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A Study in the Economic Condition of Ancient India

(Thesis approved for the Degree of Doctor of Science (Economics) in the University of London)

BY

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with happy recollections of hours

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A Study in the Economic Condition of Ancient India

INTRODUCTION

HERE are many problems relating to the study of the economic conditions of ancient India which have not been adequately dealt with by any writers on the subject. For example, to what extent were the conditions of the country under its Hindu rulers reflected in India under Muhammadan sway ? Is there any evidence to suggest that some kind of survey of the culturable lands had been made under the ancient Hindu régime ? Can any relation be discovered between the records of that period and the revenue records of Akbar's time as contained in the Ain-i-Akbari ? Can we trace any analogy between the ancient territorial divisions and those in use under Muhammadan rule ? or in the system of maintaining local police stations for the protection of the country and the arrest of criminals ? or in the weights and measures employed, or in the coinage in use ? Do the figures indicating the strength of the fighting forces available from different parts of the country in the two periods assist us to draw any comparisons ?

Side by side with these questions, other subjects of inquiry call for full and impartial investigation. What was the form of the political and administrative organization in ancient India? Was India, or any part thereof, under a democratic or republican system of government, or did the conditions resemble more the feudal organization of mediaeval Europe? What were the relations between the rulers and the landowners, and between the landowners and their tenants? What was the social status of the ruling classes, and of the labouring orders? What, again, was the economic condition of the lower grades of society? Was the standard of living of the labouring classes high or low? And to form any definite

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opinion on this question it is essential first of all to ascertain the rates of wages paid and the prices of the common foodstuffs.

It is with the above problems that I seek to deal in the present thesis. In the sections treating of the territorial divisions, the population and weights and measures evidence is disclosed that tends to show that the record presented by Abu'l-Fazl in his \bar{Ain} -i-Akbari was based to some extent at least on records that had also been maintained in the Hindu period. The statistics given in respect of the numbers of mahāls or parganas, the information supplied as to the number of troops on the muster-roll, and as to weights, measures and coins bear a remarkably close resemblance to the facts and figures revealed by my investigations into the conditions of the Hindu period, a resemblance that cannot reasonably be ascribed to chance.

In Chapter VI, I have sought to show what were the actual position and powers of the aristocratic classes and their relations with the rulers of their countries; and, if the interpretation of certain terms therein suggested be accepted, it will be seen that the social and administrative organization in ancient India was similar in more respects than one to the feudal system of mediaeval Europe, and resembled that in old Rajputana as described by Tod, and that of the Chamba State as recorded by Dr. Vogel. In Chapter V, I have tried to frame from the only data that seem to afford a possible clue a rough estimate of the total population of the eighty-four countries (deśa) comprised in ancient India.

Chapters III and IV are devoted to a study of the weights, measures, and coinage, the rate of interest and the prices of foodstuffs and other things, as ascertainable from the ancient literature and the inscriptions available up to date. In Chapter VII the same sources have been minutely examined to discover what were the wages of labour, and what the standard of living of the labouring classes in those early days.

In the course of these inquiries it has been necessary to consider several important statements and statistical MINISTRY OF CL



figures, some of which had been rejected by scholars on the ground of "Oriental exaggeration", or on other grounds had been interpreted in some novel way. For instance, there are the figures recorded by Hiuan Tsang under the term translated hitherto as " circuit ". My first aim was to try and find the source from which he had derived his information, and, next, to decide what was the most reasonable interpretation to be placed upon them. If my solution be accepted, the figures recorded by the traveller can be reconciled with other information that has been handed down to us ; and they would go to show, moreover, that only about half of the total area of India had by that time been surveyed, the remainder probably consisting of hills, forest and jungle not yet fully explored. In this connexion I have been able to show from Samskrta sources that the correct number of countries (desa) comprised in ancient India was eighty-four. Hiuan Tsang had given descriptions of eighty-two countries, while Sir A. Cunningham had sought to reduce this number still further. Attention is then directed to further details contained in the old Hindu records, leading to a new interpretation of the word grāma, so constantly used in the ancient writings and in the epigraphical records. In the Southern Indian inscriptions some figures are given which had been interpreted as meaning the numbers of towns or villages within certain areas. I have shown that the word grāma or other synonymous term used in those records does not mean village, town, or city, but an estate, or a 'survey village', or mauza. I believe this to be the first time that such an interpretation has been assigned to the word grama. I have quoted passages from Samskrta works which record in some instances the same numbers of grāmas as given in the inscriptions ; and I have cited references which disclose that Muhammadan writers have also recorded corresponding figures.

Attention has next been devoted (Chapter II) to the smaller territorial divisions, known as janapada, gana, and

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After investigating these aspects of the administration I have endeavoured to find out the real status and powers of the ruling classes (Chapter VI) who owned estates (grāmas), and were called sāmanta, rājānaka, rājan, rājaputra, bhoja,

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raya, ganaraya, gana, amātya, grāmaņī, rainņa, ranā, etc. Hitherto the sāmanta of the Artha-śāstra of Kautalya and the rajan of other Samskrta literature has constantly been translated as 'king'. The interpretation of these terms proposed by me, if established, will involve a fundamental change in hitherto accepted views. The rules which have so far been understood as dealing with the king and his subjects refer, according to my interpretation, to the relations between the estate-owners and his tenants, and others living on their estates. Thus the taxes relating to pasture and cattle, etc., and the privilege of free labour, must be regarded as having been realized and enjoyed by the estate-owners, who in their turn were obliged to pay from one-fourth to one-sixth of their income to their suzerain and, in some cases, the amount fixed by old agreements (samdhi). As a result of my inquiries it would seem that the samdhis (agreements) described in the Artha-śāstra of Kautalya and the Kāmandakīya-nīti-sāra should be understood as agreements between the estate-owners and their suzerain, and not as treaties between independent kings. This interpretation, if accepted, will shed a light on the question of the proprietary rights in land in ancient India and at the same time furnish a basis for further research, as, for example, into the history of the dues and imposts realized from the tenants and sub-tenants by the landowners at the present day. (In Oudh these dues, according to my inquiries, number some 150. See Chapter VII, p. 161, note 2.) The militia employed by estate-owners were called pāyikas in the time of Dr. Francis Buchanan; and he was quite right in understanding this to be an old organization. The passage on the subject of pāikkas quoted by me from the Prāśna-vyākaranänga-sütra will show that the institution was already in existence about the beginning of the Christian era. The employment of pāikkas for the purpose of oppression and plunder shows the power of estate-owners in those days. Hitherto the adhyaksa of Kautalya has been interpreted as meaning a 'superintendent' of a public department; e.g.

