To the memory of
Lieut.-Col. John Shaw Billings
M.D., D.C.L., LL.D.
First Director of
The New York Public Library
who by his foresight, energy and
administrative ability
made effective
its far-reaching influence

"He is not dead who giveth life to knowledge"

John Shaw Billings Memorial Fund
Founded by Anna Palmer Draper
COINS OF ANCIENT INDIA
My dear Rogers,

By to-day's post I send you a copy of my "Coins of Ancient India" and should have sent it longer since, but have had no time to send you the book. I am quite sure that you could have assisted me in adding considerably to some parts of the work — more especially in Plate II, and also in Plate III. I am still trying to purchase Old Hindu coins that will add to these Plates of the "Coins of Ancient India" and if you can do the same I shall be glad to buy any coins that you may have to part with.

I am now also engaged in the 2nd Part — "Coins of Medieval India."
Have any stone or metal seals been obtained from Sunit? At least I collected, and all that I could from clay impressions — and I came to the conclusion that the people kept the metal seals in order to multiply the clay impressions —

Inspired from Stulpgägel's death from cholera or being driven — these letters left his family pretty well off's

I shall be glad to hear of your welfare, and how you are getting on.

Thesball tells me that you have given up, for the present at least, your intentions coming here —

With kind regards to Mr. Potter and yourself —

Yours sincerely,

A. Cunningham
The JETAVANA Garden at SRAVASTI.

From RAILING of the MAHABODHI TEMPLE at BUDDHA-GAYA.

BAS-RELIEF
B.C. - 250.

From RAILING of the GREAT STUPA at BHARHUT.

BAS-RELIEF
B.C. - 150.
COINS
OF
ANCIENT INDIA
FROM
THE EARLIEST TIMES
DOWN TO THE
SEVENTH CENTURY A.D.

BY
MAJOR-GENERAL SIR A. CUNNINGHAM
K.C.I.E., C.S.I., R.E.

LONDON:
B. QUARITCH, 15, PICCADILLY
1891.
PREFACE.

The present work treats of the "Coins of Ancient India" from the earliest times down to the end of the sixth century A.D. The well-known coins of the Satraps of Surāshtra and of the Gupta kings of Magadha are not included, as they have very recently been fully described in the Journal of the Royal Asiatic Society, the former by Pandit Bhagwân Lāl, and the latter by Mr. V. Smith. In a second volume I propose to deal with the "Coins of Mediæval India," from A.D. 600 down to the Muhammedan conquest. This new volume will include (1) the Rajahs of Kashmir; (2) the Shāhis of Gandhāra; (3) the Kulachuris of Chedi; (4) the Chandelas of Mahoba; (5) the Tomaras of Delhi; (6) the Chohâns of Ajmer; with the later coins of (7) the Sisodiyas of Mewâr; and (8) the Pundirs of Kangra.

Until very lately it was the popular belief that the Indians were ignorant of the art of coinage until the time of Alexander. This popular error I refuted some twenty-five years ago, by quoting the statement of Q. Curtius that Alexander, on his arrival at Taxila, was presented by the Raja with 80 talents of coined silver (signati argenti). A similar error is still prevalent regarding Indian sculpture and architecture. Mr. Fergusson was the
most strenuous upholder of this view, and his opinion has been very generally accepted. Indeed, the total absence of any examples of either sculpture or architecture which can be assigned with certainty to a date earlier than the time of Asoka, B.C. 350, points undoubtedly to the correctness of Mr. Fergusson's conclusion. But it must be remembered that in those early days, when the country was still covered with forests, nearly all the buildings were made of wood, which was both cheap and easy to work. Even the walls of the royal city of Palibothra were made of wood, as testified by Megasthenes, and also by Euphorion, the librarian of Antiochus III., who describes the Māuryas as living in wooden houses:—Μαυρέως, ἔθνος Ἰνδικὸν, ἐν ἤλιοις ὄικοντες οἶκοι.

Arrian [Indica x.] states that the Indian cities "on the banks of the rivers were built of wood, instead of bricks and mud, to save them from the annual rains and inundations." For the same reason, at the present day, all the towns in lower Burma are built of bamboos and wood, the only brick buildings being the stūpas and temples.

That the Indians were not ignorant of stone masonry is, I think, proved by the name of Taksha-sīla-nagara, or the "cut-stone-city." I am of course aware that other meanings are given to takṣha by European savants; but that this meaning of "cut" was accepted by the people is shown by the slightly altered form of Taksha-sīra for Taksha-sīla, which gave rise to the Buddhist legend of the "cut-head." This legend is referred to by all the Chinese pilgrims:—by Fa-Hian in A.D. 400, by Sung-yun in A.D. 520, and by Hwen Thsang in A.D. 631. The last

1 Strabo, xv. i., 35, 36.
2 Steph. Byzant in v. Μαυρέως.
pilgrim expressly states that "this is the spot where Tathâgata "cut off his head." Fa-Hian also notes that Chu-cha-shi-lo, or Takshaśila, means, in Chinese words, "cut-off-head."

But there is another point which no one has yet noticed, although it has a very important bearing on this architectural question. This point is the simple fact that the Persepolitan style must certainly have been previously introduced into India by the Akhæmenian kings of Persia long before the time of Alexander. This point is proved by the prevalence of Persepolitan capitals and bases in every part of the country where remains still exist, from Kâbul eastwards to Bharhut and Buddha Gayâ. As not a single specimen of Greek architecture has yet been found to the east of the Hydaspes, I conclude, with some confidence, that the Persepolitan style must have been introduced during the two centuries of Persian dominion before the time of Alexander.

With regard to the use of sculpture, although no certain examples now remain of an earlier date than the time of Asoka, yet I can point to the statement of Q. Curtius, that an image of Hercules [Herculis simulae in] was carried in front of the army of Porus as he advanced against Alexander. This worship of Hercules is also mentioned by Strabo, on the authority of Megasthenes, as prevailing in the plain country, while the people of the hills worshipped Bacchus. The Sibæ are especially noted as worshippers of Hercules, because they wore skins and carried clubs. Judging from their name and dress I conclude that Śiva was their god. But the identification

---

3 Vit. Alex., viii. 14, 11. 4 Geogr., xv. 1, 58.
5 Geogr., xv. 1, 8.
of the other god with Bacchus was certainly due to the mistaken translation of his name by the Greeks. According to Khares of Mytilene, the name of the god was Σοροάδες, which he translated by ὀινοπόλος, or the "wine-maker." But his own spelling of the name shows very clearly that the original was Śūrya-deva, the "sun-god," and not Sūrā-deva, the "wine-god." Philostratus mentions a temple of the sun inside the city of Taxila.

From these examples we see that the Indians already possessed figures of their gods as early as the time of Alexander. It may be argued that these figures were most probably made of wood; and in the case of the simulacrum of Hercules that was borne in front of the army of Porus, I should think that it must have been of wood. The custom of carrying images of the gods in procession may have been derived from the Persians, as Strabo relates that on his visit to the joint temple of the Persian deities, Anaitis, Omanus, and Anadatus, in Cappadocia, he saw a wooden statue of Omanus carried in procession.

With reference to the name of Gandharian Alphabet, which I have proposed for the native characters found on all the coins of the Greek princes of India, and which I thought might be the Kharosti script, which was read from right to left, I have since seen that Dr. G. Bühler has actually made the same identification. He spells the name Kharoshtī, a form which seems to offer a strong support to its identification with the name of Zoroaster or Zarathushtra, which Burnouf translated as the possessor of "yellow camels." The Chinese translated Kharosti by

---

6 Athenaeus, i. 48.  
7 Geogr., xv. 8, 15.  
8 Epigraphia Indica, part vii., p. 384, n. 73.
"ass’s lips"; but Dr. Bühler’s reading of ushtra seems to point even more closely to the identification with Zoroaster. Both sarath and sar are connected with the Sanskrit swarna = “gold.” In ancient Persia the Indian sw was generally changed to kh, as in S. Saraswati = Per. Harakhaiti, and Greek Arakhotos. Kharoshtra might, therefore, have been a variant form of the name of Zarathushtra. In fact I recognise khar in the Greek χαρός. In the meantime I retain the name of Gandharian as an appropriate and descriptive title for the alphabet which was in common use throughout Gandhâra for about five centuries, from B.C. 250 to A.D. 250. The latest dated inscription which can be read with any certainty is dated in S. 122 = 200 A.D.∗ Not a single Gandharian letter occurs on the coins of Vâsu-deva or his successors—the only native letters being purely Indian Devanāgari.

∗ Archaeological Survey of India, v., Pl. XVI., fig. 4.
## CONTENTS

<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>PREFACE</td>
<td></td>
</tr>
<tr>
<td>Early Names of Coins</td>
<td>1</td>
</tr>
<tr>
<td>Connexion of Phoenicia and India</td>
<td>3</td>
</tr>
<tr>
<td>Assyria and Babylonia</td>
<td>7</td>
</tr>
<tr>
<td>Connexion of India and Persia</td>
<td>12</td>
</tr>
<tr>
<td>Persia</td>
<td>13</td>
</tr>
<tr>
<td>Assyrian and Babylonian Weights</td>
<td>15</td>
</tr>
<tr>
<td>Lydian System</td>
<td>16</td>
</tr>
<tr>
<td>Earliest Coinage</td>
<td>19</td>
</tr>
<tr>
<td>Talents of the Ancient World</td>
<td>26</td>
</tr>
<tr>
<td>The Gandharian Alphabet</td>
<td>31</td>
</tr>
<tr>
<td>The Indian Alphabet</td>
<td>38</td>
</tr>
<tr>
<td>Coins of Ancient India</td>
<td>42</td>
</tr>
<tr>
<td>Punch Coins (see Frontispiece, Plate A)</td>
<td>Plate I</td>
</tr>
<tr>
<td>Coins of Taxila</td>
<td>II. and III.</td>
</tr>
<tr>
<td>Coins of Odumbara</td>
<td>IV.</td>
</tr>
<tr>
<td>Coins of Kuninda and Kosambri</td>
<td>V.</td>
</tr>
<tr>
<td>Coins of Yaudheya</td>
<td>VI.</td>
</tr>
<tr>
<td>Coins of Panchala</td>
<td>VII.</td>
</tr>
<tr>
<td>Coins of Mathura</td>
<td>VIII.</td>
</tr>
<tr>
<td>Coins of Atodhya</td>
<td>IX.</td>
</tr>
<tr>
<td>Coins of Ujain</td>
<td>X.</td>
</tr>
<tr>
<td>Coins of Eran, or Ebakaina</td>
<td>XI.</td>
</tr>
<tr>
<td>Coins of the Andhras, S. India</td>
<td>XII.</td>
</tr>
<tr>
<td>Coins of Nepal</td>
<td>XIII.</td>
</tr>
<tr>
<td>Map</td>
<td>XIV.</td>
</tr>
</tbody>
</table>
COINS OF ANCIENT INDIA.

EARLY NAMES OF COINS.

In all countries the common measures have been derived from natural objects:

Measures of length from fingers, palms, feet, cubits and paces.

Measures of weight from seeds and beans, as the rati and barley-corn and the māsha and gerah beans.

Measures of capacity from the handful and double handful, and from the skins of animals.

Measures of time from the sun and moon.

Coins, of course, deal chiefly with weight, the only exceptions that I am aware of being the Greek ἐραχύη, which is said to mean a "handful," and to be derived from ἐρᾶσομαι, to hold—and the Indian pāṇa, a "handful" derived from pāṇi, the hand. The Greek handful may

1 The hide and the ox-hide I may note as measures of land, not according to the old tradition by cutting the hides into strips, but by sewing them up and using them as bags or sacks for holding grain. The piece of land which took a hide full of seed would be called a hide of land. The ox-hide I would suggest as the original form of the present absurd hogshead. Both ox-hides and goat-skins are used in India for carrying water. The substitution of hogs for ox must be a cockney emendation.
have been 48 chaluki, or copper coins; but the Indian pana was a handful of cowree shells, usually reckoned as 80. This term pān is still used in Bengal, where a pān of cowree shells consists of 20 gandhas, or "20 fours" of cowrees. By repeated trials I have found that 80 cowrees form a very fair average handful. But the pana was also a copper coin of 80 rati seeds in weight (144 grains) and 80 cowrees in value. The Indian reckoning was therefore as follows:—

4 cowrees = 1 ganda, or "four," from gaṇ, "to count."
20 gandhas = 1 pana = 144 grs. of copper.
4 panas = 1 tangka, or ana = 14 grs. of silver.
4 tangkas = 1 kāhan, or kārsha = 56 grs. of silver.

The weight of the tangka is said to have been fixed from the weight of the māsha or "broad bean," which, as I have shown elsewhere, averages 14·6 grains, thus agreeing very closely with the gerah of the Hebrews.

The Indian Kāreshāpāna is mentioned by Hesychius under the name of κορσίπιον νόμισμα παρ' Ἀγγυπτίοις, τὸ κερσαίον λεγόμενον, and in another place he calls the κέρσα Ἀσιανόν νόμισμα. I have before proposed to alter παρ' Ἀγγυπτίοις to παρὰ Γυπτίοις, thus referring the coins to the time of the Guptas.

Another Indian coin mentioned by a Greek author is the kāltis of the Periplus. The coin, he says, was of gold νόμισμά τε χρυσοῦ, ὅ λεγόμενος κάλτις, and to this coin he most probably refers, when in another place he says that "gold and silver denarii were exchanged with profit for native money. The Kaltis I take to be a gold hān of the weight of a Kalutti seed, about 50 grains. It was the native gold currency of the country.

The name of dramya or dramma, which is found both
in books and in inscriptions, was no doubt derived from the Greeks of the Punjab. It is found in an inscription from Jaunpur of A.D. 1216, as the shad-vodrikadramya or the “drachm of six vodris,” which certainly refers to the Greek drachm of 6 oboli. In another inscription from Besāni of A.D. 1207, I find mention of two sums of 30 dramas and 100 dramas.

According to Herodotus the earliest stamped money was made by the Lydians. If any earlier coins had existed either in Babylonia or Assyria we should have found some notice of them in the Contract Tablets of Nimrud. But the first mention of purified and stamped pieces is in the reign of Kambyses. The pieces of silver are stated to be “stamped for giving and receiving,” that is for currency. They were, undoubtedly, posterior to the Lydian coins, from which they were copied. But all of these early coins of Persia, Lydia, and Greece, were thick, rough, globular pieces of metal. The Corinthians alone made quite flat silver coins, but no reason is assigned for their departure from the common practice of the other peoples. India alone possessed flat pieces of stamped silver of a fixed weight, which in the early Buddhist Sutras were already known by the name of purâṇa or “old.” The Jātaka stories certainly speak of these coins as current during the lifetime of Buddha, or from 600 to 543 B.C. The pieces themselves were certainly not copied from any of the other existing coinages.

CONNEXION OF PHŒNICIA AND INDIA.

Owing to their happy position on the narrow neck of land which joins Africa and Asia, the Phœnicians natur-
ally monopolised all the trade of the ancient world between the East and West. Their ships exchanged the silver plates of Tarshish for the gold dust of Ophir, and the merchants of Tyre became princes, and her traffickers the honourable of the earth. From Ophir they brought gold and ivory, apes and peacocks, all productions of India even at the present day. Ophir, or \( \Sigma \alpha \nu \phi \iota \rho \) as in the LXX. version, was almost certainly the country on the lower Indus, called \( \text{SIndhu-Sauvatra} \) by the Indian geographers. It was the \( \Sigma \alpha \beta \varepsilon \upsilon \alpha \) of Ptolemy and \( \text{Iberia} \) of the Periplus. That peacocks were actually carried from India to the west we learn from the \( \text{Bâveru-Jâtaka} \), translated by Prof. Rhys Davids. \( \text{Bâveru} \) is identified with Babylon, the Bâbirush of the inscriptions of Darius. But the Phœnicians must have traded as far east as Burma and Siam, as the silver unit of traffic in both of those countries, called \( \text{tikal} \), weighs exactly 224 grains. The name is not a native one, and is said to have been introduced by foreigners. The name alone would be of little interest, but when coupled with the exact weight of the Semitic \( \text{shekel} \), it seems to me to be a very curious survival.

The Phœnician unit, a small piece of 56 grains, or \( \frac{1}{4} \) Hebrew shekel, may also be connected with the old Indian money unit, the silver \( \text{kársha} \) of 56 or 57 grains. The silver \( \text{kársha} \) or \( \text{kárshápana} \), was the only coin of the Hindus for many centuries. I venture to call it a coin because every piece that I have seen was certainly stamped, not, it is true, with one large die, but with several small punches. Some pieces have only a few marks, while many

---

2 Isaiah xxiii. 8.
3 Babylonian and Oriental Record, iii. 7.
have only one mark on the reverse. Their exact agreement in weight can scarcely be accidental, and as India produces very little silver, I presume that the Phœnicians brought the silver plates of Tarshish to exchange for the gold dust of India. The gold of Ophir is described by Job⁴ as "dust of gold" or "particles of gold," which is the very form in which it was obtained by Darius, and in which I have myself obtained it from the washings of the Indus. It is, besides, specially worthy of notice that throughout the vast extent of the Persian empire, India was the only satrapy that paid its tribute in gold. All the other nineteen satrapies, from the shores of the Aegean Sea to the banks of the Indus, paid their tributes in silver. India, in fact, produced little or no silver, while gold was abundant. Herodotus describes the Indian gold as gathered from the sands of Paktuike.⁵ Hence amongst the Afghans, or people of Paktuike, silver was only known as "spin-zar," or white gold. The gold dust of India is also noted by Megasthenes as being sold to the merchants in its natural state, because it did not require to be purified.⁶ It is also mentioned that the merchants made a profit by exchanging their own money for Indian gold.⁷ Gold was cheap in India, being as 1 to 8 rates of silver, whereas in Persia the rate was 13 of silver. I infer that the Indian gold dust was usually kept in its natural state, in small packets of fixed weight. It is, perhaps, to this practice that Isaiah refers when he says "they lavish gold out of the bag, and weigh silver with the balances."⁸ Jeremiah also points to the East as the source of gold, and to the West as that of silver, when he

---

⁴ Job xxviii. 6—16.  
⁵ III. 102.  
⁶ Strabo, XV. i. 44.  
⁷ Periplus, pp. 128—127.  
⁸ Ch. xlvi. 6.
COINS OF ANCIENT INDIA.

speaks of "silver beaten into plates brought from Tarshish, and gold from Uphaz (or Ophir)."

From all these facts I feel convinced that the gold of Ophir, which was known to Job as dust, and which was brought by Phænician ships to David and Solomon, must have been obtained in India. The annual tribute of India to Persia was certainly paid in gold dust, and I think it is only natural to infer that this was a simple continuance of the old flow of Indian gold from east to west.

If the kārsha is the representative of the Phænician small shekel of 56 to 57-5 grains, and the tikal of Burma and Siam is the representative of the large shekel of 224 to 230 grains, it follows that the vis of 100 tika is, which is used in several places on the east coast of India, as well as in Burma, must also be of Phænician origin—as implied by the round number of 100. The name is neither Indian nor Burmese. The number of 100 tikals recalls the Hebrew Manah which contained 50 shekels. The Burmese have slightly altered the name to pikthay, in which the soft th represents the s of vis. The Tâmil people call it visai.

The name of kārsha is probably indigenous, as it is derived from kris, to mark or furrow; and all the silver pieces that were current under this name are certainly marked with one or more punch-stamps. But the fabric of these kārshas, or purânas (old) as they were also called, is quite different from the money of any other people. All the most ancient coins that I have seen, with the single exception of Corinth, such as the Croësics of Lydia, the Darics of Persia, the Electrum Staters and Hektae of Asia Minor, the Owls of Athens, and the Tortoises of Aegina, are thick round knobs or buttons of metal, which

* Ch. x. 9.
must have been cast for the particular purpose. The old Indian silver purāgas on the contrary are all flat thin pieces, which have been cut from beaten plates. The two modes of fabrication are so utterly different that it is quite impossible to conceive that one could have been the model for the other. The earliest pieces would have been simple blanks of a fixed weight. I conclude that they were kept in small bags of 25, or 100, or even 1000 pieces. The smaller one of 25 kārshas would have been the equivalent of the gold suvarṇa of 140 grains. The suvarṇa also was a simple bag of gold dust, such as is still current in Kumaon of the value of 8 rupees. Each of these gold dust bags is now called phetāṅg, which I take to be a survival of the Rig Veda name of piṇḍān, or collected quantities of gold dust.

Assyria and Babylonia.

The Contract Tablets from Kuyunjik and Nimrud, now in the British Museum, are among the most ancient remains of the East that have lately been deciphered. In them we find the record of sales of lands, houses, and slaves, and of loans of money with the interest per month, all detailed in the ancient currency of manas and shekels of silver. In a few cases the “mana of Karkemish” is specially mentioned as if it was a different species from the others. On No. 13 of the Kuyunjik tablets mention is made of intercourse with “Gugu, king of Luddi, or Gyges of Lydia, during the reign of Assurbanipal of

10 These flat, thin pieces were, perhaps, suggested by the flat plates of silver which were brought from Tarshish, as India possessed no silver of its own. Jeremiah x. 9 describes the silver from Tarshish as beaten (or spread) into plates.
Assyria. Altogether of these Assyrian money tablets there are about 30, ranging in date from B.C. 709 down to 620. Of course there are many other tablets of much older date beginning with Tiglath-Pileser I., B.C. 1120-1100.

The Nimrud Tablets of Babylonia are much more numerous, and cover a much longer period of time. The earliest date from the time of King Riss-sin about B.C. 2130, of King Hammurabi, about B.C. 2120, and of Samsu-iluna, B.C. 2075. A long interval then follows without money records until the time of Esarhaddon in B.C. 677, who held both Assyria and Babylonia. From his reign there is a very interesting series, with the well-known names of Nebuchadnezzar, Cyrus, Cambyses, Darius, Xerxes, several of the Macedonian kings of Syria, ending with the Parthian king, Arsaka, in B.C. 94 and 93. The sums mentioned in these Babylonian tablets are still named manas and shekels, but there is nothing to show whether they differed from those of Assyria. The first notice of stamped money (real coinage) is found during the reign of Cambyses and Darius I. Apparently three different kinds of money were then in use, (1), common silver pieces without mark; (2), pure or refined silver; and (3), stamped silver. The last coins are specially described as intended for giving and receiving (or buying and selling). (See Tablet No. 97 Nimrud—B. M. Cat.)

The ancient weights of Assyria and Babylonia which were found by Layard in the ruins of Nineveh are of two kinds, bronze lions and stone ducks. The former are just double the weight of the latter. The heavier mina ranges from a maximum of 16,068 grains down to 14,832, and the lighter mina from 8,034 grains down to 7,107
grains. Dr. Brandis, who is here followed by Mr. Head, assumes the mean values of 15,600 and 7,800 grains for these two mines. But as this low valuation would appear to have been assumed so as to agree with the low weight of 130 grains hypothetically assigned to the Daric, I unhesitatingly reject it. The true original weight of the Daric can be derived from the existing Persian sigli, for which Mr. Head allows a value of 86.45 or 86.5 grains. He quotes Xenophon’s value of the siglos as 7\(\frac{1}{2}\) Attic obols, or 84 grains, but he omits the higher estimate of Hesychius of 8 Attic obols. Taking the Attic obolus at 11.2 grains, these two estimates would be respectively 84 and 89.6 grains, giving an average of 86.8 grains. I am willing, however, to accept Mr. Head’s estimate of 86.45 grains. Now we know from Xenophon that the Persian talent contained 300 Darics, and as each Daric contained 20 sigli, the talent was equal to 300 \(\times\) 20, or 6,000 silver sigli. Multiplying this number of 6,000 by 86.45 we obtain 518,700 grains as the full weight of the Persian talent. Dividing this number by 13, the rate of gold to silver, as given by Herodotus, we get 39,900 grains as the equivalent weight in gold of a talent of silver, and dividing this again by 300 we get 133 grains as the weight of the gold Daric. But to keep down this value to 130 grains it is necessary to alter the text of Herodotus from 13 rates to 13.3. Dr. Brandis and his copyists thus obtain 39,000 grains as the gold equivalent of the talent, which divided by 300 gives 130 grains exactly as the empirical weight of the Daric.

But just as one false step often leads to the necessity of taking a second, so this erroneous assumption of the

\[\text{\textsuperscript{11} B. V. Head, Lydia, 2.}\]
weight of the Daric leads to the depreciation of the weight of the Corinthian stater down to 130 grains. Now as it is admitted that the Corinthian system was derived from the Babylonians, the adoption of the low weight of 130 grains for the Daric has necessitated the adoption of the same weight of 130 grains for the Corinthian stater, in spite of the well-known fact that the Corinthian coinage maintained the same high standard both in purity and weight as the boasted Athenian coinage. Mr. Head in his later catalogue of the coins of Corinth has now adopted 135 grains as the normal weight of the Corinthian stater.

I have no objection to the normal weight of 135 grains for the staters of Athens and Corinth; but I much prefer the slightly lighter weight of 134-4 grains on account of its great convenience. As I have already pointed out in another place, 134-4 is not only a finite number itself, but it is continually divisible by 2 down to 0-7 grains, or the sixteenth part of an obolus. It gives a drachm of 67-2 grains, and an obolus of 11-2 grains. It also gives the whole number of 112 grains for 10 oboli, the stater of Macedon, 56 grains for the drachm of Phœnicia, and 224 grains for the Hebrew shekel, all in whole numbers. It makes the Attic talent equal to 57-6 English pounds, with a finite fraction. At the same time it makes other talents equally compact, and therefore readily convertible into English money.

The heaviest of the bronze Lions found at Nineveh has 15 marks on its side, to show that it was 15 mānas, or one quarter talent in weight. It weighs only 32-045 lbs. avoirdupois, while the heaviest of the stone Ducks is

32\cdot77 lbs. The former would give a talent of 128\cdot18 lbs., while the latter would give 135\cdot08 lbs. As this heavier weight agrees very nearly with that of 133\cdot77 lbs. as derived from the ingots of Cræsus, we learn that the Lydians had adopted the Assyrian talent. But it was the weights only which the Lydians borrowed, and in return they gave to the ancient world the invention of stamped coins, which declared the value without the trouble and delay of weighment.

With the Assyrian talent the Lydians would seem also to have accepted its division into sixths, as I find the series of 168, 56, 28, and 14 grains both in gold and in silver. The silver alone has a half coin of 84 grains, which agrees with the Persian siglos both in weight and in fabric. Accepting an approximate weight of 136 lbs. for the heavy Assyrian talent, and one half, or 68 lbs., for that of the Babylonian talent, the following will be the different weights of the two systems:

<table>
<thead>
<tr>
<th>ASSYRIAN</th>
<th>BABYLONIAN</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 talent</td>
<td>186 lbs. 952,000 grs.</td>
</tr>
<tr>
<td>1 mana</td>
<td>2\cdot266 lbs. 15,666 grs.</td>
</tr>
<tr>
<td>1 siglos (1/6)</td>
<td>264\cdot4 siglos 132\cdot76 grs.</td>
</tr>
</tbody>
</table>

We have thus obtained the approximate values of the mana and shekel, which are so often mentioned in the Contract Tablets of the Assyrians and Babylonians.

The Eastern origin of the Euboic and Corinthian systems becomes at once apparent on a comparison of the weights of their coins with those of Lydia and Persia, including the Persian satrapies of Asia Minor. The satrap coins are all double sigli, while the Arabic silver coins of Persia are single sigli. I possess a silver piece of 4 danakes, weighing 55\cdot5 grains, or two-thirds of
the siglos. The heavy silver pieces ranging up to 433.5 grains I take to be pentasigla, or 5 sigli Persian coins, but I am aware that they have been otherwise described as octadrachms, of 8 Phœnician drachms.

**Connexion of India and Persia.**

A connexion between Persia and India was established by Darius by his conquest of the Punjab, or districts on both banks of the Indus, from which he drew an annual tribute of "360 talents of gold dust." The historian specially notes that the other 19 satrapies paid their tribute in silver according to the Babylonian talent, while the gold was reckoned according to the Euboic talent. The Babylonian talent, he adds, contained 70 Euboic minæ, and he gives the total of the Babylonian money, when reduced to the Euboic scale, as 9,540 Euboic talents. The gold dust reckoned at 13 times the value of silver he makes 4,680 talents, and the whole revenue 14,560 Euboic talents.

There are discrepancies in the numbers of the historian's text, which have puzzled most commentators. His two totals of gold and silver, when added together, do not make his sum total. I solved this difficulty more than thirty years ago (1858). The chief error lies in the valuation of the Babylonian talent at 70 Euboic minæ. The true value should be 78, as the gold is said to be 13 times the value of silver; that is, as the rate of 10:13::60:78. The next error is in the valuation of the silver. Deducting 140 talents from the 500 of the fourth satrapy, because that sum was kept for the cavalry

13 Herodotus, iii. 94.
and not paid into the treasury, the actual total of the 19 silver paying satrapies was—

7,600 Babylonian talents of 78 Euboic minae.

equal to 9,880 Euboic talents of 60 minae (not 9,540, add gold 360 \times 18 = 4,680 silver. [as in text].

Total . 14,560 Euboic talents as given in the text.

We thus see that the total amount agrees exactly with the proportion of 13 silver to 1 gold. I notice this point the more particularly as I see that Mr. Head has adopted the assumed value of 13·3 to 1 as proposed by Mommsen and Brandis.

Persia.

As the Persian empire was the successor of the Assyrian and Babylonian monarchies, it naturally inherited and adopted their systems of weights and measures. But as neither of the older kingdoms has left any coins, we can only refer to their heavier weights in the shape of bronze lions and stone ducks, of which many examples have been found by Layard and others. From these weights it has been discovered that there were two distinct systems in use, of which one was exactly double the other. Many of the weights are inscribed with their values both in cuneiform and in Phoenician characters. The older weights show a heavy mina of 16,068 grains, and a light mina of 8,034 grains. Dividing both by 60, the unit of the former would be 268 grains, and of the latter 134 grains. But taking the average weights of the much worn coins, Dr. Brandis fixed the different mina weights at the lower values of 15,600 and 7,800 English grains. These values would give talents of 936,000 and 468,000 grains, or 133·714 and 66·857 lbs. avoirdupois, and units of 260 and
130 grains. Now I am under the impression that these lower values were adopted for the express purpose of bringing the unit of the lighter weight, 130 grains, to accord exactly with the weight of the Daric, as assumed from the much-worn coins.

But I must strongly demur to this low appreciation of the Daric, as it necessitates an arbitrary change in the text of Herodotus, by raising his 13 rates to 13·3 rates of silver to 1 of gold, so as to bring the value of the Daric to agree with 20 silver sigli. Mr. Head makes the weight of the silver siglos 86·45 grains, which, multiplied by 20, gives 1,729 grains of silver as the equivalent of the gold Daric. This amount, divided by the 13 rates of Herodotus, would make the Daric exactly 133 grains in weight. Xenophon makes the value of the Persian siglos only 7¼ Attic oboli, or 11·2 grains × 7·5 = 84 grains; but as the greater value of 8 oboli, or 11·2 grains × 8 = 89·6 grains, is given by Hesychius, I am willing to accept Mr. Head's estimate of 86·45 grains as a very fair mean of the two values. I have found 10 good coins give an average of 85·19 grains, the heaviest being 87·90.

It is my belief that the Daric of Persia was the original gold stater from which the Euboic, afterwards called the Attic, system, was derived. In comparing the weight of the Darics with the staters of Athens and Corinth, we must compare the actual weights of the existing coins of each class, and not take the full normal weights of the Greek coins and the lighter weight of the much-worn Darics, which had been in circulation for centuries. I have examined the catalogues of Hunter and Leake, and, after excluding all coins under 132 grains in weight, I find that 46 staters of Corinth and its colonies give an average of just over 133 grains, while the coins of Athens
yield a mean stater of somewhat under 133 grains. As the normal weight of the staters of both Athens and Corinth is usually accepted as 135 grains, the existing specimens show a loss of 2 grains.

The gold coins show even a greater loss of weight. I have taken the weights of 120 gold staters, all over 130 grains, of Philip II., Alexander III., Alexander Aegus, Lysimachus, Seleukus I., and Antiochus I., which give an average of only 131·2 grains. A former weightment of 78 staters of the same princes gave only 132·11 grains; and Hussey, p. 16, records that 71 staters of the same kings gave only a small fraction over 132 grains. It is true that the existing Darics do not reach this average. H. P. Borrell records that he found the average of 125 Darics, which he weighed himself, to be only 129·4 grains. But I possess one of 132·5 grains, and the Duc de Luynes had one of 132 grains. I fully believe, therefore, that the Persian Daric was originally of the same weight as the Euboic stater. The 4 known Attic staters give a mean of only 131·14 grains, while the 5 heaviest Darics, of which I have a record, give a mean of 131·34 grains.

Assyria and Babylonia.

This brings me to the consideration of the Assyrian and Babylonian weights. Accepting the original weight of the Daric at 133 grains, and that of the silver siglos at 86·45 grains, Mr. Head's own valuation, then the light talent would be 86·5 × 6000 = 518,700 grains, or exactly 74·1 lbs. avoirdupois, and the heavy talent would be just double, or 1,037,400 grains, or 148·2 lbs. Now it is a

14 H. P. Borrell, Num. Chron., vi. 158.
singular fact that in the territories of modern Persia there still exist two systems of weights of which the average of one set is just double that of the other. The following are examples of the two systems:

<table>
<thead>
<tr>
<th>MAN.</th>
<th>Batman.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shāhi Man, Gambrun . 13·8 lbs.</td>
<td>Batman, of Tauris . 6·84 lbs.</td>
</tr>
<tr>
<td>Man, of Bagdad . 16·5 &quot;</td>
<td>Others . . .</td>
</tr>
<tr>
<td>Batman, of Cherray . 12·6 &quot;</td>
<td>6·75 &quot;</td>
</tr>
<tr>
<td>Shiraz and Bagdad . 14·0 &quot;</td>
<td>7·75 &quot;</td>
</tr>
<tr>
<td>Tabriz and Bushir . 6·98 &quot;</td>
<td>7·78 &quot;</td>
</tr>
<tr>
<td>56·6 &quot;</td>
<td>35·55 &quot;</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

Heavy mean 14·14 lbs. Light mean 7·08 lbs.

The Lydian money is similar to that of Persia, consisting of double and single staters in gold, and double and single sigli in silver. The weights of the coins show that the system must have been received either from Assyria or from Babylonia. Professor Sayce suggests that it was brought by the Hittites of Karkhemish through Phrygia to Lydia. But as we know that Gyges had intercourse with Assyria, Mr. Head very pertinently asks, "Why the lighter weight was used in Lydia?" He quotes Norris's opinion that the lighter weights belonged to Babylonia, and the heavier to Assyria, but thinks that "this cannot be proved." Now the ingots of Cæsus prove incontestably that the Lydian system was the heavy one of Assyria, as suggested by the Lydian intercourse with Assyria.

LYDIAN SYSTEM.

The proof that the Lydians adopted their system from Assyria I derive from the weights of the ingots of gold and electrum which were presented by Cæsus to Delphi. 15

15 *Herodotus*, i. 50.
According to Herodotus he gave 4 ingots of pure gold and 117 of electrum. Each slab was 6 palms long, 3 palms broad, and 1 palm thick. The gold slabs weighed 2\(\frac{1}{2}\) talents each, the electrum slabs only two talents. Taking the Greek palm at 3·03375 inches, each slab or ingot contained 502·898 cubic inches, which, allowing 665 lbs. to each cubic inch of gold, gives 133·771 lbs. as the weight of one talent. Continuing the calculation, it will be found that the electrum talents consisted of 179·99157 lbs. of gold and 87·55448 lbs. of silver, or rather more than two-thirds of gold and rather less than one-third of silver. Now a talent of 133·771 lbs. approaches so closely to the weight of the Assyrian talent, as fixed by Brandis at 133·71 lbs., that I have no hesitation in deriving the Lydian system from that of Assyria. Mr. Norris was therefore right in his opinion.

But the Lydian coins, both gold and silver, seem to me to declare the same origin, as there are double as well as single staters of gold, and double as well as single sigli of silver. I do not, however, accept the weight of the Lydian talent thus derived as being more than a tolerably near approximation, as it appears to me quite incredible that the size of the ingots could have been in exact whole numbers of Attic palms as described by Herodotus. A talent of 133·771 lbs. would have given a silver double siglos of 156 grains, whereas the few existing coins show that the weights were not less than 164 and 82 grains, which must have been derived from a talent of over 140 lbs. As this agrees very closely with the mean weight of the dah-man, or 10 mans which is still in use in Gambrun, Bagdad, and Shiraz, I think that it may be accepted as the Lydian equivalent of the Assyrian weight.
As my numbers differ from those published by Mr. Head in *Num. Chron.*, 3rd Series, VII., 302, I will here give my calculation in detail. He notes that the electrum talents of Croesus must have contained about 73 per cent. of gold and 27 of silver, whereas my calculation gives 67·3 per cent. of gold and 32·7 of silver. The data given by Herodotus are as follows:—

A—each ingot measured 6 palms by 8 palms by 1 palm.
B—the gold ingot weighed 2½ talents.
C—the electrum ingot weighed 2 talents.

Taking the Attic palm at 3·03375 inches, each ingot contained 502·898 inches. Taking gold at 665 lbs. per cubic inch, the gold ingot of 2½ talents must have weighed 334·427 lbs., and therefore 1 talent weighed 133·771 lbs.

Taking the weight of silver at 377 lbs. per cubic inch,

Let \( x \) = No. of cubic inches of gold \( y \) = No. of cubic inches of silver in electrum ingot.

then 1, \( x + y = 502·898 \) cubic inches of ingot,
and 2, \( 665x + 877y = \) weight of electrum ingot
\[ = 2 \text{ talents}, \]
\[ = 2 \times 133·771 \text{ lbs.} \]
\[ = 267·542 \text{ lbs.} \]

Multiplying 1 by 665, we get \( 665x + 665y = 334·427 \text{ lbs.} \)

and 2
\[ 665x + 877y = 267·542 \text{ lbs.} \]
\[ \begin{align*}
665x + 877y & = 267·542 \text{ lbs.} \\
288y & = 66·885 \text{ lbs.}
\end{align*} \]

\[ \therefore y = \frac{66·885}{288} = 232·240 \text{ cubic inches of silver,} \]

and \( x = \frac{270·658 \text{ cubic inches of gold}}{502·898 \text{ cubic inches of ingot.}} \)

Then 232·240 cub. in. silver \( \times \cdot 877 = 87·5545 \) lbs. silver, and 270·658 cub. in. gold \( \times \cdot 665 = 179·9985 \) lbs. gold.

\[ \begin{align*}
267·5530 \text{ lbs.} & = 2 \text{ talents} \\
183·7765 \text{ lbs.} & = 1 \text{ talent.}
\end{align*} \]

Gold = 67·3 per cent.
Silver = 32·7 per cent.
\[ \text{electrum.} \]
I find it difficult to believe, if the weights of the Lydian ingots were exactly $2\frac{1}{2}$ talents and 2 talents, as noted by Herodotus, that all their three dimensions of 6 palms, 3 palms, and 1 palm, could by any possibility have been exact whole numbers of the Attic palm. The length of the palm which I have used above is that which has been derived from the platform of the Parthenon at Athens, commonly known as the *Hekatompedon*, of 100 feet front. Stuart's measurements make the Attic foot equal 12·137 English inches and the palm equal 3·033 inches or 3·0345. But if the Attic measure did not quite agree, and was only a very close approximation, a very minute addition of about 0·015, or fifteen-thousandths of an inch, to each palm, making 3·050 inches, would increase the weight of the Lydian talent to 135·8 lbs. avoirdupois. Dividing this amount by 3,600, we obtain the full weight of the Assyrian shekel of 264·1 grains, and of 132 grains for the gold coins.

**Earliest Coinage.**

The earliest coinage of the ancient world would appear to have been chiefly of silver and electrum; the latter metal being confined to Asia Minor, and the former to Greece and India. Some of the Lydian staters of pale gold or electrum may certainly be as old as Gyges, while the rude silver pieces of Argos and Aegina cannot be placed later than the time of Pheidon. By the silver coinage of India I refer to the thousands of square silver pieces which are found all over the country from the Himalaya Mountains to Cape Comorin, and from Sistān to the mouths of the Ganges. As all these pieces are stamped with several dies or punches, on one or both faces, they have received the descriptive name of punch-marked.
coins. In the Hindu books they are called purāṇa, or "old," a title which vouches for their antiquity. They are mentioned by Manu and Pāṇini, both anterior to Alexander, and also in the Buddhist Sutras, which are of about the same age. The original name of the coin was kārshāpana, from kārsha, "a weight," and āpanā, "custom or use," meaning that they were pieces of one kārsha weight as established by use or custom. In the same way the Greek νόμισμα was derived from νομίτζω. According to Buddhist tradition the kārshāpana, or kāhāpana, was called purāṇa at least as early as the time of Buddha himself. This is shown by the curious story, extracted by Burnouf from the Sutras, of the courtesan Vāsavadatta, who demanded 500 purānas as the price of her favours. These Indian ladies must have been as difficult of access as the Greek Hetaireæ of Corinth, whose exactions gave rise to the proverbial saying,

Non cuivis homini contingit adire Corinthum.

As Buddha's death is placed in the middle of the sixth century B.C., the silver purānas of India may be quite as old as any of the coinages of Greece or Asia Minor. In the frontispiece, Plate A, I have given two pictorial representations of a well-known Buddhist legend regarding the purchase money of the Jetavana garden at Srāvasti. As the story is related at length in my description of the Bharhut Stūpa, p. 84, it will be sufficient to note here that the owner of the garden, Prince Jeta, stipulated that he would only part with it on the condition that the purchaser should cover the whole surface with coins touching each other. Both scenes represent the coins being laid out "edge to edge." It will be seen that the pieces are all square. The older sculpture dates from 250 B.C.
The earliest-known gold coins are the Lydian staters of Crœsus and the Persian Darics of Darius. The former are very rare, and I have no doubt that they were made by refining the electrum, as described by Herodotus. The Persian Darics must have been made from the annual tribute of Indian gold dust which Darius received from the Punjab. Herodotus specially notes that the tribute was paid in "gold-dust."¹⁶ By this I understand that in the end of the sixth century B.C. the Indians had no gold coinage. But they certainly had measures or fixed weights of gold in bags, which passed current amongst the people. The issue of Darics amounted to several millions, as we learn from the story of the Lydian Pythius, who possessed a sum of no less than 4,000,000 of Daric staters, less 7,000. The amount seems almost incredible, especially for a private person. Alexander is said to have found 9,000 talents of Daric staters at Susa, besides fabulous amounts of uncoined gold at Susa, Persepolis, and Pasargada. The Persians, we know, succeeded to the hoarded treasures of the Assyrians and Babylonians. According to Khares of Mitylene, one of the companions of Alexander, a treasure of 5,000 talents of coined gold was kept in the bedchamber of the Persian king.¹⁷ As to the hoarding of treasure, we have proof in the account of the gold and silver vessels carried away from Jerusalem by Nebuchadnezzar, which were still preserved in the treasury at Babylon in the time of Cyrus.

The question naturally arises, "From whence came these large amounts of gold?" I believe that the greater quantity came from India. From the time of David and

¹⁶ Herodotus, iii. 94 and 96.
¹⁷ Athenæus, xii. 514.
Solomon down to Darius, the Phœnicians had been bringing gold from Ophir. In one year they brought 450 talents to Solomon. They traded also for gold with the island of Thasos in the Aegean, and thus for some five centuries gold continued to flow, both from the East and from the West, into the countries on the Euphrates and the Tigris. After the conquest of the Punjab by Darius the Indian gold came for two centuries as an annual tribute into the Persian treasury.

The gold of India has always been noted for its deep yellow hue, from which it has received its common name of suvarna, that is, su+varna, or "beautiful colour." For this reason Sophocles, in B.C. 440, in his Antigone, contrasts the "gold of India with the electrum of Sardis." Suvarna at last became the name of a piece of gold, equal in value to 25 silver kârshas. At this rate the ratio of gold to silver was 10 to 1, if the kârsha be taken at its full weight of 56 to 57·6 grains, or only 8 to 2 if taken at its weight in pure silver of 44·8 grains. As the rate in Persia was 13 to 1, a very fair profit might have been made by exchange—the Persian by getting gold, the Indian by receiving silver. This intercourse might have led to the adoption of some at least of each other's weight names. But this does not appear to have been the case, as the only term common to both peoples is the 14 grain danake of Persia, or one-sixth of the siglos, and the 14 grain tangka of India, or one-fourth of the kârsha. I am inclined to think that the danake or danik was actually an adopted name, as I find a coin named ropaka, which is said to have been one-seventieth of a suvarna, or 2 grains of gold or the equivalent in silver. I may note, however, that the double silver shekel of Persia and the satrapies,
or $86.5 \times 2 = 173$ grains, agrees exactly with the Indian weight of 100 ratios of 1.75 grains each.