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The comparison with feudal Europe led on to the subject of military service, and I have been tempted to frame an estimate of the total war-strength of the country from the data supplied in the description of the great war in the *Mahābhārata*, the Greek accounts of Alexander's campaigns in the Panjab and the statistics contained in the $A\bar{\imath}n$ -*i*- $Akbar\bar{\imath}$. The resultant figures, as will be seen, correspond in a remarkable manner. It would appear that the head of each sāmanta family in ancient India was expected to join the army of his suzerain in person, or, in case of inability, to provide a substitute, or in other words that each estate (grāma) furnished at

INTRODUCTION



least one fighting man in time of war. Having calculated the approximate total number of $gr\bar{a}mas$ in the whole of India from such material as is available for the purpose, I have upon this and other bases attempted to give a rough estimate of the total population. This is the first occasion on which such estimates of total population and fighting strength have been suggested.

Much labour has been devoted to the investigation of the economic condition of the working classes. For this two essential factors had first to be determined, namely (1) the rates of wages, and (2) the prices of the ordinary food-stuffs at the time. The difficulties attending such inquiry are so great that they have hitherto deterred scholars from attempting it. In the Southern Indian inscriptions wages and prices have been recorded sometimes in weights of paddy and sometimes in coins named kalañju, kāśu, and akka. The chief difficulty perhaps lay in ascertaining the value of the akka. Assuming this coin at first to be equivalent to a copper pana, I found this would involve the conclusion that wages and prices had remained practically stationary between the era, say, of the early Guptas and the eleventh century A.D., a conclusion which on the face of it was improbable, and conflicted with other evidence. Moreover, the adoption of this value would mean that the kalañju would represent a gold māşaka of about 7.2 grains, which raised further difficulties in respect of the mañjādi and kunrī. The prices recorded for jewellery necessitated taking the akka to have been a gold pana, or fanam as it was called in Southern India. On this basis it was found that the rise in prices between the period of Kautalya and the eleventh century A.D. would be about seven-fold, which is perhaps not excessive, having regard to the vast changes that had taken place in the conditions of the continent during the intervening period. It is possible that the old copper pana was ultimately converted into a gold pana or fanam, to correspond with the rise that had occurred in prices; and thus the fines recorded in the old

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After disposing of the difficulties encountered in connexion with the coins and weights given in the old inscriptions an attempt was next made to ascertain the rates of wages and the prices of foodstuffs, etc. In this inquiry I have derived most valuable help from the records of wages in the Nepāl inscriptions published by Professor Sylvain Lévi. These have been collated by me, and from them I have compiled a very interesting table. Although doubt has been felt as to the value of these records, I am now thoroughly satisfied that they are reliable, and embody valuable information. The Southern Indian table of wages has been compiled with great care from all the hitherto published inscriptions. Similar pains have been taken in the preparation of the table of prices. A very rare, and as yet unpublished, manuscript on prices, attributed to Kātyāyana, has also been appended. The determination of the rates of wages and the prices of food-stuffs has shed a flood of light upon the contemporary economic conditions of the working classes.

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Economics is a very wide subject; to deal with the economics of ancient India in all branches would be a lifelong task. Only a few aspects of the subject can be considered here. Having taken the grāma as a starting point, I have tried to collect all material concerning it. Understanding this term to mean an estate or a fiscal village, itself a part of a larger fiscal division called janapada, I was led to inquire into the management thereof from the point of view of revenue administration, and into the political and economic position of the owners of these gramas and of the people living thereon. These subjects are dealt with in Chapters I, II, V, VI, and VII. The treatment of the subjects of wages and the standard of living in Chapter VII called for consideration of the prices of food-stuffs and other necessaries, as well as of the modern equivalents of ancient Indian weights, measures, and coins, which are dealt with in Chapters III and IV.

In this thesis, it should be noted further, I have confined myself to evidence which hitherto has either not been noticed, or else not adequately appreciated; and I have suggested a number of new and original interpretations on questions that have already been raised. I have intentionally avoided any unacknowledged repetition of facts that have already been satisfactorily established by others.

Important information has been gleaned from a source, the value of which will be increasingly appreciated as it comes to be better known, namely the Jain literature, which has been extensively and carefully perused in the course of my researches. The whole of the published Southern Indian inscriptions and all the volumes of the *Epigraphia Indica* have been examined and studied. Besides the Samskrta literature in all its important branches, a special study has been made of Kautalya's *Artha-śāstra* in the Samskrta text. For the Muhammadan period the standard authorities have been consulted, and in particular I should like to express my obligation to Mr. W. H. Moreland's two valuable works



dealing with the period from Akbar to Aurangzeb. The records of the early statistical surveys made under the auspices of the British Government have also been examined.

The author feels deeply indebted to Professor T. E. Gregory, under whose guidance he carried on his research work, and to Dr. F. W. Thomas, C.I.E., who advised him from time to time, suggested many new points and assisted him in revising the thesis for the press. He desires to express his warm thanks to Professor R. L. Turner for so very kindly reading through the proofs and revising the Samskrta passages.