The ancient Persian siglos was divided into 6 danakes, just as the modern mishkâl is now divided into 6 dâniks or dângs. The Δανάρη is mentioned by three different authors, Pollux, Hesychius, and Suidas. Pollux writes the name Δανικέ, Δανακέ and Δανικόν, and says that it was a Persian coin. Hesychius calls it Δαναέ, and says that it was worth more than an obolus. But Δαναέ is certainly a mistake for Δανακέ, as he names the half-coin Ημί-Δανακίον. Suidas also writes the name Δανακέ, and repeats what is also said by Hesychius, that it was placed in the mouths of the dead. According to Xenophon the siglos was equal to $7\frac{1}{2}$ oboli; but Hesychius values it at 8 Attic oboli. Taking the Attic obolus at 11.2 grains, the mean of these two values will be 86.8 grains, which agrees so nearly with Mr. Head’s 86.45 grains, that I am perfectly willing to accept his value. The danike of one-sixth would therefore be 14.41 grains, which is exactly the weight of the Indian tangka. But as the word tangka is derived from the tang or twank sound of metal when struck by a chisel, the name would seem to belong specially to any stamped coin. The name therefore meant simply any stamped coin; and was applied to several different pieces quite irrespective of their value. At first it was perhaps a simple weight; and after a stamp was added it became the name of a coin. But it was applied to the silver kārsha, and also to the copper pana, which was also known as a "copper tangka." It soon became a general term for money, and it is so used in the Râja Tarangini as tangkaka. It appears on some rare dirhems of Mahmud of Ghazni, with a Sans-
krit inscription, the coin being described as *ayam tankam*, or "this tanka." It was in common use during the whole period of Muhammadan rule. In A.D. 1412 the Chinese envoys, who visited Bengal, describe the *silver* coin of the king Ayas-i-ting, or Ghias-ud-din Azem, as a *thang-kia*, weighing 2 thsiam, each ⅛ of a Chinese ounce, plus *sen* or ⅛.¹⁸ In the time of Sher-Shah his large copper coins of 124 grains were called *tankah*, and the same name was used by Akbar for his double copper coins of 648 grains. The word has descended down to our own time under the form of *takka*, and is frequently used for money in general. Ibn Batuta, A.D. 1340, calls the gold *dinars* of Muhammad Tughlak *tanka*. Silver *tankas* are also noted, and in the time of Baholol Lodi "black tankas" of copper are mentioned, of which 20 went to the silver *tanka*. But these Bahololi copper coins contained as much as 7 or 8 grains of silver; a score of them was just equal to one white or silver *tanka*.

The same word is also in common use for a four anna piece, or quarter rupee, the silver *Kârsha*; and under the form of "*tanner,*" I believe that it has been introduced into England by the gypsies, as a slang name for sixpence.

Considering the continuous use of the name in India, and the simple Indian derivation of the word, I believe that the name is certainly of Indian origin, and that it was perhaps first employed shortly after the old blank silver Kârsha weights were marked with punches, and thus acquired the designation of *tankha*, or "stamped" pieces.

With reference to the square form of the greater number of these old silver coins, I notice that the small *square* piece, which a fruit-seller of the present day cuts out of a melon to show its quality, is called a *tângki*.

¹⁸ Pauthier, p. 88.
In the Raja Tarangini this coin is called Tāka, where the Queen of Ananta in want of money sells a jewelled lingam for "7 lakhs of Tākas." Troyer gives the translation correctly (Raja Tar. vii. 415), but the last native translator Bābu Jogesh Chunder Dutt (kings of Kashmir, p. 198), makes the Queen sell it for "70 lakhs to the Tākās." The coins were, no doubt, the common copper pieces of Ananta Deva, each weighing about 80 grains, which in Akbar's time were reckoned as quarter dāms, or $40 \times 4 = 160$ to the rupee. The price would therefore be 43,750 rupees for 70 lakhs.

The common weight of India, the seer or setaka, is now always reckoned at so many tolas, or rupees of one tola each, the usual number being 80 tolas. But the very name of setaka, or sat-taka=100 takās, and the divisional part of chha-tāka, or 6 tākas, show that the weights were originally raised from the old tangka or taka of 144 grains. This was also the weight of the gold suvarna; but as the requisite number of copper coins was more readily available, the copper tangkas were generally used. In common use at present the seer is reckoned at 80 rupees of 180 grains, thus:

<table>
<thead>
<tr>
<th>No.</th>
<th>Grains</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rupees of 180 grains $\times$ 80 = 14,400 = 1 seer</td>
<td>= 2 lbs. avoir.</td>
</tr>
<tr>
<td>Tangkas of 144 grains $\times$ 100 = 14,400 = 1 setaka</td>
<td>= 400 grains.</td>
</tr>
<tr>
<td>1 chhetak = 14,400 ÷ 16 = 900 grains.</td>
<td></td>
</tr>
</tbody>
</table>

or taking the Tola or Rupee of Delhi at 175 grains.

1 seer = 100 tolas $\times$ 175 grains = 14,000 grains = 2 lbs. avoir.
1 chhetak = 14,000 ÷ 16 = 895 grains.

But with a seer of 100 tākas, the chha-tāka would be more exactly $16\frac{1}{4}$, or $16\cdot166$ parts—with the heavier tāka of 144 grains, 40 would be exactly equal to one pound Troy—with the lighter tāka of 140 grains, the seer is exactly equal to 2 lbs. avoirdupois.
THE TALENTS OF THE ANCIENT WORLD.

It has been generally considered that in ancient times, the money talent of the East was a fixed weight which could be applied equally to both gold and silver. In several instances, where actual weighment is mentioned, this very common opinion was no doubt true. But the general adoption of the opinion that a talent of gold must necessarily be a talent weight of gold has led many writers, and more especially Biblical writers, into the most monstrous absurdities. According to my judgment, when a talent is named without any notice of its weight, it must be taken simply as a value in gold of a talent weight of silver, just as in England a pound is a piece of gold equal in value to the original pound Troy of silver. Thus, the silver penny of William the Conqueror weighs 24 grains, and 20 pennyweights make one ounce, and 12 ounces, or 5,760 grains, make one pound Troy. In dealing with the Attic talent, this principle was always acknowledged; and in Greece, a money talent was a value of the same amount whether in gold or silver.

In ancient Persia, as we learn from Xenophon, a talent of gold consisted of 300 Darics, that is an amount of gold equal in value to a talent weight of silver, which we know consisted of 6,000 silver sigli. As each siglos weighed, according to Mr. Head's valuation, 86.45 grains, the Persian talent contained 518,700 grains, or 71.1 lb. avoirdupois. Now, as we know that the Daric was equal to 20 silver sigli, its actual weight may be obtained by multiplying the weight of the siglos by 20, and then dividing the product by 13, the rate recorded by Herodotus. Thus, $86.45 \times 20 = 1729$, which divided by 13 gives exactly 133 grains for the weight of the gold Daric.
By applying the same method to the gold talents of the Hebrews, some very curious comparisons may be made with the results arrived at by Biblical writers. The true weight of the talent is most readily obtained from the amount of 100 talents + 1,775 shekels of silver as the poll tax of a bekah or ½ shekel for each of the persons numbered,¹⁹ thus:

People numbered 608,550 = bekahs or ½ shekels

2

801,775 = full shekels

deduct 1,775 shekels

800,000 shekels

divided by talents 100 gives 8,000 shekels = 1 talent.

As each Hebrew or Phœnician shekel was 224 grains in weight, the talent was 224 × 3,000 = 672,000 grains, or 96 lbs. avoirdupois exactly. That the talent was a heavy one we learn from the story of Naaman and Gehazi, the servant of Elisha.²⁰ The Syrian lord gave Gehazi two talents of silver which were put in two bags, and laid upon two servants. Each servant therefore carried a weight of 96 lbs., or one talent of silver.

But what are we to say about the crown of the king of Rabbah? Joab took the crown of the king of Rabbah which was one talent weight of gold off his head, and set it on David’s head.²¹ The word weight must have been introduced here by mistake. The real weight at 12 rates of silver to 1 of gold would have been 8 lbs., quite enough for a head-piece of any kind.

I turn now to Bagster’s Bible, where I find the Hebrew

¹⁹ Exodus xxxviii. 24.
²⁰ 2 Kings v. 38.
²¹ 2 Sam. xii. 30; 1 Chron. xx. 2.
weight of 1 talent set down correctly enough as 114 lbs. Troy, equal to nearly 94 lbs. avoirdupois—while the money talent of silver is valued at £342, and that of gold at £5,475, or just 16 times the value of the silver talent.

It will be a sufficient illustration to apply these two values to the amount of treasure collected by David for the building of the Temple.

Talenta.
1 Chron. xxii. 14. 100,000 gold at £5,475 = £547-5 millions.
1,000,000 silver at £ 342 = 342-0
Total . £889-5

According to Napier (Metallurgy of the Bible), David's treasures amounted to £939,929,687. But this estimate must have included David's private treasure. In the corresponding notice of Josephus,22 both of the numbers are reduced to one-tenth of those in the Hebrew Bible. But there still remains a total of 110,000 talents of both metals, which, according to my calculation of £350 per talent, whether of gold or silver, would give a hoard of £35 millions of silver, and of £335 millions of gold, or altogether of £33\(\frac{1}{2}\) millions. This sum I would divide again by 10 to bring it within a reasonable amount.

According to my view, silver was the standard coin of the ancient world both in Europe and Asia; and whenever gold money is mentioned, as, for instance, a talent of gold, it simply means a quantity of gold equal in value to a talent weight of silver. I find that the writer of the article "Nummus," in Smith's Dictionary of Antiquities, held the same view as to the origin of the talent weight.23 He says, "Unless we know anything to the contrary, we assume a talent of money to mean 'a talent's weight'

22 Antiq. vii. 14, 2. 23 P. 810b.
of the metal which was chiefly used for money, namely, among the Greeks silver; and, conversely, that the weight of the silver coins, which make up the value of a talent, gives us the amount of talent weight."

All the money contracts of Babylonia and Assyria are recorded in manas and shekels of silver. In Judæa, we have mention of Kesitahs, the value of which is not known. But as the LXX. translated the term by "lamb," ἄμυχος, it seems to me highly probable that there may have been some confusion with a mana, μνᾶ. The word is used only three times, or rather only twice, as Jacob's purchase of the field at Shechem (or Shalem) for 100 Kesitahs is repeated. The mention of one Kesitah, translated ἄμυθα μνᾶ, as the present made by each of Job's friends to Job,24 if of silver must almost certainly have been a màna, as even 100 shekels would have gone but a little way in setting him up again. The same may be said of 100 "lambs," which would not in those days have been worth more than 20 shekels of silver.

When a known value of gold is mentioned, as in the case of Achan who secreted 200 shekels of silver and an ingot or bar of gold of 50 shekels weight, we may accept it as a màna of gold, equal to about 12 times its weight in silver. But this ingot of gold was simply bullion, and I think that its weight of 50 shekels offers a fair explanation of the amnos or Kesitah, just before mentioned.

All the ancient weights, according to my view, were derived simply from measures of silver. It follows, therefore, that the money equivalents in gold were not talent weights of gold, but were derived from the current market.

24 Job xiii. 11.
value of that metal as bullion when compared with silver. In Persia, the rate was 1 gold = 13 silver; and, accordingly, a money talent of gold was only one thirtieth of the weight of a talent of silver. The silver talent was a fixed weight, while gold was simply bullion. This, as I believe from my own experience, was always the case in India, a fact which was very soon discovered by Dr. Kelly when he wrote his account of the "Moneys of India." After stating that there was a gold coin called *Mohur*, which generally passed for 16 rupees, he adds (p. 129), "but this proportion varied according to the market price of gold, as silver was the measure of value."

The following table gives the weights and values of the principal ancient talents and their divisions. The money values are all calculated at the rate of 5 shillings per Troy ounce of 480 grains of silver.

<table>
<thead>
<tr>
<th></th>
<th>TALENT.</th>
<th>MINA.</th>
<th>SHEKEL.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>£ Sterling</td>
<td>lbs. avoirdupois</td>
<td>Grains</td>
</tr>
<tr>
<td>ASSYRIA</td>
<td>496/</td>
<td>136-0</td>
<td>952,000</td>
</tr>
<tr>
<td>BABYLONIA</td>
<td>248/</td>
<td>68-0</td>
<td>476,000</td>
</tr>
<tr>
<td></td>
<td>By Ingot.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LYDIA</td>
<td>487/</td>
<td>133-77</td>
<td>986,890</td>
</tr>
<tr>
<td>Assyr.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PERSIA</td>
<td>495/</td>
<td>135-8</td>
<td>950,760</td>
</tr>
<tr>
<td>PHÆNICEIA</td>
<td>270/</td>
<td>74-1</td>
<td>518,700</td>
</tr>
<tr>
<td>JUDÆA.</td>
<td>580/</td>
<td>96-0</td>
<td>672,000</td>
</tr>
<tr>
<td>At full weight.</td>
<td>210/</td>
<td>57-6</td>
<td>408,200</td>
</tr>
<tr>
<td>ATHENS.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>By good coins</td>
<td>207-28</td>
<td>56-85</td>
<td>897,980</td>
</tr>
<tr>
<td>At full weight.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CORINTH</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>By good coins</td>
<td>207-48</td>
<td>56-91</td>
<td>898,340</td>
</tr>
</tbody>
</table>
I have given two slightly different values for the Attic talent, the first according to the hypothetical value assigned to it by most writers on its assumed full value, the other according to the average of all the tetradrachms in the Hunter and Leake collections above 264 grains. I have done this for comparison with the Corinthian money, which has been unduly depreciated by modern writers who have fixed an empirical value of the Corinthian Stater at "about 130 grains." The average of 36 Corinthian staters in the Hunter and Leake collections is 132.78 grains, giving a drachm of 66.99 grains, which is a little above the Attic drachm.

THE GANDHARIAN ALPHABET.

Throughout this work I have adopted the name of Gandharian for the native characters which were used on all the coins of the Greek kings of India from the time of Demetrius and Eukratides down to the close of their rule under Hermæus. It is often called the Bactrian character. But it is very certain that not a single example of this writing has yet been found to the north of the Hindu-Kush. Its use was confined to Ariana on the west of the Indus, and to the Panjáb on the east. Lassen called it Kabulian, and Wilson called it Arianian. But both of these terms would restrict its use to the west of the Indus, whereas it is found in all the inscriptions discovered at Taxila and Manikyâla, including the version of Asoka's edicts at Mansera to the north of Taxila. M. Senart has called it the "Western Alphabet," meaning, of course, with reference to India. But as it was also used in Kabul and Kandahar, I prefer to call it the Gandharian alphabet, as more exactly defining its limits.
The same characters were also used on the coins of the Kunindas, whose territory embraced both banks of the Satlej. The Kunindas, or Kulindas, still exist as Kunets, and form nearly two-thirds of the population of the Simla hills. Ptolemy calls the province Kulindrine, and the district of Kulu now preserves the old name.

The earliest-known examples of its use are the edicts of Asoka at Shâhbâzgarhi to the west, and at Mânsera to the east of the Indus, in B.C. 250. In the eastern Panjâb also most of the native coins bear double legends, one in Gandharian letters, and the other in Indian letters. Many specimens of these coins will be found in Plate IV. There can be no doubt, therefore, that the Gandharian alphabet was used throughout the Panjâb, and even to the east of the Satlej, as shown by the copper plate inscription of Kanishka extracted from a Stûpa, 40 miles to the south of Bahâwalpur.

That the Western Panjâb was originally included in Gândhâra we learn from the Mahâbhârata, which states that the two sons of Bharata, named Pushkara and Taksha, divided Gândhâra between them, and gave their names respectively to Pushkaravata, or Peukelaotis, and to Takhasila or Taxila. The southern district of Multân must also have been included in Gândhâra, as Al Biruni quoting Utpala, who was a Kashmiri, states that Multân was originally called Kasyapapura. Now we know from Hekatæus that Kaspapuros was in Gandarike, and from Herodotus we learn that it was in Paktuika. Hence it follows that Gândhâra must have included both Afghanistan and the Panjâb. In fact Kanishka, who lived at Peshâwar in the summer, and at Chinepati (near Amritsar) in the winter, is called by the Chinese "King of Gândhâra."
In his work on "The Alphabet," Dr. Isaac Taylor has treated the origin of this alphabet in considerable detail. His conclusion is that it must have been introduced into India "considerably earlier than the reign of Asoka" [II. 259], as at its first appearance it is "in a greatly expanded form, the twenty-two Aramean consonants having been developed into an elaborate alphabet of, at least, thirty-five letters," of which the five vowels, the cerebral letters and several aspirated letters were unknown in the original Aramean alphabet. As I have already noted, these additions must have been made when this alphabet came in contact with the more fully developed alphabet of India.

Exactly the same process took place when the Indian alphabet was introduced into Tibet in the seventh century, A.D., for the cerebrals and aspirates not being required for the Tibetan language, were rejected. Afterwards with the spread of Buddhism, when the cerebral and omitted aspirates were required for the full expression of Indian names and terms, the five cerebral letters were formed by simply revising the dentals, while the aspirates $gh$, $dh$, and $bh$ were formed by adding $h$ to the letters $g$, $d$, and $b$. Dr. Taylor thinks that the original Aramean alphabet was introduced into Afghanistan and the Panjáb after the accession of Darius, about B.C. 500. I am willing to accept this date, and to place the expansion of the alphabet, with its simple vowel system and aspirates, at about 400 B.C., after its contact with the more fully developed system of the Indian alphabet.

In this Gandharian alphabet, as thus enlarged, the vowel system was very simple. A single character, a pot-hook, like the curved top of a bishop's crozier, was the letter $a$, when initial. The other vowels, when initial,
were formed by the simple process of adding side strokes to the a, so as to represent i, u, e, and o. The same side strokes were attached to the consonants to represent the same vowels in the middle of words. There was only one set of vowels, as no special marks have yet been found to distinguish long and short vowels. As this scheme of attached vowel marks differs only from the more complete system of the Indian alphabet of Asoka in the omission of the short vowels, I conclude that it must have been derived from India. It was certainly not derived from any Aramean source, as all the Aramean alphabets are utterly deficient in the representation of vowels. If speech was given to man to enable him to conceal his thoughts, it seems equally true that all the Aramean alphabets were invented to conceal his written thoughts. I may instance the name of one of the Mahommedan kings of Delhi, which on all his coins is spelt simply Biln. Colonel Dow reads it as Balin, and General Briggs as Balban. The latter form has been generally accepted, but in an inscription which I found at Gaya, written in Indian characters, which preserve the short vowels, the name is distinctly spelt Bilbun.

Dr. Taylor, after discussing the different names that have been proposed for this alphabet by other writers, comes to the conclusion that "on the whole the name Indo-Bactrian seems less open to objection than any other." The name of Bactrian, which was suggested by Mr. Thomas, "takes no account," he says, "that this alphabet was not only the alphabet of Bactria, but still more emphatically that of Afghanistan and the Panjâb, whence its chief monuments have been obtained." (II. 258).

I object most emphatically to the propriety of this
name of *Indo-Bactrian*, for the simple reason that not a single inscription in this alphabet has yet been found to the north of the Hindu Kush, or Indian Caucasus. The native legends on the barbarous coins of Antiochus, Euthydemus and Hyrkodes are all expressed in a different form of Iranian characters, which has been called Chaldæo-Pahlavi. They agree in many of the letters with the legends on the Satrap coins of the Akhæmenian kings of Persia, and with those on the coins and the seal-ring of Phrataphernes, Satrap of Hyrkania in the time of Alexander. Most of the letters also agree with those of the Arsakidan and Sassanian coin legends and inscriptions. I refer specially to the coins of the Arsakidans Mithridates and Volagasa, and of the Sassanians Artaxerxes, Sapor and Varoranes, and also to the inscriptions of Hajiâbâd. But this alphabet, which was certainly used in Bactria, and in all the provinces of the Persian and Parthian empires to the north and to the west of Ariana or Afghanistan, has not much in common with the more extensive and more elaborate Gandharian alphabet. The use of the Gandharian alphabet is confined to the south of the Indian Caucasus, where it is found in the Asoka inscriptions at Shâhbâzgarhi and Mânsra, and on all the coins of the Greek kings of Ariana and India. The name of *Indo-Bactrian* is, therefore, both misleading and improper.

In the Indo-Greek series the square copper coins of Demetrius give the earliest coin legends that have yet been found in Gandharian letters. But the fact that the language of the inscriptions, with the pure Indian titles of *Mahârâja* and *Aparajita*, is Indian and not Bactrian, is sufficient to set aside the Bactrian claims. The quarter circle copper pieces of Agathokles, which are of about the same age,
spell the king's name in Gandharian letters as Akathukreasa, while the Indian legends give Agathukleasa. I note the same change of k for g in some of the early coins of Taxila, which have Negamā in India characters and Nekama in Gandharian characters. [See Plate III.]

As all the inscriptions in the Gandharian or Eastern Iranian characters are in the Indian language, so all those in the Chaldæo-Pahlavi or Western Iranian characters are expressed in the Iranian court language of the Arsakian and Sassanian kings. On these latter we find malkā and malkān-malkā instead of the Indian mahrāja and rājā-dirāja. It is admitted that both of these alphabets, which might, perhaps, be called the Medo-Iranian and the Indo-Iranian, were derived from an Aramean source, but the Eastern alphabet has been so much modified by contact with the more complete and elaborate system of India, that it shows much less distinct traces of its origin than the Western alphabet. I believe that the two forms were originally one alphabet, which was in general use in the time of Darius throughout the Persian empire from the shores of the Ægean Sea to the Eastern limits of the Panjâb.

As the Gâthas, or Hymns of the Avesta, are considered by all Zoroastrians to have been composed by Zoroaster himself, they must have been committed to writing in some cursive form as early as the time of Darius Hystaspes. A script named Kharosti, which was read from right to left, is said to have been one of the forms taught to the youthful Buddha. As the name was derived from the inventor of the writing, I think it probable that the name of Zoroaster, or Zardusht himself, may have been

---

preserved in the term Kharosti, as the inventor or introducer of that particular form of writing. The Kharosti alphabet, under this view of its origin, would naturally have penetrated into every country under Akhemenian rule. In the provinces directly subject to Persian influence it would have remained almost unchanged; but in the provinces bordering on India, that is throughout Ariana, where the Indian language prevailed, the alphabet was no doubt modified and enlarged to suit the requirements of Indian speech.

The earliest examples of the Gandharian alphabet that have yet been found are the edicts of Asoka at Shâhbâzgarhi to the west, and at Mânsera to the east of the Indus. These may be dated about B.C. 250. The copper coins of Demetrius and Agathokles, B.C. 200, have legends in the same characters. Dr. Taylor places the disuse of the alphabet at the end of the first century, A.D. [II. 259], but he has overlooked the fact that there is a long inscription of Huvishka, the successor of Kanishka, on the Wardak vase, which is dated in the year 51, or A.D. 129, counting from 78 A.D. But the character was in use still later, as there is a short inscription dated in s. 68 from Fatahjang, another dated in s. 84 from Hashtnagar, and a third from Panjtâr, dated in s. 122, or A.D. 200, which I published in 1854. But as there are no inscriptions of Vasu Deva in this character, it seems probable that its decline had already begun in the latter half of the second century A.D. All the known coins which can be attributed to the third century bear corrupt Greek legends with some Indian letters in the field.
THE INDIAN ALPHABET.

The Indian Alphabet was in use throughout Northern India at the same time as the Gandharvan alphabet. The earliest known examples of both alphabets are the inscriptions of Asoka and the coins of Agathokles. The Pillar inscriptions of Asoka show a highly developed scheme, in which all the long and short vowels are complete. All the letters are reduced to the simplest rigid forms, composed of straight lines and portions of circles. The words also are separated from each other.

As early as the time of Asoka this alphabet had already been arranged in the form that is still in use, in which the consonants are divided into seven groups according to their respective sounds. The seven divisions comprise: 1. Gutturals; 2. Palatales; 3. Cerebrals; 4. Dentals; 5. Labials; 6. Semi-vowels; 7. Sibilants. This arrangement is attributed to Panini, shortly before the time of Alexander. The proof of the fact was discovered by myself in the arrangement of the pillar-bases of Buddha's canopied walk on the north side of Asoka's temple at Buddha Gaya. The canopy which covered the long-terraced platform was found to have been supported on two rows of pillars, eleven pillars in each row. The bases of the pillars, which are still in situ, were marked in regular succession with vowels in the south row, and with eleven consonants in the north row, all of the Asoka alphabet. It is therefore certain that this highly elaborate alphabet must have been in use for a long time prior to the reign of Asoka. Perhaps B.C. 600 may be accepted as the most probable date of its original formation.

The origin of the Indian alphabet is still unsettled. According to Lassen, Dowson, Thomas, and myself, its
origin was indigenous, that is, it was invented by the people of India. But continental scholars are generally in favour of its derivation from some unknown Western source. The latest theory, which has found a strong advocate in Dr. Isaac Taylor (Alphabet I., 314), traces its source to a "South Semitic alphabet," which is supposed to have been the "ancient alphabet of Arabia Felix." I say *supposed* because no proof has yet been offered that the Sabean alphabet of South Arabia was in use earlier than the beginning of the second century B.C. This same objection has also been urged by Prof. Max Müller, that "there are no inscriptions from Arabia of a date so early as to be the prototypes of the Indian letters." To this objection Dr. Taylor can only reply, that "there is no reason why the prototype should not be *ultimately discovered* in the unexplored region of Oman, or in some other centre of primitive commerce on the shores of the Persian Gulf." I confess that the probability of future discovery seems to be exactly the other way, and that time will reveal some earlier examples of Indian inscriptions. This seems to be the more likely, as Dr. Taylor himself admits that the Indian alphabet of Asoka was already in existence long before the time of Asoka.

Dr. Taylor then proceeds to some details when he says (p. 523), "of the forty-two Indian letters, the parentage of about *four-fifths* can be assigned with *reasonable certainty,*" while there is "no character to which a *plausible* South Semitic parentage cannot be attributed." Dr. Taylor further quotes the letter *J* on the bilingual coins of Agathokles as the representative of a Greek *sigma.* Hence he sees no phonetic difficulty in referring this letter and its derivative, *Sh,* to the Sabean *Σ.* The example is unfortunate, as the letter *J* on the bilingual coins of Agathokles
has a very different form, ꝩ, which has no resemblance to a Greek Σ. On examining the Sabean alphabet of twenty-two characters, I can find only one letter $B$, which offers a certain resemblance to an Asoka letter, namely, $B$, which is a perfect square in both alphabets. Amongst the remaining twenty-one letters I can find only one, namely, $M$, which offers a plausible resemblance to the same Indian letter.

But even if there was a general similitude of the letters of the two alphabets, I should rather conclude that the Sabean had been derived from the Indian. It is admitted that the Sabeans were great traders, and that through them the products of India reached Alexandria, but there is no proof that they traded direct with India. On the contrary, it seems more probable that the Indian goods were conveyed to the Persian Gulf, and to the coast of Arabia, as far as Aden, by Indian vessels. In the Baveru Jataka, Babylon Jataka, we have an account of some Indian seamen, who carried a peacock for sale to the "land of Baveru." 26 In the Persian cuneiform edicts of Darius, Babylonia is called Babiru. From these Indian merchants the Sabeans might have derived their alphabet.

That the ancient Indians could make long coasting voyages by sea, we learn from the fact of the Indian conquest and occupation of Java, as far to the East as Babylonia is to the West of India. This conquest was shortly followed by the introduction of the alphabet and religion of India, the monuments of which still remain in the inscriptions and sculptures of Java. What the Indians are known to have done in the East, they may be presumed to have done in the West. If they could plant their alphabet in Java or Yava-dwpta, 1,600 miles to the East of

---

26 Prof. Rhys Davids, in Babylonian and Oriental Record, iv. 7.
the mouths of the Ganges, they may have done the same in Sabea, about 1,600 miles to the West of the mouths of the Indus.

It seems not improbable that this old Indian alphabet, when it was first framed or adopted, did not possess any of the cerebral letters. But their want must have been felt very early to meet the requirements of aboriginal words. Such words as vata, the Bar or Banian tree, and Khadga (Kharg) the Rhinoceros, would seem to show that the cerebral letters $t$ and $d$ were additions to the original alphabet to differentiate the sounds of these letters in indigenous words. In the Eastern inscription of Asoka there is only one sibilant, as in the word sususa, which in the Western texts of Gândhára and Mânséra is written with all three sibilants as susrisha. 27 It is quite possible, however, that these sibilants actually existed in the alphabet, but were not used, because not required, in the Indian Pali texts. The palatal $s$ is, however, found at Kâlsi. But whatever may have been the source of the consonants, it is quite certain that the Indian system of vowels was indigenous.

The Indian alphabet of Asoka is used on the Greek coins of Pantaleon and Agathokles, on several of the early native coins of Taxila, and on all the native inscribed coins from the Indus to the Ganges. M. Senart calls it simply the "Indian alphabet," while Dr. Isaac Taylor prefers the name of the "Asoka alphabet," which I also prefer, as it certifies the date of the alphabet. Mr. Thomas, and, I believe, also Dr. Burnell, named it the "South Asoka," from some unfounded idea that it was originally framed in Southern India. But, so far as I am aware, not a single

27 Shâhbazgarhi text; Edict xi., line 28.
inscription in the true Asoka character has yet been found in Southern India. One version of the Asoka Edicts exists at Girnar, in West India, and other versions at Dhaulagiri and Ganjam, in East India. Some short inscriptions have also been found in Ceylon, but they were carried there direct by Asoka's son, Mahindo, who reached the island by sea, from the port of Charitrapura, in Orissa.

COINS OF ANCIENT INDIA.

The earliest Indian coins are small flat pieces of silver, either square or round, adjusted to a certain fixed weight of somewhat more than fifty-six grains, named Kārsha. The coin itself was called Kārhāpana, from Kārsha, the weight, and ṛpana, custom, use. As Kārsha also means "a market," the full name is equivalent to the "Kārsha of commerce," or of "common use," or in other words the "current Kārsha." But the Sanskrit form of Kārhāpana, which has been preserved in the kopāṇiov of Hesychius, was usually shortened to the Pāli Kāhāpana which is the general name found in the Buddhist scriptures, as well as in the cave inscriptions of Western India. But in common use it was still further shortened to Kāhan, and in this form it has survived in Bengal until the present day. These silver punch-marked coins are found all over India, from Kabul to the mouth of the Ganges, and from the Himalaya Mountains to Cape Comorin. There were 200 specimens in the South Indian collection of Mackenzie, 500 in Masson's Kabul collection, 373 in Stacy's North Indian collection, 227 in the British Museum. About 2,000 have passed through my hands, and altogether I have seen between 4,000 and 5,000 specimens.

The value assigned to the Kārhāpana in the ancient
COINS OF ANCIENT INDIA.

law-books agrees exactly with that of the Kāhan of the present day. The ancient Kāhāpāna was valued at 16 panas of Kauris (cowree shells), each pana being equal to 80 cowrees or the same number of raktikas or ratis of copper. The present Kāhan contains 16 pānas, each of 80 cowrees. From these data we can readily ascertain the value of the copper panas and the silver Kārshāpāna with their subdivisions.

The mode of fabrication is evident at once from an inspection of the coins. A piece of silver was first beaten out into a flat plate of about the thickness of a shilling, or somewhat thicker in later times. Narrow strips of about half an inch or more in width were then cut off. Each strip was then cut into separate pieces of the same weight, of about 56 grains, and a final adjustment of the weight was made by cutting small bits off one or more corners of the heavier blanks. The marks of the chisel still remain on the edges of the thicker pieces, which were broken off when the cut did not go clean through the strip of metal. The earliest specimens are generally thin and broad, and of irregular shape. Some are oblong, and some are nearly round; but all are light in weight, and are usually very much worn.

How old these punched-marked coins may be it is difficult to say. They were certainly current in the time of Buddha, that is, in the sixth century B.C. But I see no difficulty in thinking that they might mount as high as 1,000 B.C. They certainly belong to the very infancy of coinage. The only money that could have preceded them would have been blank pieces of silver, which were weighed out, just as Abraham weighed out to Ephron the Hittite 400 shekels of silver, current with the merchant, as the price of the cave of Machpelah.
In a former work I have given all the data in detail from which I determined the weight of the Indian *rati*, or red seed of the *Abrus precatorius* or "wild liquorice." The full weight I found to be 1·88 grains. The *Mâsha* (or "bean"), of 8 ratis, would therefore be 14·64 grains, and the *Kârshâpana* of 4 mâshas would be 58·56 grains. But none of the coins reach this full weight. During my career, I have examined more than 2,000 of these silver pieces. The 20 best specimens of my collection averaged just 55 grains, the heaviest only reaching 56·5 grains. But by far the greater number of these punch-marked coins are so very much worn that the averages obtained by Sir Walter Elliot, 47·10; by Mr. Thomas, 47·69; and by myself, 47·82, from upwards of 800 coins, show how very long they must have been in circulation. I possess one coin which is so much worn as to weigh only 34 grains. But as my 20 best coins give an average of 55 grains, while 10 average 55·6 grains, and one reaches 56·5 grains, I have no hesitation in fixing the original mint issue of these pieces at somewhat more than 56 grains, or say 57·6 grains, which agrees exactly with 32 rati seeds of 1·8 grains each. I adopt these figures on account of their convenience, as the smaller figure is a finite fraction, while the *pala* or *nishka* of 576 grains becomes exactly one-tenth of a Troy pound of 5,760 grains. The gold *suvarṇa* and the copper *pana*, with their divisions, are also whole numbers.

The weights of most of the Hindu coins, as given by Manu [Code, viii.—131-32, &c.], are all raised from the seeds of plants, which still exist for approximate verification. These are:—

I. The red-and-black berry of the *Gunaṇja* plant (*Abrus precatorius*, or wild liquorice), which is usually called *Rati*
or Raktika, the "Red," but is also known as the Krishna, or the "Black," from a black spot at one end. Its weight, as determined by myself by many weighments of thousands of seeds from all parts of India, is 1.8 grain.

II. The seed of the Masha (the big bean or Phaseolus), whose weight is usually accepted as equal to 8 Ratis, or 14.4 grains. There are, also, small Mashakas of 2, 3, and 5 ratis each.

III. The seed of the Belleric Myrobolan (Terminalia Bellerica), known as amalaka or Karsha-phala, that is the "Karsha-fruit," which reaches up to 140 grains in weight, being that of the copper Karshapana.

Copper.—The unit of the old copper-money was the pana, or Karshapana, which, according to Manu, was equal to one Karsha, or 80 raktikas of copper in weight. The derivation given for the name is from Karsha, the weight, and apuna, "custom or use," that is, the "current Karsha." In Bengal, however, where the name still exists, the pana (vulgo pun), is believed to mean "a handful" of cowrees from pdni "the hand." This derivation is plausible, as the pana is usually valued at 20 gandhas or 80 cowrees, which actually form a very good average handful.

The divisions of the pana referred to in the Law Books are 1/2, 1/3, 1/6, which are assigned as ferry tolls. The pana itself was the usual daily wage of the lowest class of servants, in addition to their food. The fines for various offences assume a decimal scale of 1 1/2, 2 1/2, 5, 10, 12 1/2, 25, 50, 100, 200, 250, and 500 panas. I possess specimens of the pana, and its multiples and divisions, varying from 1 1/2 down to 1/95, or from 250 grains down to 9 grains. But,
perhaps, the lower values were generally paid in cowreces. Some small pieces from Ujain and Eran, in Malwa, are actually less than 4 grains in weight, and were most probably worth only 2 cowree shells each.

The tale of Copper coins was, therefore, as follows:—

<table>
<thead>
<tr>
<th>Cowrees</th>
<th>Panas</th>
<th>Names</th>
<th>Weights</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3/8 pana</td>
<td>Ardha-kākini</td>
<td>5</td>
</tr>
<tr>
<td>10</td>
<td>1/4 pana</td>
<td>Kākinī, or Vodri</td>
<td>10</td>
</tr>
<tr>
<td>20</td>
<td>1/2 pana</td>
<td>Ardha-pañā.</td>
<td>20</td>
</tr>
<tr>
<td>40</td>
<td>1 pana</td>
<td></td>
<td>40</td>
</tr>
<tr>
<td>60</td>
<td>1½ pana</td>
<td></td>
<td>60</td>
</tr>
<tr>
<td>80</td>
<td>2 pana</td>
<td>PANĀ or KĀRSHĀPANA</td>
<td>80</td>
</tr>
<tr>
<td>100</td>
<td>1½ pana</td>
<td></td>
<td>100</td>
</tr>
<tr>
<td>120</td>
<td>1¾ pana</td>
<td></td>
<td>120</td>
</tr>
<tr>
<td>140</td>
<td>2 pana</td>
<td></td>
<td>140</td>
</tr>
<tr>
<td>160</td>
<td>2 panas</td>
<td>Dwi-pañā</td>
<td>160</td>
</tr>
</tbody>
</table>

The old square punch coins of copper, and all the one-die coins from Taxila, are panas. The latter are very consistent in maintaining a weight of 140 to 144 grains. The square copper coins of Pantaleon and Agathokles, and the contemporary native coins of two dies, are all pieces of 1½ pana, weighing about 180 grains. Copper coins of higher values are rare, and so also are the divisions of the pana, and more especially the ½ piece or Kākint to which H. H. Wilson gives the name of vodri. As this coin weighs only 35 grains, the name of vodri is very suggestive of the Scotch “bodle.” Is bodle a gipsy word?

The tale of silver coins is limited to three sizes, the Kārshāpana, with its half and its quarter. Mention is also made of a silver satamāna of one pala or 576 grains. As the word means 100 mānas or “measures,” the single māna must have been a very small piece of 5.76 grains.
This would be a rather light piece of 3 ratis, which is also spoken of as one of the silver māshikkas. The name of pādika is also found in the Bombay Cave inscriptions as being one hundredth part of a suvarṇa. As the suvarṇa weighed only 144 grains, the pādika would not have been a gold coin. But as the word means "one quarter," the pādika must have the fourth part of the silver Kārshāpāna, of which 25 went to the suvarṇa. Now, the quarter Kārshāpāna is the well-known silver tangka, of which we possess many specimens. Its normal weight was, therefore, 14.4 grains, or just the same as the Persian Dauvākṣṇ, which was one-sixth of the siglos of 86.4 grains. Both name and weight, therefore, correspond with the Indian tangka. The Kārshāpāna was also called dharana, probably meaning a handful of 16 copper paṇas, from dhṛi, "to hold." But a more common name was purāṇa, or "the old," which could only have been imposed upon it after the Greek occupation of the Panjāb. Burnouf saw the importance of this name, as he says that "the Purāṇa is a piece of money belonging to a system purely Indian, and therefore anterior to the system of the Greeks of Bactriana." 29

The following list gives the names and weights of the ancient silver coins:

<table>
<thead>
<tr>
<th>Panaś.</th>
<th>Kāraṇas.</th>
<th>NAMES.</th>
<th>WEIGHTS.</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>¼</td>
<td>Tangka, or Pādika . . . . . .</td>
<td>Ratia.</td>
</tr>
<tr>
<td>8</td>
<td>¼</td>
<td>Kona . . . . . . .</td>
<td>8</td>
</tr>
<tr>
<td>16</td>
<td>1</td>
<td>Kārshāpāṇa, Dharana, Purāṇa</td>
<td>16</td>
</tr>
<tr>
<td>160</td>
<td>10</td>
<td>Śatamāna or Pala . . . .</td>
<td>82</td>
</tr>
</tbody>
</table>

29 Burnouf, Introduction à l'histoire du Buddhism Indien, p. 147, note.
The fact that the satamāna, or silver pala, contains 10 kārshapana shows that the silver reckoning was made on a decimal scale.30 This is still further developed in the gold coins, for as the suvarṇa contained 25 silver kārshas, the gold pala or nīshka of 4 suvarṇas must have contained 100 silver kārshas. No specimens of the satamāna have yet been seen, although it is mentioned by Kātyāyana, as well as by Manu. The only known silver coins are the Kārshapana, or Kāhāpāṇa, with its divisions of one half and one quarter, and a few specimens which must be eighths. All of these are mentioned in the Mahāvānśa, where the monks address the people: “Beloved! bestow on the priesthood either a Kāhāpāṇa, or half, or a quarter of one, or even the value of a māsa.”

The gold money of Northern India consisted of the suvarṇa and the nīshka. No specimens of either have yet been found; and it seems probable that the larger piece may have been only an ingot of gold of a fixed weight. In the Satapatha Brāhmaṇa [xii. 7. 3], mention is made of a “satamāna of yellow gold,” hiranyam suvarṇam satamānam. But as the satamāna was equal to a pala in weight, it was only another name for the nīshka, which is itself mentioned in the Rig Veda, where the Rishi Kākshivat receives a present of 100 nīshkas, with 100 horses, and 100 bulls, from Raja Bhāvayavya. In another place [Rig Veda III-474], mention is made of a present of “ten purses” of gold (dava Kṣoṣayīḥ), given to the Rishi Garga. As kṣoṣayī = kṣa means a purse or bag, I infer that the gold was in the shape of dust, and not a coin, nor even an unstamped ingot. We know that the tribute of the Indian Satrapy

---

30 It is curious that the English troy pound is exactly 10 palas in weight, or 5,760 grains.
was paid to Darius in "gold dust" (Herod. III. 94). We know, also, that even at the present day small amounts of gold dust, of the fixed value of 8 rupees, tied up in pieces of cloth, circulate freely in the Himalayan provinces. But the Indian gold was also made into pindân, or "ingots," which, probably, were known to the Hebrews (Isaiah xiii. 10), as the "golden wedge, or tongue of Ophir." An earlier mention of the "golden ingot of 50 shekels weight" is found in the story of Achan. Now, fifty Hebrew shekels weight of gold would be exactly equal to 20 palas, or nishkas, or satamânas, a fact which goes far to prove that Ophir, or Σωφίρ, was part of India.

Although no specimens of ancient Indian gold money have come down to us, yet we know, from the Erythraean Periplus, that on the Eastern coast there was a native gold coin called Kaltis, from which the merchants derived a profit by giving Roman gold and silver money in exchange. The name seems to be the same as the Kalutti of Malayâlam, the Karanda of Ceylon, and the Kalanju of South India.31 The seed is used as a weight, which is now over 50 grains. Taking this weight as a guide, I have little hesitation in identifying the Kaltis with the gold Hûn of South India, which averages about 52 grains. The oldest gold coins noted by Sir Walter Elliot are quite plain and smooth.32 "They weigh about 52 grains, evidently derived from the Kalanju, their original name being pon, which simply means gold in Tamil, becoming hon in Kanarese, and the origin of the Mohammedan hûn." I must confess, however, that I have always looked upon

31 Walter Elliot, Coins of S. India, p. 48.
32 W. Elliot, p. 58.
hon and hūn as being the same as son, which is the spoken form of suvarna, "gold." The coin itself is called Hūna in the Nasik inscription, No. 5 of Stevenson (Bombay Pl. V).

With reference to the absolute non-existence of any very old Indian gold coins, my explanation is a very simple one. During the early centuries of the Christian era, the Roman trade with India increased to such an extent that the annual balance in favour of India amounted to nearly half a million pounds sterling. This was made good by sending actual cash, both in gold and silver to India. Pliny's words are "minimâque computatione millia sestertium annis omnibus India et Seres peninsulaque (Arabia) imperis nostro adamant." 33 "At the lowest reckoning one hundred million sesterces (about £800,000) are taken from us every year by India, the Seres, and Arabia." Gibbon (c. 2), reckons the amount as "upwards of £800,000;" and in a note he adds, "in another place Pliny gives half that sum, quingenties H.S. for India, exclusive of Arabia." What became of this great influx of gold? My explanation is that in North India it was received by the Indo-Scythian Kushán Princes, Wema Kadphises, Kanishka, Huwishka, and Vāsudeva, whose gold coinage is now found in such large quantities. Their gold coins are of the same weight as those of the early Cæsars. In South India the gold coin circulated just as it came, which satisfactorily accounts for the frequent finds of Roman gold coins at the present day, and the total absence of any early Indian gold coins.

In North India the great Gupta kings introduced their own coinage, while they still adhered to the Roman

standard and the Indo-Scythian types. In South India, however, there appeared the new gold coins called Ḥūns, which would seem to have been intended for half-dinârs of the Roman standard. At a later date in North India a few Hindu chiefs issued gold coins, which, being heavier than the Ḥūns, were perhaps intended for half suvarnas. But the issue was chiefly confined to the Chandel Rajas of Mahoba, and the Rathor Rajas of Kanauj.

The gold coins of South India, the Ḥūn and its subdivisions, are very numerous. I take the Ḥūn to be the original "gold Kârsha," of 57·6 grains, which has now dwindled down to 52 and 53 grains. I find that 10 of the old Ḥūns, published by Walter Elliot, give an average of 55 grains, while the gold funams, or "tenths," average 5·75 grains. A few still older pieces, which range from 63 to 66·4 grains, give an average of 64·9 grains. But these are, perhaps, half-suvarnas, of 72 grains, full weight. The oldest of them are broad, thin, punch-marked coins, of more than 66 grains. They bear the names of Châlukya, and are assigned by W. Elliot to the fifth and sixth centuries A.D. I acquiesce in this date, as the inscribed silver coins that were found in their company are of about the same period.

The actual age of the heavier Ḥūns, or gold Kârshas, is not known; but I am able to fix the date of one of the most remarkable specimens as certainly not later than the eleventh century. In the history of Kashmir it is stated that Raja Harsha Deva "liked the customs of the south, and introduced coins like those current in Karnâta." 34 Now I possess a gold coin of this king, with the name

---

34 Raja Tarangini, B. vii. (Translation by Jogesh Chunder Dutt, p. 288).
of "Sri Harsha Deva" on one side, and on the other a
caparisoned elephant walking to the right, which is an
evident copy of one of the Karnāṭa gold coins of the
same type. [See W. Elliot's Coins of South India,
Plate III., 109; and Marsden Numismata Orientalia,
Plate XLVIII., 1059.] But the Kashmir coin is a half
suvarṇa, of 72 grains, while the southern coin is a Ḥūn, of
58 grains. Harsha Deva reigned from A.D. 1089 to 1101.