CHAPTER I

TERRITORIAL DIVISIONS IN ANCIENT INDIA

- I. REGIONS AND COUNTRIES
- II. SMALLER TERRITORIAL DIVISIONS : THEIR NAMES AND MEANINGS
- III. SMALLER TERRITORIAL DIVISIONS : THEIR NUMBER AND SIZE

CHAPTER I

TERRITORIAL DIVISIONS IN ANCIENT INDIA

I. REGIONS AND COUNTRIES

HERE are many problems connected with the territorial divisions of ancient India. Among them two are very important, viz. (1) the numbers and dimensions of Indian countries as given by Hiuan Tsang and (2) the numerical designations found in inscriptions, qualifying the names of countries and of territorial divisions, which have been interpreted as meaning the numbers of "villages, towns, and cities " comprised therein. " We are familiar with the fact," says Dr. J. F. Fleet in his article on the Dimensions of Indian Cities and Countries (JRAS., vol. xxxix, 1907, p. 641), "that Hiuen Tsiang has usually, if not quite always, indicated the dimensions of the various countries described by him. He has done so by stating sometimes the length and breadth, sometimes the circuit. For instance, he has told us that Kant'o-lo, Gandhāra-the capital of which was Pu-lu-sha-pu-lo, Purushapura, Peshawar—measured about 1,000 li = 121.21miles from east to west, and 800 li = 96.96 miles from south to north (Julien, Mémoires, i, 104). So, again, he has told us that the Cheh-ka, Takka, country-the old capital of which was She-ka-lo, Sākala, Sialkot-had a circuit of about 10,000 $li = 1212 \cdot 12$ miles (*ibid.*, 189). And he has usually indicated in a similar manner the dimensions of the capital cities; thus, he has told us that Pu-lu-sha-pulo and She-ka-lo had circumferences of about 40 li and 20 li = 4.84 and 2.42 miles respectively. Whence did Hiuen Tsiang obtain these details ? Was it from official records, or from the Buddhist books, or from what other source ? "

He may have obtained the figures either from the official records or from the people on the spot. Other details of a topographical character given in his narrative are

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found to have been so carefully and accurately recorded that it seems unreasonable to suppose that he should have been careless in respect of the territorial divisions and their dimensions; and we should rather seek to discover whether the correct interpretation of his figures has hitherto been given. If we could ascertain the source from which they were obtained, it might be possible to explain their meaning, and so remove the difficulties which scholars have found in reconciling them with known facts.

It appears, so far as my investigations have gone, that, at least from the seventh century to the eleventh century A.D., ancient India was divided into five regions and eighty-four countries (deśa).¹ These five regions consisted of (1) Northern India (Uttarāpatha), (2) Western India (Paścād-deśa), (3) Central India (Madhya-deśa), (4) Eastern India (Pūrvadeśa), and (5) Southern India (Dakṣināpatha).² On account of this five-fold division the Chinese traveller Hiuan Tsang, who travelled through India in the seventh century A.D., called it by the name of the "Five Indies".

Northern India comprised the Panjab, Kashmir, and Eastern Afghanistan, and included twenty-one kingdoms, namely (1) Šaka, (2) Kekaya, (3) Vokkāņa, (4) Hūņa, (5) Vāņāyuja, (6) Kāmboja, (7) Vāhlīka, (8) Vahlava, (9) Lampāka, (10) Kulūta, (11) Kīra, (12) Taṅgaṇa, (13) Tuṣāra, (14) Turuṣka, (15) Barbara, (16) Harahūva, (17) Hūhuka, (18) Sahuda, (19) Haṃsa-mārga, (20) Ramatha, and (21) Karakaṇtha. Perhaps the Sarasvatī river may have been the boundary between Northern and Central India.

Western India comprised Western Rajputana, Sindh, Kacch and Gujarat, and contained ten kingdoms, namely

² Prthūdakāt parata uttarāpathah ... Devasabhāyāh paratah. pūrvadešah Tatra Vārāņasyāh paratah pūrvadešah Māhişmatyāh parato daksiņā-pathah. ... (Kāvya-mīmāmsā, p. 94.)

¹ Čaturāšītir dešāh. Gauda-Kanyakubja-Kaullāka-Kalingānga-Vanga-Kurangacālya-Kāmākşa-Odra. . . Abhīra - Narmadātata - dvīpa - dešāš ceti (Kāvya-šikşa, by Vinayacandra, quoted in the Kāvya-mīmāmsā, by C. D. Dalal in his note on page 24.)

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 Deva-sabhā, (2) Surāṣṭra, (3) Daśeraka, (4) Travaṇa,
 Bhṛgukaccha, (6) Kacchīya, (7) Ānarta, (8) Arbuda,
 Brāhmaṇavāha, and (10) Yavana. The Narmadā river on the south, the Devasabhā on the east, the Sarasvatī river on the north and the sea-coast on the west were the boundaries of Western India.

Eastern India comprised the modern Bihar, Bengal, Assam, and Orissa, and the ancient Kalinga-rāṣṭra. It included sixteen kingdoms, namely (1) Anga, (2) Kalinga, (3) Kosala, (4) Tosala, (5) Utkala, (6) Magadha, (7) Mudgara, (8) Videha, (9) Nepāla, (10) Puṇḍra, (11) Prāgjyotiṣa, (12) Tāmaliptaka, (13) Malada, (14) Mallavartaka, (15) Suhma, and (16) Brahmottara.

Southern India comprised the whole of the country from Kalinga to Konkana and from the Narmadā to Ceylon, and included twenty-one kingdoms, namely (1) Mahārāṣṭra, (2) Māhiṣaka, (3) Aśmaka, (4) Vidarbha, (5) Kuntala, (6) Kratha-kaiśika, (7) Šūrpāraka, (8) Kāñcī, (9) Kerala, (10) Kāvera, (11) Murala, (12) Vānavāsaka, (13) Simhala, (14) Coda, (15) Dandaka, (16) Pāndya, (17) Pallava, (18) Gānga, (19) Nāsikya, (20) Konkana, and (21) Kollagiri.³

Central India comprised the eastern portion of Rajputana and the whole of the Gangetic plain from Thanesar to Benares.

¹ Prthüdakät parata uttaräpathah, Yatra Saka-Kekaya-Vokkäna-Hünà-Vänäyaja - Kämboja-Välhika - Valhava - Lampäka - Kulöta - Kira - Tangana-Tugära - Turuska - Barbara - Harahüva - Hühuka - Sahuda - Hamsamärga -Ramatha - Kara - kantha - prabhrtayo janapadäh Himälaya - Kulindrendra -Kila - Candrädavah parvatäh

Devasabhāyāh paratah paścāddeśah. Tatra Devasabha-Surāstra-Daśeraka-Travana-Bhrgukaccha-Kacchīyānartārbuda-Brāhmaņavāha-Yavana-prabhrtayo janapadāh....