The gold coins of ancient India were as follows:—

\[
\begin{array}{ll}
\text{Grains.} & \\
1\text{ Hūn, or Fanam} & 5.28 \\
\frac{1}{2} \text{ Hūn, or Māda} & 13.20 \\
\frac{1}{4} \text{ Hūn, or Pratāpa} & 26.40 \\
1 \text{ Hūn [Varāha, or Pagoda]} & 52.80 \\
1 \text{ Kārsha (full weight)} & 57.60 \\
\frac{1}{4} \text{ Suvarṇa} & 72.00 \\
1 \text{ Suvarṇa} & 144.00 \\
1 \text{ Nishkā, Pala, or Satamāna} & 576.00
\end{array}
\]

In former days it was the general opinion of classical
scholars that the art of coinage had been introduced into
India by the Bactrian Greeks. Some twenty years ago
I pointed out a passage of Quintus Curtius, which records
a gift of eighty talents of coined silver, which was made to
Alexander himself on his arrival at Taxila by the native
Raja of the country. The term used by Curtius is signati
argentī, which fortunately admits of no other meaning
than that of coined silver.” I argued also that the
types, the shape, and the standard of the earliest Indian
money, the square punch-marked silver, and the square
one-die copper coins could not have been copied from the
Greek money. Since then I have discovered two monu-
mental evidences of the antiquity of these square Indian

35 Curtius Vit. Alex., xviii. 18—41.
coins in the Buddhist sculptures of Mahâbodhi and Bharhut. The former is as old as Asoka himself, B.C. 250, having been executed during his reign; the latter are somewhat later, or about B.C. 150. In both of these there is a representation of the famous story of the Jetavana, or purchase of the garden of Prince Jeta by the merchant, Anâtha. According to the legend the purchaser had to cover the whole surface of the garden with a layer of gold coins. In both sculptures the servants of Anâtha are seen laying the coins, edge to the edge, as the inscription states. As all the pieces are square, they clearly represent the punch-marked money that was current in the time of Asoka. I have given representations of both sculptures in the frontispiece.36 The story will be found in the Appendix.

That the native square copper coins were contemporary with the similar shaped copper coins of Pantaleon and Agathokles was lately proved by the discovery of nine pieces of Pantaleon and fifteen of Agathokles, along with eighty-four native pieces of the single-die, and twenty-seven of the double-die coins.37 Now, it is remarkable that the single-die coins were all of the indigenous weight of eight ratis, or 140 grains, while those of the Greek kings and the double-die native coins were of 100 ratis, or 180 grains.

In favour of my arguments to the priority of a native Indian coinage, I pointed to the name of purâna, or "old," which was applied in the Buddhist sutras to the silver punch-marked Kârshas. I then asked "under what possible circumstances could the Indian silver

\[36\] Plate A.
Kārsha have been called 'old' at the time of the compilation of the Buddhist sutras, about 200 B.C.?" I replied that they must have received this name when they came in contact with the Greek money of Alexander's successors. The round Greek drachms and hemi-drachms were the new silver money, and the square native Kārshas were the old money, or the purāṇas.

My other argument against the Greek origin of the punch-marked coins was, that any Indian coins copied from the Greek money would have been in silver, and of the Greek standard in weight. This argument has been satisfactorily proved by the discovery of the coins of the native princes, Dhāra-Ghoshā, Mahādeva, Rudra-Varma, and Amogha-bhūti of the Greek standard, with inscriptions on both sides. As these coins were found in company with the Greek Philopator hemi-drachms of Apollodotus they must have been current at the same time. But the old punch-marked coins were also current along with them, as a few specimens much worn were some years earlier found in company with hemi-drachms of Antimachus II., Philoxenus, Lysias, Antialkidas, and Menander.\(^{38}\)

NORTH INDIA.—PUNCH AND CAST COINS.

Plate I.

In Plate I., Figs. 1 to 15 are silver Kārshāpanas or Purāṇas from several different places. Figs. 16, 17, 18 are half Kārshāpanas or Konas, and Fig. 19 is a quarter Kārshāpana, called Tangka, and also Pādika. On the earliest specimens, or, perhaps, I should say, on those

\(^{38}\) Sir E. C. Bayley was my authority for this fact.
which have been the shortest time in circulation, the punch-marks are confined to one side of the piece. As a general rule the best preserved coins are not much worn, whereas those that are nearly worn smooth betray their long circulation by their light weight. Fig. 15 is a good example of long wear, as it weighs only 34 grains, the original weight having been not less than 56 grains. This coin was found, along with two others weighing 35 and 42 grains, in the deposit at the foot of the Vajrāsan, or throne of Buddha, in the temple of Mahābodhi, at Buddha Gaya. As this deposit was made about A.D. 150, during the reign of the Indo-Scythian king, Huvishka, we learn that punch-marked coins were still in circulation at that time. The three coins weigh 111 grains, giving an average of only 37 grains. But, as the general average of upwards of 800 of these coins from all parts of India is upwards of 47 grains, I am willing to accept a loss of 19 grains in weight in about 600 years circulation, or, roughly, from B.C. 450 to A.D. 150, as very exceptional. These three coins show a loss of upwards of 3 grains per century, while the average loss of these punch-marked coins was not more than one grain and a half in a century. It must be remembered that they were all hardened with copper alloy.

These punch-marked coins are generally known in South India by the name Sālāka, which is usually applied to a domino, as well as to the oblong die which is used at the game of pachisi. I infer that this name has been given them partly on account of their oblong form, and partly on account of the marks upon them. At first the stamps were punched quite clear of each other, and on one side only. But as new stamps were found necessary they were punched over the old ones, until on some pieces it
is difficult to trace all the original forms. As a general rule the opposite side was very sparingly stamped, as on No. 10, or sometimes only one stamp was made on the reverse, as on Nos. 12 and 14.

I have often thought that where only one stamp is found on the reverse it might possibly be the peculiar symbol of the place of issue. I found, for instance, that about one-third of the silver punch coins discovered at Taxila bore the same stamp placed alone on the reverse, and as this particular stamp is found as the full reverse of the small gold coins of Taxila, I think that my conjecture may be correct. This peculiar stamp is seen on the reverse of the silver coins 1 and 2 of Plate II., and on the gold coin No. 18, all from Taxila.

A second symbol I have noted as being often placed alone on the punch-marked coins from Benares and the surrounding districts. This is well shown on the reverse of Fig. 14, Plate I. It looks something like a bale of cotton, but I cannot suggest its application to any particular place.

A few of the symbols are no doubt very suggestive, but the most that can be said in their favour is, that they are not impossible. The following are a few of these possibilities:

1. A Bull or Cow [Sk. Vatsa = Vacca] a very common symbol on the coins of the Kosambi, the capital of the Vatsas, or, as they were also called, the Vatsa puttriyas.

2. An armed soldier [Sk. Yoddha] I would refer to the Yaudheyas, who derived their name from Yuddha, "battle," as they were renowned as warriors even in the time of Pânini.

3. A Tree, Udumbara fig tree (Ficus glomerata), on the
coins of the Odumbaras, who are also mentioned by Pāṇini.

4. A *Square Tank*, with or without fish, might be referred to the holy Pushkara or Pokhar, "a tank," near Ajmer, or to the famous city of Pushkara, or Pushkadāvati (Peukelaotis), near Peshāwur.

5. A *Snake* [Sk. Ahi] might refer to the ancient city of Ahi-chatra, or Ahi-Kshetra, which was famous in both Buddhistical and Brahmanical story.

6. A *Peacock* [Sk. Mayūra] might refer to the city of Mayūrapura, or "Peacock-town," now Maya-pura, near Hardwar. The old town of Mo-yu-lo, or Mayūra, is described by the Chinese Pilgrim, Hwen Ynsang, as being 20 li., or upwards of three miles in circuit.

7. A *Palm tree* [Sk. Kharjūra,] might be referred to the old capital of the Chandels called Kharjūr-pur.

8. A *Lotus flower* [Sk. Padma], might refer to Padmāvatī, the old title of the famous fortress of Narwar, the capital of Raja Nala.

9. The Pātali, or Trumpet Flower, might refer to Pātaliputra, or Pālibothra, the capital of the Mauryas, on the Ganges.

10. A *Female* figure, standing to front, with five rays ascending from her head. The number five, or panch, may, perhaps, refer to Panchāla, the capital of Raja Drupada, whose daughter, Draupadi, was married to five husbands, the Pānch Pândava. The figure occurs on several of the actual coins of Panchāla.

Some of the kings also placed on their money punning allusions to their names, thus:

Sūrya Mitra and Bhānu Mitra have each got a representation of the "Sun" [Sk. Sūrya and Bhānu].
Chandra Gupta has a "Crescent," [Sk. Chandra, the Moon].
Kumára Gupta has a figure of the goddess Kumári Devi.
Raja Hasti has an Elephant [Sk. Hasti.]

But amongst all these numerous symbols, I do not find one that points unmistakeably to Brahminism, such as the trident of Siva, or the shell of Vishnu. But I notice several symbols that were certainly Buddhist. Of these, the most remarkable are the Chaitya symbol, and the holy Tree, surrounded by a Buddhist railing. The Swastika occurs, but it was common to both religions. The Pentagonal Star is also seen; but both of these symbols have also been found in other countries.

Another explanation of some of these symbols has struck me as possible, or perhaps, even probable. I have a suspicion that several of the symbols may have been the private marks of ancient money-changers. At the present day these men are still in the habit of placing their own particular stamps on the rupees that pass through their hands, so that when any of the coins come back to them again, they know their value without making a second testing. Now, the old money changers might have had symbols referring to their own names, thus: the "Sun," for Sûrya Dâs; a "Snake," for Nâga Sen; and an "Elephant," for Gaj Sinh. Bir Deo might have had a "soldier," Gopâl a Bull, and Khajur Varma a "Palm" tree (Khajur). The number of these symbols is so great, nearly three-hundred, that their origin was probably due to several different causes. My friend, Mr. W. Theobald, has been making a complete collection of them, which will shortly be published, with his explanations of most of them.
In Plate I. I have given only a selection of the most striking examples.

The punch-marked copper coins are much rarer than the silver coins. At least, one-half of those that I have seen are simple forgeries of the silver coins, which betray themselves by their weight (that of the fifty-grain Kārsha), and sometimes by the silver still adhering to them. The finest copper specimens that I have got all came from Eran, see Plate XI. But in Plate I. I have given four specimens of different weights, three of which are nearly worn smooth. Some of them must be of early date, as the marks are few, and apart from each other, and are confined to one side of the coin.

The following is the scale of the copper coins:

<table>
<thead>
<tr>
<th>Weight</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>½ paṇa, or ½ kāκiṇi</td>
<td>10 ratis or 18 grains</td>
</tr>
<tr>
<td>¼ paṇa, or 1 kāκiṇi</td>
<td>20 &quot; 36 &quot;</td>
</tr>
<tr>
<td>¼ paṇa, or ardha-paṇa</td>
<td>40 &quot; 72 &quot;</td>
</tr>
<tr>
<td>1 PANA</td>
<td>80 &quot; 144 &quot;</td>
</tr>
<tr>
<td>1¼ paṇa</td>
<td>100 &quot; 180 &quot;</td>
</tr>
<tr>
<td>1½ paṇa</td>
<td>120 &quot; 216 &quot;</td>
</tr>
<tr>
<td>1¾ paṇa</td>
<td>140 &quot; 252 &quot;</td>
</tr>
<tr>
<td>2 paṇas</td>
<td>160 &quot; 288 &quot;</td>
</tr>
</tbody>
</table>

The four specimens in the Plate are:

No. 20—weighing 159 grains a heavy Paṇa
No. 21 " 250 " = 1¼ paṇa
No. 22 " 229 " = 1½ "
No. 23 " 79·5 " = a heavy ¼ paṇa.

The square single-die coins of Taxila are Paṇas of 144-grains. The square double-die coins, and also those of Pantaleon and Agathokles, are pieces of 1¼ paṇa of 180 grains.

The cast coins of ancient India are very numerous.
They are all of copper, and, from the scarcity of the copper punch-marked coins, I am led to believe that they must have been current together with the silver coins. Nos. 24 and 25 are double coins, having never been separated since taken from the mould. They show an Elephant and Chaitya, and are found all over North India. No. 26, with a Bull, and No. 27 with a Lion and Flagstaff, are rarely found in the Panjāb. No. 28 is found chiefly about Benares. It is of six different sizes, weighing respectively, 107, 76, 26, and 11 grains. No. 29 shows a Bodhi tree surrounded with a railing. These coins are rather rare. No. 30 was obtained at Kosam, but it shows the six bulls of the Malwa coins from Ujain, Eran and Besnagar. The cast coins are rare at some places, and common at others. There are few cast coins at Taxila, but at Ayodhya all the earliest coins are cast ones.

**COINS OF TAXILA.**

Plates II. and III.

Just twenty-five years ago I identified the present Shāh-
dheri or Dheri Shāhān, that is, "the royal residence," with the ancient Taxila. The old fortified city, which is still surrounded by stone walls, is called Sir-kap, which all the people agree in stating is only a slight alteration of Sir-kat, or the "cut head." Now this is the exact meaning of Taksha-sira or Takha-sira, which was the Buddhist form of the name of Taksha-sila or Takha-sila, from which the Greeks made Taxila. The change of name to Taksha-sira was made to suit the legend of Buddha having cut off his head to offer to a hungry tiger.

---

The legend now exists in a changed form, which makes the Raja Sir Kap a gamester, who used to play with strangers for "heads," which he always won by fraud, and immediately cut off.

The coins found on this site are very numerous, beginning with the earliest punch-marked silver pieces, and the square copper pieces of single dies, and of the standard peculiar to India, all of which I take to be anterior to the Greek conquest of Alexander.

Figs. 1 and 2 of Plate II. are silver kārshas or purāṇas, of the usual punch-marked standard of over 50 grains. On the reverse of both specimens is the peculiar symbol, which I have conjectured to be the mark or sign of Taxila. See also fig. 18, where the same symbol occurs on a gold coin. Here we see the lion, or, perhaps, the tiger of the Buddhist legend, in its earliest form, which was afterwards matured on the square copper pieces of double dies, and on the square pieces of Pantaleon and Agathokles. These small copper coins are common.

Figs. 6 to 17 are single-die coins, the reverse sides being quite plain. They present some well-known Buddhist symbols, such as the Chaitya and the Bodhi tree. The Swastika also is a well-known symbol. On No. 6 I recognize a monolith standing beside the Chaitya. On No. 12 I see the plan of a monastery with its cells, and a stupa in its courtyard. On No. 13 there is a building which may be a temple. On Nos. 9 and 11 there is a pile of bales, which on No. 14 is an object of worship. On No. 17 the symbol commonly called Chaitya is the object of worship. The legend on No. 17, in Asoka characters, is Vataśwaka, of which the meaning is unknown. Vata is one of the names of a cowree shell, and as the coin is a pana of 145 grains, or 80 shells in value, it may, perhaps,
have some reference to the number 80, *asiti*. But *vata* also means "round," and may, therefore, refer to the *shape* of the coin, in which case, *swaka* or *suka* would be the *name* of the piece, "the round *suka*.

No. 15 is a cast coin, weighing 306 grains. It is, therefore, a piece of 2 panas, the only one that I have ever seen. Nos. 19 and 20 are double-die coins, with symbols on both sides.

No. 18 is a gold coin, weighing 32.8 grains. It may be either a quarter *swarna*, or a quarter stater.

Nos. 21 and 22 are cast coins, on which a snake is the prominent figure. The legend, in Asoka characters, reads *Kâdasa*, which may, perhaps, have some reference to the descendants of the serpents called *Kâdrus*.

The coins in Plate III. are all double-die pieces. Nos. 1 and 2, with the Elephant and Lion types, have already been referred to. These coins are very common, not only in the Western Punjab, but in the Kabul valley. They average upwards of 180 grains in weight; there are also smaller pieces of the same types, weighing upwards of 100 grains, and others of 68 and 70 grains. A large coin like No. 2 was found in a stûpa at *Ushkar* in Kashmir, opposite Barâhmula. It formed the sole deposit, and was probably placed there during the reign of Asoka.

Figs. 3 and 4 present an Elephant and a galloping Horse. The Horse appears to have been copied from the copper coins of Euthydemus. On No. 4 there is a Greek monogram under the horse, which may form either KA or TA. The latter might refer to Taxila.

Fig. 5 is of rare occurrence. On the obverse, between a Chaitya and a Bodhi tree, is seen an Elephant full front. The two ears are spread out to the right and left of the lobes of the head; the trunk hangs down the middle,
with a tusk on each side; while all four legs are displayed, the hind legs appearing outside the fore legs. The symbols require no description. The coins are of two kinds, thick and thin, the former weighing from 114 to 121 grains, the latter only 88 grains.

Fig. 6. The coins of this type are all thin pieces, of three different sizes, the largest weighing 100 grains, the middle sizes ranging from 58 to 64 grains, and the smallest only 27 grains. The Buddhist symbol on the obverse has a small head on the top of the middle limb. It stands on a Buddhist railing, and is flanked by a small chaitya symbol on each side.

Fig. 7 is of very rare occurrence. I have only two specimens and there is a third in the British Museum. The weight, 75 grains, is that of a half pana. The head, with short ears and protruded tongue, may be that of a Rakshasa, or "demon," as an opponent of Buddhism. There are traces of some letters over the head. The reverse is a Buddhist symbol, flanked by a chaitya symbol on each side.

We now come to a series of rare inscribed coins, which are found only at Taxila. The legends are in beautifully formed Asoka characters, both Gandharian and Indian. One word occurs on all of them. In Indian letters it is usually written Negamā, a single variant being Nigama. In Gandharian letters it is written Nekama. I take this to be the name of the piece, whether it be a coin or a weight. Nigama, like νόμος, means "custom, habit, use;" and Negamā, like νόμισμα, I take to be either a coin or weight of fixed value, as ascertained or settled by common use. Over the word Negamā there is a single stroke or bar, as if to designate one negamā. On the opposite side there is a "steelyard" very clearly represented, over which
is the word *dojaka*, in Gandharian letters on some coins, and in Indian letters on other coins. On fig. 8 this word is replaced by *rālimata*, and on fig. 11 by *antarotaka*. On fig. 12 there is only an incomplete word, ending in *dare*, in Gandharian characters.

On another class of coins, fig. 13, with a wheel, or *Dharmachakra*, on one side, there is a new legend in Gandharian letters, which I read as *pancha nekamma*, or “Five Nekamas.”

The only word now existing which has any resemblance to *negama*, or *nekama*, is *gani*, or *kani*, which, in Kashmir, was the unit from which all the coins were derived. The *Bāragani* was a coin of 12 (or properly of 12½) *ganis*; the *Panchi* was equal to 2 *Bāraganis*, or one “twenty-fiver”; 4 *panchis* made one *hat* (or *sat*) or “hundreder”; and 10 *hats* made one *Sāsnu* (sahasrānu) or “thousander.” ⁴⁰ Now the *panchi*, being one-fourth of Akbar’s *dam* of 324 grains, must have weighed 81 grains of copper, which is, in fact, the mean weight of the copper coins of Kashmir. If we take *pancha-negama* as the possible original of *panchi* (or *panchi gani*) then *negama* may be still preserved in *gana* or *gani*. As three of my coins weigh 236 grains, the *pancha nekama* averages 78.66 grains, the heaviest coin being 82 grains. Taking the true average as 81 grains, the one *negama*, or *nekama*, would have been ⁵³⁄₄ or 3.24 grains. It seems to me not improbable that the old *negami* may have been preserved in Kashmir as the *gani*.

But, unfortunately, this explanation is of no use with regard to the other names, *Dojaka* and *Rālimata*. Their weight varies from 105 to 120 grains, and their general aspect is so different from that of the other coins that it

does not seem possible that they could have been connected. Perhaps the names may be those of places, or even of men, and "Dojaka’s Token" and "Rālimata’s Token" might be the actual names of the pieces.

No. 14 is a thin coin, weighing only 57 grains. It bears the remains of a long inscription, which unfortunately is not legible.

The variant spellings with $g$ and $k$, in *negama* and *nekama*, are common to other names on the Western frontier, as in Agathamkliya, and Akathukliya, Gandhāra and Kandahar, and also in Mihir-kul and Mihir-gul. It is curious to find both spellings of *Negama* and *Nekama* in the same inscription in one of the Kānhari caves near Bombay. [Journal of Bombay Asiat. Soc. xii. 407.]

In 1884 a small parcel of 143 square copper coins, of several of the types just described, was found at Shāhyp-dheri, the ancient Taxila. Of these, 127 specimens came into my possession, and 8 others were sent for my inspection. They comprised the following kinds:—

84 Indian coins of one face only, average weight, 140·8 grains.
27 Indian coins of two faces  " 188·8  "
9 coins of Pantaleon  } 24 Greek    " 180·5  "
15 coins of Agathokles

It will be observed that the single-face coins with blank reverse are all of the Indian standard of 80 *ratis*, or 144 grains, while the two-face coins, both Indian and Greek, are the heavier standard of 100 *ratis*, or 180 grains.

As all these coins were found together, they must have been current at the same time. But as the greater number are of the Indian standard, I infer that they must belong to the indigenous coinage prior to the Greek occupation. I infer also that the deposit must have been made at an early period of the Greek rule, as shown by the pre-
sence of the coins of the two early Greek Kings, Pantaleon and Agathokles. The Greek coins preserve the Indian type of the Lion, as well as the square shape.

**Odumbara.**

**Plate IV.**

The name of Odumbara, or Audumbara, is derived from the Udumbara fig tree (Ficus glomerata). According to Pânini any country possessing these trees may be called Audumbara. There is a country of this name now called Kachh, where Pliny places a people named Odonbeores. But all my coins were found in the Northern Panjâb, beyond Lahore, and this I find is the very part of the country where the coins were discovered. Varâha Mihira twice couples the Udumbaras with the Kapisthalas; the Markandeya Purâna does the same, while the Vishnu Purâna couples them with the Traigarttas and Kûlindas. The Kapisthalas are the Kambistholi of Arrian, and their name is still preserved in the abbreviated form of Kaithal to the south of Ambâla. The Traigarttas are the people of Katoch or Kângra, and the Kûlindas are the people of Ptolemy’s Kûlindrine, or the districts on both banks of the Satlej, which are now occupied by the Kunets of Kullu and Kunâwar. The name of Kûlinda is also written Kuninda, and this form will be found on some of the coins about to be described. The country of the Odumbaras must therefore be looked for near Kângra and the Kunet districts, and there the name still exists in the rich tract between the Râvi and Biâs Rivers, comprising the forts of Pathân-

---

41 Goldstücker, quoted by Hall, Vishnu Purana, ii. 188.
42 *Nat. Hist.* vi. § 76.
ODUMBARA.
kot and Nūrpūr (or Damāri). The old fort of Damāla was captured by Ibrahim Ghaznavi. The town was properly called Dahmāri, the name of Nurpur being that of the fort, which was built or repaired by Jahāngir, and named after his wife, Nūr Jāhān. Reinaud [p. 113] calls Dahmālah the capital of Jālandhar. The district itself which gave its title to the Raja, was named Pathāna. The name is a Hindu one, being derived from Paithāna, the spoken form of Pratishthāna, which I would identify with Ptolemy’s Batanagara.