Tatra Väränasyäh paratah pürvadesah. Yatränga-Kalinga-Kosala-Tosalotkala-Magadha-Mudgara-Videha-Nepäla-Pundra-Prägjyotisa-Tämaliptaka - Malada - Mallavarttaka - Suhma - Brahmottara - prabhrtayo janapadäh. . . .

Mähişmatyäh parato daksinäpathah. Yatra Mahäräştra-Mähişakäšmaka - Vidarbha - Kuntala - Krathakaisika - Sürpäraka - Käñei - Kerala-Kävera - Murala-Vänaväsaka - Simhala - Coda - Dandaka - Pändya - Pallava-Gänga-Näsikya-Kauńkana-Kollagiri-Vallara-prabhrtayo janapadäh. . . . (Kävya-mimämä, pp. 93-4.)

Rajaśekhara, the poet, does not give the names of its component kingdoms, but there is no doubt that, with the help of Hiuan Tsang, these names could be restored. It probably consisted of the following sixteen kingdoms :--(1) Kurukṣetra, (2) Matsya, (3) Śrughna, (4) Madavara and Brahmapura, (5) Goviṣāṇa, (6) Ahicchatra, (7) Pilośanā and Sāṃkāśya, (8) Śūrasena, (9) Kānyakubja, (10) Ayodhyā, (11) Hayamukha, (12) Prayāga, (13) Kauśāmbī, (14) Kuśapura, (15) Vaiśākha, and (16) Kāśī. Not having access to the original Saṃskṛta sources, Sir Alexander Cunningham included some portions of Eastern and Western India with Central India : in reality it contained only sixteen kingdoms, and not thirty-seven, as he thought.

As to the geographical division of Ancient India into nine regions, as given by Varāhamihira and in the Purāņas, it was perhaps made from the astronomical point of view, and adopted by poets and literary folk for providing similes with the lotus, and sometimes with the human body, which contains, according to the Hindu belief, nine 'entrances' for the senses. The *Śrīcakra-śambara-tantra* may be quoted as a good instance of how these nine divisions were used to furnish similes.¹ The *Bodhāyana-grhya-sūtra* went so far as to specify the ruling planet together with the name of the country representing each main division.²

¹ Śricakraśambara Tantra, pp. 30-1.

² Atha nava-graha-pūjā-vidhih.

Madhye vartulākāra-maņdale pratyaimukham Kalinga-dešajam. . . . Sūryasya daksina-dig-bhāge trikoņākāra-maņdale daksinābhimukham Avantidešajam. . . Sūryasya pūrva-dig-bhāge paňca-koņākāra-maņdale prānmukham Bhojakataka-dešajam. . . . Sūryasyāgneya-digbhāge caturašrākārā-maņdale pratyaimukham Yamunādešajam Ātreya-gotrajam. . . . Sūryasyaišāna-dig-bhāge bāņākāra-maņdale prānimukham Magadha-dešajam Ātreya-gotrajam. . . . Sūryasyottara-dig-bhāge dirgha-caturasra-maņdala udaimukham Sindhu-dešajam Āngirasa-gotrajam. . . . Sūryasya pašeimadig-bhāge dinaur-ākāra-maņdale udaimukham Kāśyapa-gotrajam . . . Saurāstra-dešajam Sūryasya mā-rtya-dig-bhāge Sūrpākāra-maņdala daksiņābhimukham Barbara-dešajam . . . Sūryasya vāyavya-dig-bhāge dhvajākāra-maņdale daksiņābhimukham Antarvedi-dešajam. . . (Bodhāyana-grhyasūtra, adhyāya 17, prašna 1, pp. 196-205.)

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In connexion with the number of countries Cunningham separated Persia and Ceylon from India proper, and reduced the number of eighty-two countries, as given by Hiuan Tsang, to eighty; but, as a matter of fact, two kingdoms should be added to make up the number eighty-four, as described by Vinayacandra in his $K\bar{a}vya-\dot{s}iks\bar{a}$. Ceylon was for a long time considered to be a portion of India and at one time more definitely as the fourth district of Malaya.¹ It was represented at the $R\bar{a}ja-s\bar{u}ya$ sacrifice of Yudhisthira, and played an important part in epic poetry. It embraced the Buddhist religion in the time of Aśoka, and always took a leading part in the sea-borne trade of southern India.

Persia was a vast country, and some of its frontier districts were included in the Aparanta, Barbara, and Yavana kingdoms of India. It exported fine horses and other valuable articles to India, and Indian goods to the kingdoms of the west. "They (the people of Palmyra), being merchants," says Appian, "bring from Persia to Arabia Indian commodities, which they dispose of to the Romans." 2 Kālidāsa included it among the countries conquered by Raghu,³ and the Mauryan Emperor Candragupta annexed a portion thereof to his own empire. "The Indians," writes Strabo, "occupy (in part) some of the countries situated along the Indus, which formerly belonged to the Persians. Alexander deprived the Ariani of them, and established there settlements of his own. But Seleukus Nikator gave them to Sandrokottus, in consequence of a marriage contract, and received in return 500 elephants." 4 As to its boundary, Pliny says that "most writers do not

¹ Tatra Vindhyädayah pratitasvarüpa Malaya višeşäs tu catvārah. Teşu prathamah :---" Ämülayaşteh phaņiveştitānām saccandanānām jananandanānām Kakkola-kailā-maricair-yutānām jātitarīnām ca sa janma-bhūmih.". . Caturthah :---" Sā tatra cāmīkara-ratna-citraih prāsādamālā-valabhir vitaikaih. Dvārārgalā-baddha-sureśvarānkā Lanketi yā Rāvaņa-rājadhānī." (Kāvya-mīmāmsā, p. 92.)

² McCrindle's Anc. Ind., p. 214.

³ Pārasīkāms tato jetum pratasthe sthala-vartmanā. (Raghuvamśa, Canto iv, verse 60.)

⁴ Cunningham's Anc. Geo., Ed. 1924, p. 18. Cp. McCrindle, op. cit., pp. 88-9.

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fix the Indus as the western boundary (of India), but add to it the four satrapies of the Gedrosi, Arachotæ, Arii, and Paropamisadæ—thus making the River Cophes its extreme boundary ".¹

The division of India into eighty-four countries seems very old. The *Bārhaspatya-artha-śāstra* gives the number of the principal countries as eighteen, that of the minor countries as seventeen, that of the marshy land countries as twenty-five, that of the hill countries as twenty, and that of the miscellaneous countries as four, making the total number eightyfour. It informs us, further, regarding the area of each country, which in some places is the same as that given by Hiuan Tsang and in other places slightly more or less. The names of the countries, together with the areas, as given by the *Bārhaspatya-artha-śāstra*,² may be arranged in a table in the following manner :—

¹ Cunningham, Anc. Geog. of India, Ed. 1924, pp. 17-18.

² 86. Rāmasrstiś catvārimšacchatam daksiņottare āsahyam dvādaša Viśvāmitrasīstir ekādaša. 87. Nepālam catuhšatam. 88. Pūrva-samudratīre varuņatah samudrāntam asta-yojanā. 89. Pañca-śata-dvitayam Uttaralātam Pūrvalātam ca. 90. Kāšī-Pāñcāla-dvitayam asītih. 91. Kekaya-Srfijayam şaştih. 92. Mātsya-Māgadham šatam. 93. Mālava-Šakuntam asitih. 94. Kosalāvantih sastih. 95. Saihya-Vaidarbha-dvitayam śata-dvayam. 96. Vaideha-Kauravam śatam. 97. Kāmboja-Daśārnam aśītih. 98. Etc mahā-visayāh. 99. Etc khalu caturāśrāh. 100. Āratta-Bälhikau daksinottaratah sata-mātrau pūrva-pascād dvādasau. 101. Saka-Saurāstrau caturasrau catvārimšat. 102. Anga-Vanga-Kalingāh šatamātrāś caturaśrāś ca. 103. Kāśmīra-Hūņāmbaştha-Sindhavah śatamātrāś caturāśrāś ca. 104. Kirāta-Sauvīra-Cola-Pāņdyā uttare daksiņe sthitih satātparam sasti-mātrāh. 105. Vādava-Kāňcī-visayam catvārimsacchata-106. Ete upavişayāh. 107. Sapta-końkaņāś catuhśatamātrā mätram. dvädasa sadrastrau ca. 108. Ete anüpäh. 109. Sahyadrau catvaro girivişayāh. 110. Śriparvate dvayam. 111. Raivataka ekah. Vindhye pañca. 113. Kumāra ekam. 114. Mahendre irayam. 115. Pärivätre trayam. 116. Sarve daksinottaratab pañcāšan-mātrāh pūrvatah paścāt pañca-yojanāh samāh. 117. Mleoche yavana-vişayāh pārvatīyāh. (Le Muséon, 33, pp. 1915-16.)

70. Tatrottare Himavân. 71. Tasya dakşine Nava-sähasri bhuh. 72. Tatra däksinätyo Bhäratah khandah. (Le Muséon, The Bårhaspatya-sätra, iii, p. 143.)



GL

TABLE NO. I

			A	rea in				1	Irea in
	Countrie	8.	yo	janas ?		Countrie	28.	3/	ojanas ?
1.	Uttara-La	ița		105	1.	Ārațța			100×12
2.	Pūrva-Lā	ţa		105	2.	Välhika			100×12
3.	Kāśī			80	3.	Śaka			40
4.	Pañcala			80	4.	Surāșțra			40
5.	Kekaya			60	5.	Anga			100
6.	Srñjaya			60	6.	Vanga			100
7.	Matsya			100	7.	Kalinga			100
8.	Magadha			100	8.	Kāśmīra			100
9.	Mālava			90	9.	Hūņa			100
10.	Śakunta			90	10.	Ambaştha	L.'		100
11.	Kosala			60	11.	Sindhu			100
12.	Avanti			60	12.	Kirāta			100-60 ?
13.	Saihya			100 ?	13.	Sauvīra			100-60 ?
14.	Vaidarbha	2		100 ?	14.	Cola			100-60 ?
15.	Vaideha			100	15.	Pāņdya			100-60 ?
16.	Kuru			100	16.	Yādava			140
17.	Kāmboja			80	17.	Kāñcī			140
18.	Daśārņa	1		80					

Total = 18 Principal countries (mahāviṣaya). Total = 17 Minor countries (upavisaya).

7	kingdoms	of	Końkana .		104
12	**		dvādaša-rāstra		104 ?
6	,,		şad-rāstra .	1000	- ?
Patal	- 95 Lin	ad.	ma of low londs	1	diamonth.

Total = 25 kingdoms of low lands ($an\bar{u}pa$ -visaya).

4	kingdoms	on th	e Saihya Mt.		50	×	5	
2	"	,,	Śrī Mt		50	×	5	
2	33	,,	Raivataka		50	×	5	
5	,,	59	Vindhya Mt.		50	×	5	
1		13	Kumära Mt.		50	×	5	
3	>>	,,	Mahendra Mt		50	×	5	
3	25	**	Päriyätra Mt.		50	×	5	
tol	- 20 kin	adoms	on hills and	15	harri	-		

Total = 20 kingdoms on hills, each having an average area of about 70 yojanas.

1.	Rāma-srsti .	1		140,	112 ?
2.	Visvāmitra-srsti				111
3.	Nepāl .				104
4.	Varuna .		I. all	108 (8 2)
	A		111 12 14	-	

Total = 4 miscellaneous kingdoms.

Total of countries mentioned in the $B\tilde{a}rhaspatya.artha.s ilde{a}stra = 84$ (18 + 17 + 4 + 25 + 20 = 84).