In A.D. 1573 Chota, a relative of the Raja, held Damhāri against Akbar’s general.

In A.D. 1594 Vasu Deva, Zamindār (Raja) of Mān and Pathān, rebelled against Akbar.

The coins of the Odumbaras consist of 2 silver hemi-drachms and 5 small square copper pieces. One of the silver coins, now in the Lahore museum, was found in a field near Jwāla Mukhi, in company with 3 silver pieces of the Kunindas, and 28 Philopator hemi-drachms of Apollodotus. My silver coin was obtained in the Pathānkot district, and my 7 copper coins were all found in Pathānkot itself. As they all bear the name of Odumbara, their assignment is quite certain. Their age may also be assigned, with some certainty, to the time of Apollodotus, or about 100 B.C.

Raja Dhara-Ghosha.

Plate IV., Fig. 1. R. 0·7. Weight 87·5 grains. Dupl. Lahore Museum.

Obv.—Siva, standing to front with r. hand raised to head, and leopard’s skin over l. arm; similar to figure of Herakles crowning himself. Legend in Arian
COINS OF ANCIENT INDIA.

Raja Bhanu-Mitra.

Plate IV., Fig. 12. Æ. 0·55. Weight 32 grains. Author.
Obv.—Elephant to l. Arian legend, Rajna Bhānu Mitasa.
Rev.—Bodhi Tree and two Symbols, snake below. Indian legend, [Rajna] Bhānu Mitasa.

Plate IV., Fig. 18. Æ. 0·4. Weight 16 grains. Author.
Obv.—Symbols as on reverse of figure 12. Indian legend, Bhānu Mitasa.
Rev.—Rayed disc of Sun (Bhānu) above a Buddhist railing.

Raja Vira Yasas.

Plate IV., Fig. 14. Æ. 0·75. Weight 57·5 grs. Author.
Obv.—Wheel surrounded by circle of dots. Indian legend, Rājna Koputasya (or Koptanasaya) Vira Yaṣasya.
Rev.—Chaitya surmounted by Buddhist symbol of Dharma-chakra and Triratna, with Swastika to l, and unknown Buddhist symbol to r. In field the Arian letters Rājna.

Raja Vrishni.

Plate IV., Fig. 15. Æ. 0·6. Weight 32 grains. Author.
Obv.—Pillar, with half Lion and half Elephant, surmounted by Triratna symbol, and surrounded by Buddhist railing. Indian legend, Vrishni Raja Jnāganasya bhubharasya.
Rev.—Large Dharma-chakra symbol. Arian legend, Vrishni Raja Jnāganasya bhubharasya.

Kuninda.

Plate V.

The Kuniṇḍas, or Kuliṇḍas, would seem to have occupied the hill districts on both sides of the Satlej from time
immemorial. On the coins they call themselves Kuninda, and this also is the spelling of Varāha Mihira (Bṛ. Sanh. xiv. 32, 33), who locates them with the Kulūtas and Sairindhas, or the people of Kullu and Sarhind. In another place he locates them to the east of the Madras (Madreso anyascha Kaunindah). In Ptolemy I find the name of Kulindrīne, and this spelling is suggested by the Kulīnda of the Vishnu Purāṇa, and the Kauṇīnda of the Mārkandeya Purāṇa. From their position I have no hesitation in identifying them with the Kunets of the present day, who number not less than 400,000 persons, and form the bulk of the population in Kullu, and all the hill districts around Simla.  

As before, the greater number of their coins are found in the country between Ambâla and Sahāranpur. I think it probable that their capital may have been at Srūghna (or Sugh) on the west bank of the old Jumna, where the high road from the Punjâb to the eastward had crossed the river for many centuries.

The earliest coins are distinguished by Buddhist symbols only in addition to the name of Kuninda; but the later coins have the trident and battle-axe of Siva, and want the tribal name.

There is a single coin of very early date, Plate V. fig 6, which is of doubtful attribution, but as it was found in company with the known coins of the Kunindas, I think it best to describe it along with them.

Plate V., Fig. 6. Æ. 0·9. Weight 116 grains. Author.

Obv.—Tall Bodhi tree in Buddhist railing, temple to l., surmounted by Tri-ratna symbol. Indian legend to r. in Asoka letters, Kādasa. A subdivision of the Kunets is named Kadaik, from an ancestor called Kaḍu or Kaḍru.

* See Archaeol. Survey of India, xiv. 126.
Rev.—Large rayed circle of the Sun.

Plate V., Fig. 1. AR. 0·7. Weight 84 grains. Author.

Obv.—Deer to r., Buddhist symbol between horns, Chaitya between legs, symbol over back; to r. female figure holding flowers towards the Deer. Indian legend, Rajna Kunindasa Amogha-bhūtisa Mahārajasa.

Rev.—Chaitya surmounted by combined Tri-ratna and Dharmachakra symbols; snake below; tree and Buddhist railing to r.; Swastika and symbol to l. Arian legend, Rajna Kunindasa Amogha-bhūtisa Mahārajasa.

N.B.—The reading of Kuninda was made by me in 1868, and published in the Academy in 1874. It was afterwards, in 1875, adopted by Mr. E. Thomas without acknowledgment.

Plate V., Fig. 2. AR. 0·7. Weight 84 grains. Author.

Types and legends same as No. 1, but there is no Chaitya between the Deer’s legs.

Plate V., Fig. 3. Æ. 0·8. Weight 75 grains. Author.

Types same as silver coins Nos. 1 and 2, but Indian legend only on obverse. A few of the larger copper coins have both legends; many of the smaller coins have no legend.

Plate V., Fig. 4. Æ. 0·85. Weight 181 grains. Author.

Obv.—The God Śiva, standing to front with battle-axe trident in r. hand, and leopard skin hanging from l. arm. Indian legend, Bhāgavato Chātresvara Mahātanā.

Rev.—Deer in middle with symbol between horns, snake below to r., tree, star and vase to l. Chaitya and symbols.

Plate V., Fig. 5. Æ. 1·0. Weight 291 grains. Author.

Types and legends same as last.

N.B.—These two coins are extremely rare. Only five specimens are known to me. The reverse of one of them
was published by James Prinsep [see E. Thomas, I., Plate XX., fig. 48]. All the five coins came from the west of the Jumna, were given me by C. J. Roscher, who had a lot more. They were found at Jeyadhani.

KOSAMBI.

Plate V.

The famous old city of Kosambi is now represented by a grand ruined fort on the Jumna with its two villages of Kosam-Inâm and Kosam-Khirâj, or “Rent-free” and “Rent-paying” Kosam. It is just 31 miles above the fort of Allahabad. It was the capital of the Vatsas, and was, therefore, generally known as Vatsa-pattana, or the “Vatsa city.” On the north-west stands the holy hill of Prabhâsa, with its dragon cave, and inscription of Raja Baha-sata-mitra, whose coins will be described presently.

The earliest coins of Kosam are all cast pieces, of which Nos. 7, 8, 9 and 10 of Plate V. are good examples.

Plate V., Fig. 7. Æ. 1-0. Weight 104 grains. Author.

Obv.—Humped Bull moving to 1. towards a standing symbol.

Rev.—Bodhi tree with Buddhist railing in middle, wheel to l., Swastika to r., and Chaitya below. A very good specimen of this coin is given by James Prinsep [E. Thomas, II. Pl. XLIV., fig. 6].

Plate V., Fig. 8. Æ. 1-0. Weight 68 grains. The mould was broken across.

Obv.—Horse moving to r. towards a square. Indian legend at top, [Baha]sata Mitasa.

Rev.—Elephant, with upraised trunk, moving to r., tree and Chaitya behind.

Æ Archaeol. Survey of India, i. 301.
Plate V., Fig. 9. Æ. 1.1. Weight 100 grains. Author.

*Obv.*—The Goddess Lakshmi standing in a lotus flower to front; on each side, standing on a small lotus flower, an Elephant, with upraised trunk, anointing the goddess.

*Rev.*—Bodhi tree with Buddhist railing in middle. Unknown symbols on each side.

Plate V., Fig. 10. Æ. 1.0. Weight 190 grains. Author.

*Obv.*—Elephant standing to l. between two symbol pillars. Indian legend above, *Sudevasa*.

*Rev.*—Bodhi tree to r. Unknown symbols to l.

**Raja Bahasata Mitra.**

Plate V., Fig. 11. Æ. 0.75. Weight 98 grains. Author.

*Obv.*—Bodhi tree with Buddhist railing in middle, symbols on each side. Indian legend, *Bahasata Mitasa*.

*Rev.*—Humped Bull moving to r. towards Chaitya raised on Buddhist railing. Ujain symbol above.

Plate V., Fig. 12. Æ. 0.75. Weight 95 grains. Author.

Coin of *Bahasata Mitasa* countermarked with Buddhist Tri-ratna symbol.

Plate V., Fig. 13. Æ. 0.7. Weight 121 grains. Author.

Coin of *Bahasata Mitra* countermarked with symbol standing on Buddhist railing.

**Raja Aswa Ghoshasa.**

Plate V., Fig. 14. Æ. 0.65. Weight 21 grains. Author.

*Obv.*—Bodhi tree between snake and unknown symbol. Indian legend, *Aswa-ghoshasa*.

*Rev.*—Symbols uncertain.

**Raja Jetha Mitra.**

Plate V., Fig. 15. Æ. 0.7. Weight 89 grains. Author.
COINS OF ANCIENT INDIA.

Obv.—Male figure standing to front, r. hand raised, l. hand on hip. Indian legend to r., Jetha Mitasa.

Rev.—Indistinct animal, like horse.

Plate V., Fig. 16. Æ. 0·7. Weight 127 grains. Author.

Obv.—Bodhi tree with Buddhist railing in middle, symbols on each side. Indian legend below, Jetha Mitasa.

Rev.—Indistinct.

Plate V., Fig. 17. Æ. 0·6. Weight 59 grains. Author.

Obv.—Small Chaitya and Ujain symbol. Indian legend, Jetha Mitasa.

Rev.—Indistinct.

Plate V., Fig. 18. Æ. 0·8. Weight 60 grains. Author.

Obv.—Bodhi tree in middle. Indian legend, Raja Dhana Devasa.

Rev.—Humped Bull to l., trident and Chaitya.

N.B.—Small coins of this last type with Bull and Bodhi tree are very numerous. The inscriptions are always short, and apparently incomplete. A few specimens were given by James Prinsep [E. Thomas, I. Pl. VIII., fig. 12, 13, 14, 15].

YAUDHEYA.

Plate VI.

The Yaudheyas were one of the most famous tribes of Ancient India. They were especially noted as warriors; their name, in fact, meaning simply “soldier or fighter” from Yudha, “battle.” As they are mentioned by Pāṇini, before the time of Alexander, as one of the war-like tribes of the Panjāb, we ought to find their name amongst the opponents of the Macedonian leader. They
Rev.—Male figure to l., with l. hand on hip and r. hand extended.

Figure 7 has dvi after jaya, and figure 8 has tri.

Figure 7 has two symbols on reverse, one being a vase of flowers.

Figure 8 has also two symbols on reverse, one being a shell.

Plate VI., Fig. 9. A. 0·7. Weight 26 grains. Author.

Obv.—Six-headed male figure standing to front, with spear in right hand. Indian legend, Bhágavato Swámina Bráhmana Yaudheyā.

Rev.—Six-headed figure standing to front between Chaitya and Bodhi tree.

Plate VI., Fig. 10. A. 0·6. Weight 80 grains. Author.

Same types as No. 9; inscription incomplete.

Plate VI., Fig. 11. A. 1·0. Weight 158 grains. Author.

Obv.—Six-headed figure as on No. 9. Indian legend (completed from many coins), Bhágavata Swámina Bráhmana Devasya.

Rev.—Six-headed figures, with symbols, as on Nos. 9 and 10.

Plate VI., Fig. 12. A. 1·0. Weight 180 grains. Author.

Similar to No. 11, but the obv. figure has a small bird on shoulder, and the rev. figure appears to be a female.

Plate VI., Fig. 13. A. 0·95. Weight 189 grains. Author.

Obv.—As figure 9, and same legend.

Rev.—Antelope to r., with Buddhist symbol over head, and Chaitya to r., and over the back of the deer the letters dharma.

Plate VI., Fig. 14. A. 0·9. Weight 126 grains.

Obv.—A Snake with Indian legend, Bhānu Varma.

Rev.—Nearly obliterated; trident visible.

N.B.—The silver coin, fig. 9, determines these coins to
PANCHÂLA.
belong to the Vaudheyas. I obtained four of them in the Kangra district; but the silver piece, and upwards of 300 copper pieces, were all found between the Satlej and Jumna Rivers.

PANCHALA.

Plate VII.

According to the Mahâbhârata the ancient kingdom of Panchâla extended from the Hîmâlayan Mountains to the Chambal River. It was divided into North and South Panchâla. The former embraced the whole of Rohilkhand to the north of the Ganges, while the latter included the upper half of the Doab between the Ganges and Jumna. The capital of North Panchâla was Ahi-chhatra, which still exists as a large ruined fortress, twenty miles to the west of Bareli. The capital of South Panchâla was Kâmpilya, now Kampil on the Ganges, nearly opposite Badaon.

As the coins which I am now about to describe are found in Rohilkhand, and chiefly at Abichhatra, Aonla, and Badaon, it is quite certain that they belong to North Panchâla. It has been suggested that they belong to the Sunga kings, who ruled over North India after the Mauryas for 112 years, or from B.C. 178 to 66. But the assignment is uncertain, as only one of the coin names, Agni-mitra, is found in the Puranic lists of the Sungas. The dates, however, agree, as all the coins have inscriptions in Asoka characters. I incline rather to assign the coins to a local dynasty of Princes, as they are very rarely found beyond the limits of the North Panchâla, which would not be the case did they belong to the paramount dynasty of the Sungas.
I have found two inscriptions of the Sunga king, *Danabhūti*, at Bharhut and at Mathura, but as his name does not occur in the Puranic lists it is certain that these lists must be incomplete, and perhaps erroneous. As all other Puranic lists have been found to be erroneous, it is possible that these coins from Panchâla may belong to the Sunga kings.

In the Sanskrit drama of *Mālavikāgnimitra*, translated by Wilson, Agnimitra, son of Pushpamitra, and father of Vasumitra, is called king of *Vidisa* on the *Vetravati*, that is of Besnagar on the Betwa River. As these three names head the lists of the Sunga kings, it would seem that the Sungas were rulers of East Mālwa. As Bharhut, where the Sunga inscriptions of King Danabhūti and his son were found, is much nearer to Besnagar than to Rohilkhand, this assignment is very probable. I conclude, therefore, that the coins found in Rohilkhand are those of some local dynasty and not of the paramount Sunga kings.

All these Panchâla coins are of copper. On one side the die, consisting of the symbols with the name of the king below, is deeply sunk. The letters are somewhat later than Asoka's date, but, I think, earlier than the Christian era. The reverse, which is not sunk, has either a symbol mounted on a Buddhist railing, or the figure of some god, as Agni or Indra, referring to the name of the king.

It is worthy of notice that the weights of the Panchâla coins do not correspond with the common Hindu standard of the *Panā* of 80 ratis or 144 grains and its multiples and divisions, but rather with a centenary piece of 100 ratis, or 180 grains. They agree, therefore, with the heavy standard of the double-die coins of Taxila, which was adopted for the copper coinage of Pantaleon and Agathokles.
of inventing new names I prefer to adhere to the old Hindu system, and to call the 100-rati or 180-grain coin a heavy pana, equal to 1½ pana of the common standard. The multiples and subdivisions are few in number, and comprise only the following specimens:—

<table>
<thead>
<tr>
<th>Fraction</th>
<th>Value</th>
<th>Value</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>150</td>
<td>270</td>
<td></td>
</tr>
<tr>
<td>½</td>
<td>50</td>
<td>90</td>
<td></td>
</tr>
<tr>
<td>¼</td>
<td>25</td>
<td>45</td>
<td></td>
</tr>
<tr>
<td>⅛</td>
<td>12½</td>
<td>22½</td>
<td></td>
</tr>
</tbody>
</table>

**Rudra-Gupta.**

Plate VII., Fig. 1. Æ. 0·75. Weight 78 grains. Author.

*Obv.*—Incuse square, with three symbols above and Indian legend below, *Rudra Gupta*. The reading of Rudra is not quite certain. At first I read *Chandra*. The coin is earlier than any of the Mitras.

*Rev.*—Trident, fixed on basement of Buddhist railing.

Plate VII., Fig. 2. Æ. 0·55. Weight 82 grains. Author.

Types and legend as on figure 1.

N.B.—Rudra is a name of *Śiva*, whose symbol is a trident.

**Dhruva-Mitra.**

Plate VII., Fig. 3. Æ. 0·7. Weight 58 grains. Author.

*Obv.*—Incuse square, with the three Panchāla symbols Indian legend below, *Dhruva Mitasa*.

*Rev.*—Trident on basement of Buddhist railing.

N.B.—*Dhruva* is the North Polar Star, but as it is also a name of *Śiva*, I conclude that the trident refers to him.
COINS OF ANCIENT INDIA.

Obv.—Incuse square, with three Panchâla symbols. Indian legend, Jaya-Mitasa.

Rev.—Figure, on Buddhist basement.

VISWA-PALA.

Plate VII., Fig. 18. Æ. 0·65. Weight 58 grains. Author.

Obv.—Incuse square, with three Panchâla symbols. Indian legend, Viṣṇa Pâlasa.

Rev.—Indistinct.

INDRA-MITRA.

Plate VII., Fig. 19. Æ. 0·6. Weight 66 grains. Author.

Obv.—Incuse square, with three Panchâla symbols. Indian legend, Ṡdra-Mitasa.

Rev.—Figure of Indra seated on Buddhist railing.

Plate VII., Fig. 20. Æ. 0·5. Weight 54 grains. Author.

Obv.—As No. 19.

Rev.—Figure of Indra inside Temple.

VISHNU-MITRA.

Plate VII., Fig. 21. Æ. 0·55. Weight 60 grains. Author.

Obv.—Incuse square, with three Panchâla symbols. Indian legend, Vishnu Mitasa.

Rev.—Four-armed figure (Vishnu) standing on Buddhist basement.

N.B.—From this detailed examination of their coins, I conclude that the Rajas of Panchâla were certainly Brāhminists, as there is an entire absence of Buddhist symbols, coupled with the use of Brahminical names, such as Rudra and Vishnu, Indra, Agni, and Sûrya. It must be remembered also that Ahi-chhatra, the name of the capital of North Panchâla, was the altered form used by the Buddhists instead of the original Adi-kshetra of the Brahmins.
COINS OF ANCIENT INDIA.

MATHURA.

Plate VIII.

The holy city of Mathura, which Ptolemy calls Μῶςοψα ἤ τῶν Θεῶν, stands on the bank of the Jumna, 35 miles to the North of Agra. Ancient coins are found here in great numbers, beginning with the Greek hemi-drachms of Menander, Apollodotus, and Antimachus II. The coins of the Kushân Indo-Scythians are still more numerous; and as many of their inscriptions have been dug up in the ruins, there can be no doubt that Mathura belonged to their dominions. In fact, Ptolemy includes Mathura in the kingdom of Kaspeiria, which embraced the whole of the lower Punjab. The Satrapy of Mathura probably extended to Delhi on the North, to Gwalior on the South, and to Ajmer on the West. Many of the coins included in this Plate were brought for sale from the surrounding country. The Chinese Pilgrim, Hwen Thsang, says Mathura was 800 miles in circuit.

The coins given in the accompanying Plate begin with a single specimen, bearing a legend in Asoka characters. Many punch-marked silver coins are also found at Mathura. A few short inscriptions in Asoka letters have been found on Buddhist railing pillars. But the great mass of the antiquities, both of coins and inscriptions, begin with the occupation of the country by the Indo-Scythians.

The coins of the Indo-Scythian Princes are described in another special work dedicated to them alone. In the accompanying Plate I have given coins of four Satraps who flourished during the Indo-Scythian period, namely, Rajubula and his son, Suvâsa, and Hagamâsha and his contemporary (perhaps brother), Hâdana. The remaining coins are all of pure Hindu Princes.
Obv.—Figure to front, symbol to l. Bodhi tree to r. Indian legend above, Arjunāyanāna.

Rev.—Humped bull to l.

N.B.—I find a duplicate of this rare coin of the Arjunāyanas in Prinsep’s Antiquities, by Thomas, Pl. XLIV. fig. 22. The legend was read as Rajna Raghunām. The Ārjunāyanas are mentioned as a tribe in Samudra Gupta’s Allahabad Pillar inscription. Their name follows that of the Mālavas and precedes those of the Yaudheyas, and Mādras. According to this collocation of the names the Ārjunāyanas may have occupied some part of Rajputāna, to the North of Malwa and to the South of Madradesa or Mādra. Perhaps Ajudhan, on the bank of the old Satlej River, may still preserve some trace of their name.

**AYODHYA.**

Plate IX.

Ayodhya, the ancient kingdom of Rāma, is now known by the shorter name of Oudh (or Awadh). The old capital of Ayodhya is still known as Ajudhya, and there all the coins in the accompanying Plate IX. were obtained. A few coins of this class have been published by Mr. Carnac, in the Bengal Asiatic Society’s Journal for 1880, Plates XVI. and XVII., but without any notice of their findspots. Amongst them is a new type of Visākha Deva, which I have given in Plate IX., fig. 7.

In my account of Ayodhya I have identified it with the Visākha of the Chinese pilgrim, Hwen Thsang, and I have suggested that this name was perhaps derived from

*Archaol. Survey of India*, i. 818.
the famous lady Viskoḍhā, the daughter of the rich merchant Dhananjaya, of Sākata or Ayodhya. On some of the oldest coins of Ajudhya will be found the names of Dhana-deva and Visokha Datta, which may very plausibly be connected with those of the rich merchant and his daughter. The coins are certainly not older than the second century B.C., but, as both names were popular, they would probably be repeated in many families of Ayodhya. The coins themselves do not present any traces of Buddhism except the Bodhi tree and the combined symbol of the Tri-ratna and Dharma-chakra. But neither do they show any special traces of Brahmanism, except in the names of Śiva and Vāyu.

Plate IX., Fig. 1. Æ. 0·7. Broken.

_Obv._—Buddhist symbol surrounded by rayed circle.

_Rev._—Plain.