There is probably much truth in the figures given by Hiuan Tsang, if we understand them to refer to the area and not

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to the circumference of each kingdom. Take, for instance. the kingdoms of Gurjara, Valabhi, Surāstra, Ānandapura, and Atāli. These, according to Hiuan Tsang, had a circuit of about 26,000 li. The Barhaspatya-artha-śastra gives in respect of these kingdoms certain figures which total 630 yojanas, or 25,200 li (taking one yojana as equal to 40 li). The difference of 800 li is comparatively small, if we take into account the fact that the boundaries of the kingdoms may have varied between the two periods of time, and the difficulty of identifying exactly the area referred to in each case. It is remarkable that both these authorities give the very same figure in respect of Anga, viz. 4,000 li, or 100 yojanas. In the case of other kingdoms the figures given are exactly the same, provided we take a yojana as equal to 12.12 miles or 50 li, as suggested by Dr. J. F. Fleet in his article on "The Yojana and Li" (JRAS., vol. xxxviii, 1906, p. 1011). It appears that two distinct yojanas were in use in Ancient India, namely, one equal to 9.532312 miles, or say 40 li, as suggested by a French authority, and the other equal to 12.12 miles, or say 50 li, as proposed by Dr. J. F. Fleet. The similarity between the figures of the Si-yu-ki and the Barhaspatya-artha-śastra can be seen from the following table :---

TABLE NO. II

The Bārhaspatya-artha-sāstra figures and the Si-yi-ki figures compared.

	Iountrie			The figures given in the Bärhaspatya- artha-kästra.	The figures given in the Si-yu-ki,		
Anica	io until re			100 (10	1000		
Anga		* - u.	1	100 (× 40 =)	4,000	1 yojana	= 40 li.
Vārāņasī				$80 (\times 50 =)$	4,000	1	= 50
Kalinga				$100(\times 50 =)$	5,000	1	= 50
Magadha				$100(\times 50 =)$	5,000	1	- 50
Käñeï (D	ravida)			$140(\times 50 =)$	6.000	i "	
Marth		100	1	2011.00	0,000	- 12	= 00 ,,
Nepala		*	*	$104(\times 40 =)$	4,000	1 ,,	== 40 ,,
				(approximatel	V)	
Cola .				$60(\times 40 =)$	2.400	1	- 40
Vanga (P	undraw	rdha	(na)	100 (× 40 -)	1.000	C	- 10 ,1
AmiRelt	which we are	ar chines	1100 1	100 (1 10 -)	2,000	1	== 40



Surāstra co	ount	ries.		Surāstra	cou	ntries.
Yādava		140		Ațāli .		6,000
Sauvīra		140		Kaccha		3,000
Sindhu .		100		Valabhi	1.	6,000
Valabhi		105		Ānandapu	ıra	2,000
Pūrva-lāța		105		Surāstra		4,000
Surāstra		40		Gurjara		5,000
Total	-	630	voianas.	Tota	ıl =	26,000 1

Surāstra countries total = $630 (\times 40 = 25,200 li) = 26,000$ (approximately, taking 1 yojana = 40 li).

The similarity between the figures given in the Barhaspatyaartha-śāstra and the Si-yu-ki may possibly afford an answer to the question raised by Dr. Fleet, namely, "Whence did Hiuen Tsiang obtain these details? Was it from official records, or from the Buddhist books or from what other source ? " As the Barhaspatya-artha-śastra, like the Arthaśāstra of Kautalya, is a treatise dealing with administrative affairs, it is most probable that both authorities derived their figures from the official records kept in each kingdom for the purpose of collecting land revenue. And if this was the source, as it is reasonable to conjecture, then the figures given by both should be taken as representing only the area surveyed by government officers, and as but approximately correct. As to Dr. Fleet's further question (in his article on "Dimensions of Indian Cities and Countries" quoted above): " And to what extent, in respect of the countries in particular may we, making allowance for the fact that the statements in this class would obviously give only approximations, in round numbers, accept these details as authentic ? " If we understand Hiuan Tsang's figures to represent, not the circuit, but the surveyed area of each kingdom, then their accuracy or inaccuracy can easily be roughly tested.

The total for all India of the figures given in the Bärhaspatya-artha-śāstra is 9,000 yojanas.¹ The same figure is given

¹ Nava-sahasra-yojana-vistirne bhärata-khande. Nava-sahasra-yojanavistirna-bhäratavarse. (Šri-Šukla-yajurvedīyānām brahma-nitya-karma, pp. 10, 12.)

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by other authorities also. The average of the figures given in respect of each kingdom by Hiuan Tsang amounts to approximately 4,000 li, or say 100 yojanas. If we multiply this by 84, the total number of kingdoms as given in the Bārhaspatyaartha-śāstra, we get 8,400 yojanas. Or, if we take the figures given in the Bārhaspatya-artha-śāstra in respect of thirty-three principal and minor countries (as it does not give round numbers for Vāhlīka and Āraţţa), the total is 3,250 yojanas, giving an average per country of 98.7 yojanas. Multiplying this average by eighty-four, we should get 8,290.8 yojanas for the whole of India.

Sir Alexander Cunningham took a *yojana* to be equal to 9 miles. The *yojana* not representing the same distance in all parts of the country, it will be safe to adopt as the standard *yojana* the average of the different *yojanas*. According to Cunningham, there were three *krośas* prevalent in his time, viz. that of $1\frac{1}{4}$ miles in the north-west and the Panjab, that of $2\frac{1}{4}$ miles in the Gangetic provinces, and that of 4 miles in Bundelkhand, Mysore, and Southern India. The average of these three is $2\frac{1}{2}$ miles.¹ As one *yojana* was always recognized to be equal to 4 *krośas*, we may fairly assume the average length of the *yojana* to have been about 10 miles. Therefore 8,628 *yojanas* would represent about 862,800 square miles (taking the figures as referring to *area*, and not *circuit*).

Modern India, excluding Burma, but including the Native States, comprises about 1,600,000 square miles,² nearly double the area as calculated from the figures given in the *Bārhaspatya-artha-šāstra* and the *Si-yu-ki*. The difference may be explained by the fact that the balance in ancient times was unexplored or unsurveyed, owing to its being covered by forests or uncultivable.

Now it seems clear that Hiuan Tsang's figures were based either upon the information given him by the people he

¹ Cunningham's Anc. Geo., Ed. 1924, p. 658.

² Census of India, 1921, vol. i, p. 58; Statistical Abstract for British India, 1912-13 to 1921-2; East India (Statistical abstract), vol. 57, 1925, p. 2.