Plate IX., Fig. 2. Æ. 0·5. Weight 84 grains, Kākini, or ½ pana.

_Obv._—Swastika.

_Rev._—Buddhist symbol of four crescents, with circle in middle.

Plate IX., Fig. 3. Æ. 0·5. Weight 88 grains. Kākini, or ½ pana.

_Obv._—Swastika and fish.

_Rev._—Taurine symbol and axe.

**Mula-Deva.**

Plate IX., Fig. 4. Æ. 0·85. Weight 56 grains. Half-pana.

_Obv._—Elephant moving to l. towards Buddhist symbol.

Indian legend, Mūla Devasa.
Rev.—Wreath in centre, snake below. Buddhist symbol above.

**VAYU DEVA.**

Plate IX., Fig. 5. Æ. 0·60. Weights 86 and 87 grains.

*Obv.*—Elephant moving to 1. Indian legend, *Vayu Devasa.*

*Rev.*—Four triratna symbols on four sides of small circle. Bodhi trees to r. and l. Snake below.

**VISĀKHA DEVA.**

Plate IX., Fig. 6. Æ. 0·75. Weight 45 grains.

*Obv.*—The goddess Lakshmi standing to front. A small elephant on each side anointing her. Indian legend, *Visākha Devasa.*


Plate IX., Fig. 7. Æ. 0·8. Mr. Carnac, Bengal Asiat. Soc. Journal, xl., Pl. XVI. 2.

*Obv.*—Humped bull moving to l. Indian legend, *Visākha Devasa.*

*Rev.*—Circle with dots in middle. *Tri-ratna* symbol above; snake below; Buddhist symbol on each side.

**DHANA DEVA.**

Plate IX., Fig. 8. Æ. 0·8. Weight, 88 grains; thin coin.

*Obv.*—Humped bull moving to r. Indian legend, *Dhana Devasa.*

*Rev.*—Bodhi tree to r.; figure in middle; Swastika to l.

Plate IX., Fig. 9. Æ. 0·75. 108 grains; thick coin.

*Obv.*—Humped bull moving to l. Indian legend, *Dhana Devasa.*

*Rev.*—Bodhi tree to r.; Buddhist pillar to left; snake below.
COINS OF ANCIENT INDIA.

SIVA-DATTA.

Plate IX., Fig. 10. Æ. 0·6. Weight 24 grains.

Obv.—Elephant moving to l., towards symbol on pillar. Indian legend, Siva-datasa.

Rev.—Tree inside railing.

Plate IX., Fig. 11. Æ. 0·6. Weight 20 grains.

Obv.—Elephant and Indian legend as on last.

Rev.—Cross with four circles.

N.B.—All the above are cast coins. The following are die-struck coins.

SATYA-MITRA.

Plate IX., Fig. 12. Æ. 0·8. Weight 123 grains.

Obv.—Humped bull to l., facing upright standard.

Rev.—Cock and fan-palm tree standing on snake.

Plate IX., Fig. 13. Æ. 0·45. Weight 27 grains.

Types and legend as on No. 12.

SURYA-MITRA.

Plate IX., Fig. 14. Æ. 0·65. Weight 105 grains.

Obv.—Humped bull to l., facing standard. Indian legend, Su(r)yya Mitasa.

Rev.—Cock and fan-palm tree as on No. 12.

Plate IX., Fig. 15. Æ. 0·4. Weight 25 grains.

Types and legend as on No. 14.
COINS OF ANCIENT INDIA.

SANGHA-MITRA.

Plate IX., Fig. 16. Æ. 0·80. Weight 123 grains.

Obs.—Humped bull to 1. Indian legend, Sangha (Mitasa).

Rev.—Front view of temple or shrine (?).

VIJAYA-MITRA.

Plate IX., Fig. 17. Æ. 0·55. Weight 80 grains.

Obs.—Humped bull to 1, before standard. Indian legend, Vijaya Mitasa.

Rev.—Cock and fan-palm tree.

Plate IX., Fig. 18. Æ. 0·6. Weights 46 and 40 grains.

Obs.—Combined symbol of Tri-ratna and Dharma Chakra. Indian legend below, Vijaya Mitasa.

Rev.—Humped bull to 1, standing on railed base.

Plate IX., Fig. 19. Æ. 0·55. Weight 29 grains.

Obs.—Tri-ratna symbol. Indian legend, Vijaya Mitra.

Rev.—Indistinct object standing on railed base.

UJAIN.

Plate X.

Ujain, in Sanskrit Ujjayini, is one of the most ancient cities in India. It is situated on the Sipra River, 16 miles to the north of Indore, and 120 miles nearly due west from Bhilasa. Much of its importance was derived from its selection by the Hindu astronomers as their first meridian or starting point for measures of longitude. The well-known cities of Kota, Jaypur, Hisar, and Já-
landhar lie on the same meridian, almost due north of Ujain.

In the beginning of the third century B.C. it was the residence of Asoka, as governor of Málwa, under his father, Bindusára, king of Pátaliputra. It is renowned as the capital of the great Vikramáditya, who gives name to the era which dates from 57 B.C. About A.D. 80 Osene is described by the author of the Periplus as having formerly been the capital of the country, and in the second century A.D. Ptolemy names it as the capital of Tıastanes, who is the great Satrap Chashtan of our coins and inscriptions.

The coins of Ujain are remarkable for a peculiar symbol, which occupies the whole of the reverse. The same symbol, but of small size, is also found on the obverse of a few coins, as on Nos. 15 and 17 of Plate X. This symbol has usually been described as a “cross and balls.” It is, in fact, a small cross with a circle at the end of each limb. It occurs also on several of the coins of Eran and Besnagar in East Málwa, and may thus point to some political association of the two districts, of which Ujain and Besnagar were the capitals. That they were usually independent states is shown by a most marked difference in their money, the coins of Ujain being invariably round pieces, while those of Besnagar and Eran are nearly all square. Both districts belong to Málava at the present day, and we know that the Málavas [Málavân of the early coins] must once have been confederated, as they gave their name to the “era of the Málavas,” which is now known as the Vikrama Samvat, or “era of Vikramáditya.”

As the small coins which bear the name of the Málavâns are found chiefly in the country 100 miles to the north of Ujain, about Ajmer, Tonk, and Chitor, it seems probable
that they may have belonged to some northern tribe of the Mālavas. My previous notice of these coins will be found in my Archaeological Survey of India, Vol. xiv., Plate XXXVI., p. 150. Many of the coins are very small, weighing 8 and 9 grains, and a few only 4 or 5 grains.

The astronomer, Varāha Mihira, places the Mālavas in the northern division of India, along with the Madrakas and Traigarttas. This position agrees with the location of the Mālava Sikhs along the Satlej. Samudra Gupta's inscription on the Allahabad Pillar, A.D. 370, couples the Mālavas with the Arjunāyanas, Yaudheyas, and Madrakas. The position of the first people is unknown, but the Madrakas, we know, dwelt in the East Panjāb, and the Yaudheyas occupied both banks of the Satlej, the Multān Doāb being still called Johia-bār. These small coins of the Mālavas have, however, very little in common with those of Ujain and Eran, as they are all inscribed, while the largest do not exceed 25 to 30 grains in weight.

The same “cross and balls” symbol is also found on the coins of some of the Andhra kings of Mahārāṣṭra, as Vāsithi-putra, Gotami-putra, Yajna Sri, and Vada Sri. In fact Gotami-putra claims Ujain as part of his kingdom, while one of the gateways of the Sānchi Stūpa was erected by Ananda Vāsithi-putra. [See my Bhika Tope, Plate XIX., fig. 190, and page 264.] The inscriptions on the railing of the Great Stūpa at Sānchi record about twenty gifts from people of Ujain.

I have already noted that the coins of Ujain are nearly all round. In the plate there are several square coins, but I observe that, though the coins themselves are square pieces, yet their impressions were evidently made from round dies. The coin, No. 11, is perhaps an interloper
from Eran, or East Málwa, as similar coins are also found there. The round shape is preserved in the single coin, No. 20, which bears the name of Ufeniya, and also in the two dated coins Nos. 21 and 22. I have purchased several specimens of these dated coins at the old town of Sărangpur, 55 miles to the north-east of Ujain, but not a single specimen has yet been found at either Eran or Besnagar.

About the coins themselves very little can be said. In weight they may be arranged in five groups of—

<table>
<thead>
<tr>
<th>Weight</th>
<th>Grains</th>
</tr>
</thead>
<tbody>
<tr>
<td>17</td>
<td>80</td>
</tr>
</tbody>
</table>

representing coins of —

<table>
<thead>
<tr>
<th>Weight</th>
<th>Grains</th>
</tr>
</thead>
<tbody>
<tr>
<td>18</td>
<td>86</td>
</tr>
</tbody>
</table>

which would be —

<table>
<thead>
<tr>
<th>Fraction</th>
<th>of a panā</th>
</tr>
</thead>
<tbody>
<tr>
<td>⅔</td>
<td></td>
</tr>
<tr>
<td>⅓</td>
<td></td>
</tr>
<tr>
<td>⅔</td>
<td></td>
</tr>
<tr>
<td>⅔</td>
<td></td>
</tr>
</tbody>
</table>

Not a single specimen of the unit coin, or panā, has yet been found at Ujain, although they are not uncommon both at Eran and at Besnagar.

The commonest coins are Nos. 1, 2, 3, 4, 5, on all of which the chief type is a man standing to the front and holding a Sun-standard in his right hand. Beside him there is a tree surrounded by a railing, which shows that these coins were struck during the prevalence of Buddhism. On the opposite side there is an unknown symbol. No. 3 has a humped bull, and on all there is a snake below the standing figure.

On Nos. 7, 8, 10, there is a figure squatted in the native fashion beside a holy tree surrounded by a railing. On the reverse of the small coin, No. 8, there appear three signs or letters, which may read as mu-bu-mi.

On No. 9 the holy tree occupies the principal position. Beneath it there are two parallel curved lines, which I guess, but with much hesitation, may, perhaps, represent a river with fish in it. If so, it will be the river Sipra, on which Ujain is situated.
No. 6 has a three-headed standing figure, which is probably intended for the Brahmanical god Mahâkâla, who had a famous temple at Ujain. The idol worshipped at Ujain as Mahâkâla is mentioned by Al-Beruni, 48 in A.D. 1030. Two centuries later it was carried to Delhi by the Mohammedan conqueror, Ilutmish, and there broken to pieces in front of the great mosque. The figure on the coins seems to carry a club in one hand, and a water vessel in the other, both of which symbols are characteristic of Sīva. This coin may, therefore, be accepted as a single evidence of Brahmanism at Ujain.

No. 11 has a large Svastika, or mystic cross on one side, with several unknown symbols and the river on the reverse.

No. 12 has a humped bull and tree, with some other symbols.

Nos. 13 and 14 have a large frog on one side, with the Sun-standard, man, and the river, on the reverse.

Nos. 15 and 16 have the holy tree as the chief type, with the river on the first, and a bull on the other.

No. 17 is similar to the last, but square in shape.

No. 18 is small and round, and similar in type to the last.

No. 19 has a horse, with an unknown circular symbol.

No. 20 bears an elephant on one side, and on the reverse a man's hand, with the name of U-je-nya below in Asoka characters, not later than 150 B.C.

No. 21 and 22 are dated coins, struck during the sway of the Satraps in Ujain. No. 21 bears the date of 147, and No. 22 has 162, or A.D. 225 and 240. On the obverse is

an elephant, and on the reverse a chaitya, with the sun and moon, as on all the Satrap coins.

**Eran or Erakaina.**

**Plate XI.**

Eran is an old decayed city on the south bank of the Bina river, sixteen miles above its junction with the Betwa, fifty miles to the north-east of Bhilsa, and forty-five miles west-north-west from Sāgar. Ancient coins are found here in great numbers. They are all square in form, and offer specimens of the four different classes of old Indian money: (1) Punch-marked coins. (2) Cast coins. (3) Die struck coins. (4) Inscribed coins.

The punch-marked copper coins of Eran are the finest specimens of this class that have yet been found. On all the best coins the punches are confined to one side, and are generally placed quite clear of one another. They are remarkable also for presenting us with the largest and smallest specimens of the old Indian money. One coin, 1·1 inch in breadth, with a corner broken off, weighs 192·5 grains, when perfect it would have weighed about 210 grains, equal to 1½ pana in value, or 120 ratis of copper. I possess ten coins of the mean weight of 12 grains; ten others of the mean of 8·3 grains; and four coins averaging only 3·25 grains each, being 2 ratis of copper, equal to 2 cowreens in value. They are only two-tenths of an inch in diameter.

Similar coins are found in the old ruined capital of Besnagar, situated in the fork between the Betwa and Bes rivers, immediately above their junction, and only a few miles to the west of Bhilsa. It was certainly the capital
of east Mālwa, as Ujain was the capital of west Mālwa. At Ujain, also, similar coins are found, with a peculiar symbol on the reverse formed of a cross and four balls or circles, the same as are found on many of the coins in Plate X. Several of the coins are in fact exactly the same; such as Nos. 14 and 17, and others.

The principal types are men, animals, trees, and symbols.

1. Men; Nos. 16 and 20. On No. 14, the goddess Lakshmi seated, being anointed by two elephants.

2. Animals; the Horse, on No. 1.
   Elephant, on Nos. 1, 3, 8, 13.
   Bull, on Nos. 11 and 12.
   Frog, on coins of Ujain.

3. Trees occur on Nos. 1, 2, 5, 6; on 10, 11, 12, 13, and 19. The trees are probably of different kinds, but as they are nearly all surrounded by a Buddhist railing, they must be intended for Bodhi trees, or the special trees under which each of the Buddhas had sat in meditation before the attainment of Buddhahood.

4. Symbols; these are not easy to describe, but they may be roughly grouped as: (A) Varieties of Cross and Balls. (B) Flowers and Ornaments. (C) Buddhist religious symbols. (D) Swastikas. (E) Triangular symbols. (F) Rivers. (G) Cities.

(A.) The cross and balls symbol is found on nearly all the coins of ancient Mālwa, wherever found—at Eran, Besnagar and Ujain. On some it is small, and the balls or circles are plain. On others the balls are large, and inside each may be either a small swastika, or a taurine symbol, or a small cross and four balls.

(B.) Flower ornaments are of two kinds; the Lotus of eight leaves, on Nos. 2, 6, 10, and the symbol flower of
six points, three being arrowheads, and three taurine signs, as on Nos. 4, 16, and 17.

(c.) The Buddhist religious symbols consist of the Tri-ratna of three points, and the Dharma-chakra wheel, either singly or combined. On No. 17, the combined symbol is quadruple, with the dharma-chakra wheel in the middle, and a tri-ratna on four different sides.

(d.) The Svasastika is either plain or ornamental. On No. 15 it is plain, and on No. 20 it is ornamental, with a taurine symbol attached to each arm.

(e.) The triangular symbol consists of a triangle with apex below fixed on the top of a pillar surrounded with a Buddhist railing. It is found in Nos. 2, 3, 4, 5, 8, and 11.

(f.) This peculiar symbol is very common. It consists of two parallel undulating lines forming a narrow channel or passage, in which a continuous stream of small objects, like fish, is shown. It occurs on all the larger coins, with the rare exceptions of a few, like Nos. 9 and 10, which present instead a semi-circle containing fish on No. 10, but only plain round lines on No. 9 and its duplicates. I have conjectured that the long channel may represent the river Bina on which the town is situated, and that the semi-circle may represent the town itself. The inscribed coin, No. 21, bearing the name of Erakaina or Eran, has the same semi-circular device divided into compartments. Some years ago I suggested that this was intended as a representation of the city itself, as I had found that this same form was used by the tattooers to represent the city of Jhânsi.

Fig. 18 is a thick rude piece of copper weighing 171 grains. It bears the name of Dharma Pâlasini, written reversedly in large Asoka characters of early date.
Fig. 21, a small thin copper coin weighing 24 grains.

Obv.—Three concentric circles, the outer two being divided into compartments. Above is a crescent, and, on each side, a tall cross. Over all is the name of the city in early character, Erakanya, or simply Erakana.

Rev.—Bodhi tree with railing, and the Ujain symbol of cross and balls, with a snake above.

**South India.—Andhras.**

Plate XII.

The coins of the Andhras have hitherto been found only to the south of the Narbada River, that is in Dakshinapatha, or Dachinabades, or Southern India. But as the later Andhra Kings, according to their own accounts, extended their sway far to the north of the Narbada River, they may be reckoned among the dynasties of North India. The northern countries over which they claim to have ruled are Surāshtrā, or Kāthiāwār, Aparāntika, or West Rajputāna, and Akarā-Avanti, or Ujain of Malwa.

The situation of Aparāntika has not yet been settled. Pandit Bhagwân Lāl wished to identify it with the Konkan or Western coast of the Peninsula, and he quotes several authorities to show that it was certainly so esteemed by several writers. One of them, indeed, says that Sopāra was the capital of Aparāntika. And so, no doubt, it may have been, just as Bombay is now the capital of Western India. In fact Bombay actually does include Kāthiāwār and the whole of Sindh, as well as West Rajputāna, which are all to the North of the Narbada.

Aparāntika is placed by Varāha Mihihā in the Western

49 Brihat Sanhita.
Division of India along with Sindhu-Sauvira and Panchanada, or Sindh and the Panjáb. In the same division he locates Mount Astagiri, or the "Western Mountain," which I would identify with Mount Abu. The name of Aparântika is perhaps preserved in the Aratrii of the Periplus, who held the inland country from Barygaza towards the Arakhosii. This description tallies exactly with the position of West Rajputana, or the provinces of Mewâr and Mârwâr, including Mount Abu. Aratrii is an abbreviated form of the Sanskrit Arâshtra; but the more usual abbreviation is Aratta. By the simple elision of the letter p, which is a common practice in Indian words, the same form is derived from Aparânta. Pandit Bhagwan Lal thought that the first Greek form might have been Aparatike, from which was deduced Ariake. But the province of Ariake was to the south of the Narbada, therefore corresponds with the Konkan, which is placed by Varaha Mihira in the south-western division of India.

I may add also that the coins of the Aparântikas, bearing the inscription Apalâtasa Maharâjasasa, were found chiefly in Rajputâna, about Nimach and Ajmer, by Colonel Stacy, while my own specimens have been obtained in North Rajputana and Mathura. For these reasons I conclude that the country known as Aparântika or "West Land," was actually in the west of India, and that it did not extend geographically to the south of the Nerbada. Politically Sopâra and other places to the south of that river may have been included, just as Delhi and Sahâranpur are now included in the Panjáb, because they have been placed under the Lieutenant Governor of the Panjáb.

Specimens of the coins of Apalâta, or Aparânta, may be seen in Thomas's edition of Prinsep, Pl. XLIV., figs. 25
and 26; and also in Archæol. Survey of India, Vol. XIV., Pl. XXXI., fig. 4.

The earliest notice of Aparântika is in the Pali annals of Ceylon, in the description of the Third Buddhist Synod held during the reign of Asoka in B.C. 241,\textsuperscript{50} when missionaries were despatched to all quarters to propagate the Buddhist religion. Amongst them was the Yavana Dharma-Rakshita, who went to Aparântika, where he converted 70,000 persons.

I think it probable that the Oratae of Pliny,\textsuperscript{51} whose king possessed only ten elephants, but had a large army of foot, may be Aparâtas, as the first part of the name, or, is a common abbreviation of Apar.

We now come to the inscriptions of the Andhra King, Gotamiputa, and the Śaka King, Rudra Dāma.

In line 2 of No. 1 of the Nāsik cave inscription the dominions of Gotamiputa are said to have included the provinces of Saurāshtra, Aparâta and Anupa, or Kathiāwār West Rajputāna, and Ninār on the Narbada. In line 6 it is boasted that he had conquered the Sakas, Yavanas and Palhavas, and that he had exterminated the race of Kha-gartā. In other inscriptions at Nāsik the name of this tribe, written in a Sanskrit form, is Kshaharatā. They were under the rule of the Satrap Naḥapāna, whose date in one inscription is either 46 or 76. As his dominions embraced Prabhāsa, in Kathiāwār, as well as Barygāza, to the north of the Narbada, with Sopāra and Nāsik, to the south, his capital was probably at Ujain. In fact, the Jain Chronicles give 17 years to a Saka rule at Ujain from B.C. 57 to 74 when Sâtigâni was Raja of Paithan.\textsuperscript{52} If his date be

\textsuperscript{50} Mahawanso, p. 71.
\textsuperscript{51} Nat. Hist., vi. 28.
\textsuperscript{52} Kālakācharya Katha, in Bombay Journal, ix. 189.
reckoned from the time of the Saka King, Moas, he must have lived in the middle of the 1st century B.C. That the Kshaharâtas were Sakas is certain, as Ushavadâta, the son-in-law of Nahapâna, calls himself a Saka. I would, therefore, identify the Kshaharâtas with the Sakas, who occupied Ujain in the 1st century B.C.

The descendants of Nahapâna were exterminated by Gotamiputra, the Andhra King, whose capital was at Baithâna (Paithan or Pratisthâna), on the Godâvari. I would identify him with Gotamiputra I., who lived in the 1st century A.D.

The earliest Andhra King of whom we have any coins is Vâsithi-putra Vilivaya-kura. He was followed by Mâdhari-putra, as we learn from the fact of some of his money being struck on pieces of Vâsithi-putra; and, lastly, we learn from a similar cause that Gotami-putra Sri Yajna succeeded Mâdhari-putra. The positions and dates of these kings have been discussed by Dr. Bühler in the Indian Antiquary, vol. XII., 273, whose results I have adopted. Pandit Bhagwân Lâl had previously pointed out that Gotamiputra Yajna was the son of a prince named Vâsithiputra Chatrapana, whose inscription he had formerly translated.

The inscriptions of Yajna Sri are common, and his reign, according to the Puranic lists, was a long one of 29 years. Dr. Bhau Dâji had previously identified the Saka chief, Chashtana, with Ptolemy’s Tiasanes of Ozene or Ujain. I accept the identification, but not the date which Bhau Dâji assigned to him as a contemporary of the geographer. If any one were to speak of Agra as the “city of Akbar” I should not consider that he intended to make himself a

53 Bombay Journal, xii. 407, and xiii. 303.
contemporary of that famous emperor. Similarly, I consider that Ptolemy, who composed his geography from many authorities of several different ages, simply copied the descriptions of his predecessors, without any corrections for difference of age.

On examining all the dates of the coins and inscriptions, I find that the only possible arrangement is to refer them to the Saka era. This conclusion has now been satisfactorily confirmed by the establishment of the Gupta era in A.D. 319. As the Guptas were the undoubted successors of the Western Satraps, the discovery, in a Stūpa deposit, of a coin of the latest Satrap, Swāmī Rudra Sena, son of Satya Sena, whose dates come as low as S. 304, or A.D. 382, in company with a coin of Chandra Gupta Vikramāditya, whose earliest inscription is dated in S. 82 or $318 + 82 = 400$ A.D., is clear evidence of their having been contemporaries.