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consulted on the spot, or upon the records kept by the local authorities. In reducing the *yojana* to *li* he appears to have treated the figures as linear measurements, multiplying by 40, instead of by (40×40) 1,600, as he should have done if they represented superficial measure. That Hiuan Tsang, with his great learning and accuracy of observation and record, should have made an error of this kind may perhaps be regarded as the chief stumbling-block to the acceptance of the conclusion that the figures represent areas in square measure.

Such a mistake is, however, very common with the ancient writers. For instance, in the $D\bar{a}na$ -mayūkha and many other books treating of similar subjects, we find the nivartana measure described as $(3 \times 10) 30 \ dandas$,¹ instead of $(3 \times 10 \times 10) 300 \ dandas$ as given by Kautalya.²

Samskrta words expressing superficial measure are generally made by adding the prefix *pari*, which means 'surrounded by', e.g. *parimāna*, *pari-kşetra*, etc. It is quite likely that the Chinese traveller tried to translate the Samskrta prefix *pari* by the Chinese word *chau*, which had exactly the same meaning, namely 'surrounded by'.

Whatever may be the origin of the error, it is quite clear that in both authorities, the $B\ddot{a}rhaspatya-artha-\dot{s}\ddot{a}stra$ and the Si-yu-ki, the figures cannot be taken as representing circuit. But, on the other hand, if we understand them to denote the surveyed areas, we do not meet with any serious difficulty.

II. SMALLER TERRITORIAL DIVISIONS : THEIR NAMES AND MEANINGS

The problem regarding the numerical designations attached to the countries mentioned in the last section is more difficult to solve than the problem connected with their number and

¹ Chap. III, p. 83, note 1.

^a Daśa-daŋ-dorajjuh. Dvi-rajjukah parideśah, Tri-rajjukam nivartanam. Ekato dvi-daŋ-dādhiko bāhuh. (Kau, Artha, p. 107.)

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What do these numerical components mean ? Why are they given so much importance in connexion with landgrants ?

What purpose do they serve there? Are they mythical and exaggerated? "There has been a mistaken idea," says Dr. Fleet, "which apparently originated with Dr. Burnell (see his *South Indian Palæography*, second edition, p. 67, last paragraph but one), that the numerical components of this and similar appellations denote the amount of revenue. And some apparent reason for it might be found in the facts that there are not so many as twenty thousand villages in Mysore, and not quite forty-four thousand villages and hamlets in the whole of the Bombay Presidency. . . But there are



quite enough passages to show clearly that the reference is to the numbers, real, exaggerated, or traditional, of the cities, towns, and villages : for instance, the Aihole inscription of A.D. 634-5 mentions 'the three Mahārāshtras, containing ninety-nine thousand villages' (Ind. Ant., vol. viii, p. 244) : the Silāhāra records of A.D. 1026 and 1095 distinctly speak of a division of the Konkan containing 'fourteen hundred villages' (id., vol. v, p. 280, and vol. ix, p. 38); an inscription at Pātna in Khāndēsh, of about A.D. 1222, speaks as distinctly of 'the country of the sixteen hundred villages' (Epigraphia Indica, vol. i, p. 345); and the meaning of the name of the territorial division, called the Velugrama or Venugrama seventy, is explained by a passage which describes Vēlugrāma as 'resplendent with seventy villages' (Jour. Bo. Br. R. As. Soc., vol. x, p. 252). Other instances of very large numbers are, the Nolambavadi thirty-two thousand, in the district of Bellary ; the Kavadidvipa lakhand-a-quarter, which was the northern part of the Konkan; and the seven-and-a-half lakh country, which is the expression that was used in later times to denote the territory that was held first by the Räshtrakūtas and then by the western Chālukvas. These large numbers must be gross exaggerations, based possibly on some traditions or myths. But there appears no reason for objecting to accept the literal meaning of such more reasonable appellations as the 'Konkana fourteenhundred and nine-hundred', the 'Santalige thousand', the 'Tardavādi thousand', the 'Pānumgal five-hundred', and the 'Belvola three-hundred'; and possibly, when we know more as to how far the larger numbers include the smaller, of the 'Kundi three-thousand', the 'Karahata four-thousand', the 'Toragale six-thousand ', the ' Palasige twelve-thousand ', and the 'Banavāsi twelve-thousand '. The system of administration by dividing the country into circles of tens, twenties, hundreds, and thousands of villages, is prescribed in the Mānava-dharma-śāstra, vii, 113 to 117 ". (Bomb. Gazartal TAR pt. ii, p. 298, n. 2.)

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THE TERM GRAMA

From the passage quoted above it appears that Dr. Fleet had no hesitation in accepting the numbers as true when they were small; but, when very large, he thought that they were mythical or exaggerated. Personally I should rather prefer to consider them to be true or false as a whole, whether they be large or small. However, before rejecting or accepting these figures, it will be as well to find out the actual meaning of the word grāma, which they qualify. It is translated in English by the words 'village', 'town', or 'city'. Does it really signify this or something quite different ?

When cataloguing the Prajnapanopanga, an old Jain canonical work, I was astonished to find the meaning of grama given as an estate or a survey village which can pay eighteen kinds of Government taxes.¹ I consulted many Samskrta lexicons as to this interpretation, but without any success. It is well known that these lexicons were compiled from a literary view-point and that they are not of much assistance as far as the technical meanings of words are concerned. But the case was quite different with the Jain lexicographers, who had to deal with the Prakrta words used in different meanings in their scriptures.

In the time of the great Guptas, and even many centuries prior to them, it appears that the word $gr\bar{a}ma$ was used in official records for an estate, and in poetical and literary works for a village or settlement. A discussion arose among scholars with regard to its technical meaning. They agreed that the word $gr\bar{a}ma$ meant an estate, whether cultivated, fallow, or *jangal*, but they differed as to the size or area to which it referred.

¹... Mahävidehesu cakkavatti-khamdhäväresu väsudeva-khamdhäväresu baladeva-khamdhäväresu mamdaliya-khamdhäväresu mahämamdiliya-khamdhäväresu gäma-nivesesu nagara-nivesesu nigamanivesesu... (Commentary : Mahävidehesu, kintu cakravarttiskandhäväresu... "gäma-nivesesu" ityädi, grasati buddhyädin gunän iti grämah, yadi vä gamyah sästra prasiddhänäm astädasakaränäm iti grämah.... Sri Prajääpanopänga, tol. 46, part i.)