To apply the chronology of the Satraps to the times of the Andhra kings, I would refer to the Junagarh inscription of the Satrap, Rudra Dāma, who boasts of having often defeated the Sātakarnis. At the same time he claims to have conquered Akaradvanti (or east and west Mālwa), Anarta and Surashtra (Kathiawār), Sindh Sauvīrya (Sindh), Aparanta (west Rajputāna), and Anupa (Nimār), on the Narbada. Now, all these districts had belonged to Gotamiputra I. Sātakarni, whose reign of twenty-one years I would assign to the first century A.D.

As Rudra-Dāma’s inscription is dated in S. 72 or A.D. 150, his warfare with the Sātakarnis must have taken place about A.D. 130 to 140, or with the predecessors of Yajna Śri.

The following list gives the names of the Sātakarni kings, from the accession of Gotami-putra I. to the close
of the dynasty, with their approximate dates, according to the lengths of reigns given in the Purânas. For comparison, I have given the names of the contemporary Satraps of Surâshtra, with their dates, from coins and inscriptions.

<table>
<thead>
<tr>
<th>A.D.</th>
<th>ANDHRAS.</th>
<th>A.D.</th>
<th>SATRAPS.</th>
</tr>
</thead>
<tbody>
<tr>
<td>78</td>
<td>Gotamiputra I. Sàatakarni.</td>
<td>78</td>
<td>Chashtana.</td>
</tr>
<tr>
<td>99</td>
<td>Pudumayi . Vásithiputra.</td>
<td>100</td>
<td>Jayadâman.</td>
</tr>
<tr>
<td>127</td>
<td>Medhasiras . Madhariputra.</td>
<td>125</td>
<td>Rudra Dâman</td>
</tr>
<tr>
<td></td>
<td>184 Skanda-swâti . Chatrapana.</td>
<td>150</td>
<td>Jiva-Dâman</td>
</tr>
<tr>
<td></td>
<td>141 Yâdna Sri . Gotamiputra II.</td>
<td>178</td>
<td>Rudra Sinha</td>
</tr>
<tr>
<td></td>
<td>170 Vijaya .</td>
<td>200</td>
<td>Rudra Sena</td>
</tr>
<tr>
<td></td>
<td>176 Vada Sri . Sàatakarni.</td>
<td>225</td>
<td>Dâma-Sena</td>
</tr>
<tr>
<td></td>
<td>186 Pulomavi.</td>
<td></td>
<td>s. 125 = A.D. 142.</td>
</tr>
</tbody>
</table>

The names of Gotamiputra, Vásithi-putra, and Mâdhari-putra have been explained by Dr. Bühler as matronymics derived from the Vaidika Gotras of the Purohitas of the fathers of the queen mothers. Thus, Gotamiputra’s mother, Gotamî, derived her name from the Gautama Gotra of her father’s Purohita, or family priest. So, also, Vásithi-putra’s mother, Vasithî, got her name from the Vasishtha Gotra of her father’s family priest. But no explanation has yet been offered for the curious titles of Vidivaya-kura and Sivâla-kura, taken by these princes. Perhaps Sivâla-kura may have some connection with Siva-Sri, the name or title of Medhasiras or Madhariputra.

The types of the coins are few and simple. On all of the early coins, except No. 3, a bow and arrow is the

---

54 Indian Antiquary, xii. 272.
marked type. These coins were found at Kolhapur in the west. But on most of the others, all of which came from Amaravati, on the Krishna River, the common type is a cross with four balls or circles, which is the well-known symbol on the coins of Ujjain. Fig. 7, a silver coin, was found in the Stūpa of Sopāra. Both in weight and in style it corresponds with the coins of the early Satraps, Chashtana, and his successors. A few specimens of the Amaravati, or Eastern coins, have a horse on the obverse, and one specimen has an elephant. But the greater number of the coins present a Stūpa on the obverse. There are a few coins with a lion on one side, and others with a two-masted ship. But on none of them is there any legible inscription.

So far as my experience goes, all the southern coins of the Andhras are found in Eastern India, round about Amaravati, while all the bow and arrow coins come from Western India. My own western specimens I owe to the kindness of my late friends, Pandit Bhagwân Lâl and Mr. Gibbs. My eastern coins I owe to the liberality of Mr. Sewell, who has done so much for the exploration of the antiquities of the Madras Presidency.

Sir W. Elliot was under the impression that the Andhras possessed the whole of the lower valley of the Ganges "from the frontier of Magadha to the sea," and he quotes Pliny in support of his belief. But the position assigned to them by Pliny is "beyond the Ganges." The whole of the Gangetic valley was then held by the Prasii the "most powerful nation in India," who had an army of 600,000 foot and 30,000 horse. As the Andarâ had only 100,000 foot and 3,000 horse, it is quite impossible that

---

55 The reverse type of the Chaitya and tree occurs on the much earlier coins of Agathokles, of Kabul.

56 Coins of South India, p. 10.
they could have possessed any territory on the Ganges. In Edict XIII. of the Rock inscriptions of Asoka, the Andhras are coupled with the Pulindas, "Andhra-Pulindeshu."

VÂSITHI-PUTRA.

Plate XII., Fig. 1. Lead. 1·2 inch. A.C.

*Obv.*—Bow, with arrow fixed. Indian legend, Râjna VASITHI-PUTASÂ Vidivaya-kuRASA.

*Rev.*—Large Temple or Chaitya, with tree to l.

Plate XII., Fig. 2. Copper. 0·7 inch. A.C.

Same types and legend as on Fig. 1; in field to 1. the combined Tri-ratna and dharma-chakra symbols.

Plate XII., Fig. 3. Lead. 0·85 inch. General Pearse.

*Obv.*—Temple or Chaitya. Indian legend incomplete, Râjna [VASITHIPUTASĀ SIRĪ] Pudumavasa.

MADHARI-PUTRA.

Plate XII., Fig. 4. Lead. 1·2 inch.

*Obv.*—Bow, with arrow fixed, as on No. 1. Indian legend, Râjna MADHARI-PUTASA Sivâla-kuRASA.

*Rev.*—Temple or Stûpa, raised on plinth, with trees to l.

Plate XII., Fig. 5. Copper. 0·7 inch. A.C.

Same types and legend as on fig. 4.

GOTAMI-PUTRA II.

Plate XII., Fig. 6. Lead. 1·15 inch. A.C.

*Obv.*—Bow, with arrow fixed. Indian legend, Râjna GOTAMI-PUTASA Vidivaya-kuRASA.

*Rev.*—Temple or Chaitya, on plinth, with trees to r.
Plate XII., Fig. 7. Copper. 0·7 inch. A.C.
Same types and legend as on Fig. 6.

Plate XII., Fig. 8. Silver. 0·6 inch, from Stūpa of Sopāra.
*Obv.*—Head of King to r., with large earrings. Indian legend, *Śrī Yaṅja-Saṭakaṇīṣa Chatrapana Gotamiputasa.*
*Rev.*—Stūpa or Temple, with Ujain symbol to l. and sun and moon over symbol; snake below. Indian legend, *Rājna Gotamiputasa Śrī Yaṅja-Saṭakaṇīṣa.*

Plate XII., Fig. 9. Lead. 1·1 inch. Weight 240 grains.
*Obv.*—Chaitya, with shell and flower; snake below. Indian legend, *Rājna Gotamiputasa Śrī Yaṅja-Saṭakaṇīṣa.*
*Rev.*—Ujain symbol of cross and four circles.

Plate XII., Fig. 10. Lead. 0·65 inch. General Pearse.
*Obv.*—Horse to r., and Indian legend as on No. 9 but incomplete.
*Rev.*—Ujain symbol.

Plate XII., Fig. 11. Lead. 0·8 inch. Sir W. Elliot.
*Obv.*—Elephant, moving to r. Indian legend incomplete [*Rājna Gotamiputasa Śrī Yaṅja-Saṭakaṇīṣa*].
*Rev.*—Ujain symbol [Coins of S. India. Pl. II., Fig. 48].

Plate XII., Fig. 12. Lead. 0·8 inch. A.C.
*Obv.*—Temple or Chaitya and snake. Indian legend incomplete, [*Rājna Gotamiputasa Śrī Yaṅja-Saṭakaṇīṣa*].
*Rev.*—Ujain symbol.

**Vasithi-Putra—Vada-Sata.**

Plate XII., Fig. 13. Lead. 0·7 inch. A.C.
*Obv.*—Chaitya, with snake. Indian legend, *Rājna Vasithiputasa Śrī Vada-Satasa.*
*Rev.*—Ujain symbol.
COINS OF ANCIENT INDIA.

Plate XII., Fig.14. Lead. 0-85. A.C.

Obv.—Horse, to r. Indian legend incomplete, Rājna Sīri Vāda-Sa[tasa].

Rev.—Ujain symbol.

KĀRWĀR.

A few coins only of Kārwār have been found by General Pearse. They are of lead and of large size, like the large leaden coins of the Andhras. Only two names are found on the five known specimens. One of each kind has been published in Sir W. Elliot's Coins of South India. I have not thought it necessary to give any sketches of them here. But as I read the names differently, I will now describe them.

MUDRA-NANDA, OR MULA-NANDA.

No. 1. Lead. 1-0 inch. Weight 250 grains. Coins of S. India. [Pl. II. 41.]

Obv.—Hemispherical Stūpa, standing on basement, with two rows of niches for lights. Legend in Andhra letters, Rājna MUDRA-NANDA.

Sir W. E. reads, Madenna Dāsa.

Rev.—Bodhi tree, surrounded by Buddhist railing; two Buddhist symbols to r., and joint Trī-ratna and Dharma-chakra to l.

No. 2. Vadala-Nanda.

No. 2. Lead. 1-0 inch. Weight 288 grains. Coins of S. India. [Pl. II. 42.]

Obv.—Stūpa, as on No. 1. Legend in Andhra letters, Rājna VADALA-NANDA.

Sir W. E. reads Vadaka denna Dāsa, but his letter K I take to be the pinnacle of the Stūpa.

Rev.—Tree, as No. 1, with the Swastika, and Trī-ratna symbols.
NEPAL is an extensive hilly country, about 500 miles in length by 150 miles in breadth, on the southern slope of the Himalaya Mountains, between Almora and Darjiling. It embraces all the headwaters of three great rivers, the Sarju, the Gandak, and the Kosi, and is the only part of North India which escaped the tyrannical rule of the Mohammedans. Its ancient capital was Mānagriha, the site of which is unknown; but as all the inscriptions of the Suryavansi dynasty come from the immediate neighbourhood of Deva-patana and Kāthmāndu it was probably only another name for Deva-pāta itself, which contained the famous old temple of Paśupati. Deva-patana I take to mean only "the god's city," i.e., the city of Paśupati, or Siva, whose shrine was already in existence when the Suryavansi family of the Lichhavis founded their sovereignty, about the beginning of the Christian era. The genealogical lists have been very fully examined and compared with the inscriptions by Dr. G. Bühler, whose results I accept with perfect confidence. The inscriptions were first discovered and translated by Pandit Bhagwan Lal67 and Mr. C. Bendall.68 The dynasty of the Suryan Licchavis ended with Siva Deva after A.D. 634, whose minister, Thākur Anṣu Varma, a contemporary of the Chinese pilgrim, Hwen Thsang, established the Thakuri dynasty about A.D. 640.

67 Indian Antiquary.
68 Journey in Nepal and West India.
<table>
<thead>
<tr>
<th>Coin</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Elephant</td>
</tr>
<tr>
<td>2</td>
<td>Lion</td>
</tr>
<tr>
<td>3</td>
<td>Horse</td>
</tr>
<tr>
<td>4</td>
<td>Elephant</td>
</tr>
<tr>
<td>5</td>
<td>Sun</td>
</tr>
<tr>
<td>6</td>
<td>Horse</td>
</tr>
<tr>
<td>7</td>
<td>Elephant</td>
</tr>
<tr>
<td>8</td>
<td>Sun</td>
</tr>
<tr>
<td>9</td>
<td>Horse</td>
</tr>
<tr>
<td>10</td>
<td>Elephant</td>
</tr>
<tr>
<td>11</td>
<td>Sun</td>
</tr>
<tr>
<td>12</td>
<td>Horse</td>
</tr>
<tr>
<td>13</td>
<td>Elephant</td>
</tr>
<tr>
<td>14</td>
<td>Sun</td>
</tr>
<tr>
<td>15</td>
<td>Horse</td>
</tr>
<tr>
<td>No.</td>
<td>Name</td>
</tr>
<tr>
<td>-----</td>
<td>-----------------------</td>
</tr>
<tr>
<td>1</td>
<td>Jaya Deva</td>
</tr>
<tr>
<td>2-12</td>
<td>Eleven names omitted in inscription</td>
</tr>
<tr>
<td>13</td>
<td>Vrisha Deva</td>
</tr>
<tr>
<td>14</td>
<td>Sankara Deva</td>
</tr>
<tr>
<td>15</td>
<td>Dharma Deva</td>
</tr>
<tr>
<td>16</td>
<td>Māna Deva</td>
</tr>
<tr>
<td>17</td>
<td>Mahi Deva</td>
</tr>
<tr>
<td>18</td>
<td>Vasanti Deva</td>
</tr>
<tr>
<td>19</td>
<td>Udaya Deva</td>
</tr>
<tr>
<td>20</td>
<td>Māna Deva V</td>
</tr>
<tr>
<td>21</td>
<td>Gunakāma Deva V</td>
</tr>
<tr>
<td>22</td>
<td>Siva Deva V</td>
</tr>
<tr>
<td>23</td>
<td>Narendra Deva V</td>
</tr>
<tr>
<td>24</td>
<td>Bhumi Deva V</td>
</tr>
<tr>
<td>25</td>
<td>Vishnu Deva V</td>
</tr>
<tr>
<td>26</td>
<td>Viswa Deva V</td>
</tr>
<tr>
<td>27</td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>Siva Deva II</td>
</tr>
</tbody>
</table>

**Thakuri Dynasty.**

<table>
<thead>
<tr>
<th>No.</th>
<th>Name</th>
<th>Gupt. Sam. 316</th>
<th>Harsha 84-39 45</th>
<th>A.D.</th>
<th>Native List</th>
</tr>
</thead>
<tbody>
<tr>
<td>29</td>
<td>Anṣu-Varma</td>
<td>684</td>
<td>640-645, 651</td>
<td></td>
<td>See Bendall, No. I. Inser.</td>
</tr>
<tr>
<td>30</td>
<td>Dharma Deva (Sri Hasha)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>31</td>
<td>Jishnu Gupta</td>
<td>46</td>
<td>652</td>
<td></td>
<td></td>
</tr>
<tr>
<td>32</td>
<td>Vishnu Gupta</td>
<td>-</td>
<td>670?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>33</td>
<td>Narendra Deva</td>
<td>-</td>
<td>690?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>34</td>
<td>Siva Deva II</td>
<td>119-145</td>
<td>725-751</td>
<td></td>
<td></td>
</tr>
<tr>
<td>35</td>
<td>Jaya Deva II</td>
<td>153</td>
<td></td>
<td>759</td>
<td></td>
</tr>
</tbody>
</table>
All the coins that have yet been found are of copper, and of large size. The types seem to be indigenous, and quite different from the contemporary coinage of the Guptas. Perhaps the recumbent bull of the coin of Pasupati may have been copied from the money of the Guptas and the Nine Nagas. In weight the coins range from 120 grains to 250, corresponding in this respect, as well as in size and style of letters, with the contemporary copper coinage of the Yaudheyas. [See Plate VI.] Both were direct descendants of the copper money of the Kushâns.

The types are few in number. The principal type shows the king seated on a throne holding a flower in his right hand. The positions are varied. Other types are an elephant, a bull either standing or recumbent, a lion sometimes winged, and various circular shields or ornamented solar emblems. Many of the coins of Pasupati show a vase of flowers, while a few have the trident of Śiva with the axe attached to the side. The coins are rather neatly made, the types being generally complete on both sides.

Two copper coins of Mânângka were obtained by James Princep in 1833 (Bengal Journal, August, 1833, and Thomas's Prinsep I., Plate III., fig. 12, and p. 62). No attempt was then made to read them. A coin of Gunângka was published by myself in 1865 (Journal, Bengal As. Soc.), and referred to as connected with the various mintages of Pasupati, of whom I made known four specimens.

For most of the early coins in Plate XIII. I am indebted to the kindness of Colonel Warren, who obtained them in Kashmir. According to his list he obtained about a hundred legible coins, and thirty-seven that were un-
COINS OF ANCIENT INDIA.

named. I was already possessed of twenty-three Nepal coins, of which three were procured at Benares, but the remaining twenty coins were obtained at Gayâ, by purchase in the Bazar, or at Buddha Gayâ in the small votive Stûpas. The Gayâ coins were no doubt obtained by work-people at Buddha Gayâ, and I would therefore ascribe my twenty specimens to the gifts of pilgrims from Nepâl, who visited the holy Bodhi tree during the first six centuries of the Christian era.

The coins of Pašupati are by far the most numerous, as they form about half of the known specimens of the early Nepalese coinage. The coins of Ansu Varma form about one-fourth, and the remainder are nearly equally divided between Mânângka, Gunângka, and Jishnu Gupta. The coins of Pašupati I was at first inclined to assign to Pasupaksha Deva, who is recorded to have restored the temple of Pašupati. But as he preceded the establishment of the Suryavansi dynasty, just before the beginning of the Christian era, he would have to be placed several centuries before Mâna Deva. This date is much too early, judging from the style of the letters on the coins, which is unmistakeably Gupta.

Four of the coin names we found on the lists, namely: Mânângka, Gunângka, Ansu Varma, and Jishnu Gupta, but there is no trace of Vaisravana. As the name is a patronymic of Kuvera it is possible that he may be the Kuvera Varma of the lists. But, as he is placed nine reigns or generations before Mâna Deva, the date of about 100 A.D. seems too early for the style of the coins of Vaisravana (Plate XIII., fig. 4).
MĀNĀNGKA OR MĀNA-DEVA.

Plate XIII., Fig. 1. Æ. 1·0 inch. Weight, 197 grains. Author.

Obv.—Deity seated on lotus throne; left hand resting on hip; right hand raised upward with expanded fingers. Indian legend in Gupta characters, Sri Bhogini.

Rev.—Lion walking to left towards lotus plant, with flower and bird. Indian legend in Gupta letters, Sri Mānāngka.

GUNĀNGKA OR GUNA-DEVA.

Plate XIII., Fig. 2. Æ. 0·9 inch. Weight, 195 and 146 grains. Col. Warren.

Obv.—Goddess seated; right hand held up. Indian legend in Gupta letters, Sri Gunāngka.

Rev.—Elephant standing to right.

VAISRAVANA.

Plate XIII., Fig. 3. Æ. 0·95 inch. Weight, 172 grains. Col. Warren.

Obv.—Deity, or Raja, seated to front, holding flower in right hand. Indian legend in Gupta letters, Vaiśravaṇah.

Rev.—Cow to left with calf beneath. Indian legend in Gupta letters, Kāma-dehi. This is the cow, usually called Kāma-dhenu, which sprang from the churning of the ocean. She possessed the power of granting desires.

ANSU-VARMA.

Plate XIII., Fig. 4. Æ. 0·95 inch. Weight, 212 grains. Col. Warren.

Obv.—Winged lion to l. with left fore-foot raised. Indian legend in Gupta letters, Śryaṇṣu Varma.

Rev.—The cow, Kāma-dhenu to l., as on No. 3. Indian legend in Gupta letters, Kāma-dehi.
COINS OF ANCIENT INDIA.

Plate XIII., Fig. 5. Æ. 1·0 inch. Weight, 250 grains. Col. Warren.

*Obv.*—Round figure of sun with rays. Indian legend in Gupta letters in circle, Mahārājādhityājasya.

*Rev.*—Lion to l., with forefoot raised. Indian legend in Gupta letters, Śrīyogah.

Plate XIII., Fig. 6. Æ. 0·95 inch. Weight, 169 grains. Col. Warren.

*Obv.*—Winged lion to l. with forefoot raised, as on No. 4. Indian legend in Gupta letters, Śrīyogu Varma.

*Rev.*—Lion to l. with forefoot raised. Crescent over back.

**JISHNU-GUPTA.**

Plate XIII., Fig. 7. Æ. 0·9 inch. Weight, 191 grains. Col. Warren.

*Obv.*—Winged lion to l. with forefoot raised, as on Nos. 4 and 6. Indian legend in Gupta letters, Śrī Jīshnuguptasya.

*Rev.*—Ornamental symbol.

**PASUPATI.**

Plate XIII., Fig. 8. Æ. 0·9 inch. Weight, 150 grains. Col. Warren.

*Obv.*—Recumbent humped Bull to l. Indian legend in Gupta letters, Paśupati.

*Rev.*—Round sun in middle with large rays.


*Obv.*—Recumbent bull to l. as on Fig. 9, and same legend.

*Rev.*—Ornamental symbol, as on Fig. 7.

Plate XIII., Fig. 10. Æ. 0·85 inch. Weight, 128 grains. Col. Warren.

*Obv.*—Humped bull standing to r. Crescent over back.

*Rev.*—Sun with rays in middle. Indian legend disposed at top and bottom, and r. and l., Paśupati.

No. 11. Æ. Similar types with bull to l. Same legend.
Plate XIII., Fig. 12. Æ. 0·85 inch. Weight, 152 grains. Col. Warren.

*Obv.*—Trident upright, with axe fixed to 1. Indian legend in Gupta letters, in two lines, *Paśupati*.

*Rev.*—Sun with rays, and legend disposed as on No. 10.

_N.B._—I possess several specimens of lighter weights.

No. 18. Æ. 0·8 inch. Weight, 128 grains. Col. Warren.

*Obv.*—Trident and legend as on Fig. 12.

*Rev.*—Sun with rays in middle, surrounded with ornament. No legend.

Plate XIII., Fig. 14. Æ. 0·85 inch. Weight, 95 grains. Col. Warren.

*Obv.*—King seated with right hand resting on knee.

*Rev.*—Vase of flowers. Indian legend in two lines, *Paśupati*.

Plate XIII., Fig. 15. Æ. 0·9 inch. Weight, 114 grains. Col. Warren.

*Obv.*—King seated with flower in right hand, and holding a vase of flowers in left hand.

*Rev.*—Vase of flowers and Indian legend, *Paśupati*.

_N.B._—I possess several varieties of these last coins of *Paśupati*; but the differences are slight, being chiefly confined to the attitude of the Raja, and to the shape and size of the vase. On some the Raja is seated under a canopy.

_N.B._—A brief notice of some of these Nepāl coins by Mr. V. Smith and Dr. Hoërnle will be found in the *Proceedings* of the Asiatic Society of Bengal for May, 1887. The coins, about 40 in number, belonged to Dr. Gimlette.
N.W. - INDIA