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Like the commentator of the *Prajñāpanopānga*, Vijayacandra also in his *Abhidhāna-rājendra*¹ defines grāma as an

¹ Gāma-grāma-pum. Gamyo gamanīyo 'ştādašānām šāstre prasiddhānām karāņām iti vyutpattyā, grasate vā buddhyādīn guņān iti vyutpattyā vā prşodarāditvān niruktavidhinā grāmah. . . Prācuryeņa grāmadharmopetatvāt karādigamyo vā grāmah. Ācā. 2 Śru. 1 A. 2 U. . . . Sanniveša-višese, Praśna. 3 Āsra. dvāra. Bha. Jñā. Kaņtaka-vātakā-vrtam janānām nivāse, Utta. 2 A. Sūtra. . . Tatrāneka-vidha-naigamānām anyāny api pakşāņi yāni vaktavyāni tāni nāma-grāham samgrhņann āha :---

Gāvo taņāī sīmā, ārāmam udapāņa-ceta-rūpāņi

Vähiya väņamamtara, nuggaha tatto ya āhipatī. Gāvah 1 trņāni 2 upalakṣaṇatvāt trņāhārakādayah sīmā 3 ārāma 4 udapānam kūpah 5 ceṭarūpāņi 6 vāhirvrtih 7 vāṇam antaram devakulam 8 avagrahab 9 tataś cādhipatih 10 iti niyukti gāthā'kṣarārthah. Atha bhāvārtha ucyate—prathamam naigamah prāha—yāvantam bhūbhāgam gāvaś caritum vrajati tāvān sarvo'pi grāma iti vyapadešam labhate. Tato visuddhanaigamah pratibhaṇati—

Gāvo vayamti dūram, pijam tu taņakatthahāragādīyā |

Sūrutthite gataem-ti attha samte tato gāmo.

Paristhūram api paragrāmam api caritum vrajanti, tatah kim evam so'py eka eva grāmo bhavatu ? api ca evam bruvato bhavato bhūyasām api parasparam atidavīyasām grāmāņām eka-grāmataiva prasajjati, na caitadupapannam, tasmān naitāvān grāmah kimtu yat yāvanmā tram ksetram trņāhārakakāsthahārakādayah sūrya utthite trņādyaitham gatāh santah sūrye 'stamayati trņādi-bhārakam baddhvā punar āyānti, etāvat ksetram grāmah.

Parasīmam pi vayamti hu, suddhataro bhaņati jā sa sīmā tu |

Ujjāņa avattā vā, ukkīlam tā u suddhaparo.

Suddhataro naigamo bhanati—yadyapi gavām gocara-ksetrād āsannataram bhūbhāgam trņa-kāsthā-hārakā vrajanti, tathāpi te kadācit parasīmānām api vrajanti, tasmān naitāvān grāma upapadyate. Aham bravīmi—yāvat svā ātmīyā simā etāvān grāmah. Tato'pi viśuddhatara h prāha—maivam. Atipracuram ksetram grāma iti vocah, kimtu yāvat tasyaiva grāmasya sambandhī kūpah tāvad grāma iti. Tato'pi viśuddhataro brūte— udyānam ārāmas tāvad grāma iti bhaŋvate. Viśuddhataro brūte— udyānam arāmas tāvad grāma iti bhaņvate. Viśuddhatarah pratibhaņati—etadapi bhūyastaram ksetram na grāma-samjūām labdhum arhati, aham bhaņāmi yāvad udapānam tasyaiva grāmasya sambandhī kūpah tāvad grāma iti. Tato'pi viśuddhataro brūte—idam apy atiprabhūtam ksetram, ato yāvat ksetram avyaktāni cetarūpāņi ramāņāni gacchanti tāvad grāma h. Tato'pi viśuddhatarah prativakti etad apy atiriktatayā na samīcīnām abhāti, tato yāvantam bhūbhāgam atilaghīyāņiso bālakā utkrīdanto ringandah prayānti tāvān grāma iti.

Eva visuddha-nigamassa vai parikkhevaparivumo gāmo

Vavahārassa vi evam, samgaha jahi gāma samavā ö.

Evam vicitrābhiprāyāņām pūrvanaigamānām sarva api prati-pattīrvyaposya sarva-višuddha-naigama-nayasya yāvān vrti-pariksepaparivrto bhūbhāgas tāvān grāma ucyate. . . (The Abhidhāna-rājendra by Vijavacandra; the article "Grāma", pp. 865-7.)

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estate which can pay eighteen kinds of government taxes or which is assessed separately for revenue purposes. The word was used in the remotest period of Indian history in ten different meanings, viz. : (1) cows $(g\bar{a}vah)$; (2) grasses $(trn\bar{a}ni)$; (3) boundary $(s\bar{s}m\bar{a})$; (4) pleasure-garden $(\bar{a}r\bar{a}ma)$; (5) well $(udap\bar{a}na)$; (6) servants ? (ceta ?); (7) fences (bahih); (8) temple (devakula ?); (9) an estate (avagraha); (10) owner (adhipati).

Take, for instance, the first meaning, 'cows.' There was a body of scholars (naigamah) who believed that grama meant an estate containing an area as large as that of a pastureground. They defined grāma as an estate (ksetra) where cows go to graze. This definition was rejected by others on the ground that cows sometimes entered a grāma (estate) belonging to others, which had its own separate existence as an estate (grāma). Others tried to explain the exact area of a grāma by saying that all land which is traversed by a wood-cutter should be taken as one grāma (estate). This definition again was not accepted owing to its being very vague. Some proposed to take grāma as meaning the estate owned by a family, and others as an estate equal in size to a garden; and so on. Apart from its technical meanings, there existed no difference of opinion as far as its popular use was concerned, namely, for 'a group of people settled on a portion of land and vice versa'.

The Inscription No. 20 of the Pāndu-Lena Caves of Nāsik furnishes clear proof that the word *grāma* was frequently used for a petty estate. Understanding the term to mean 'a village', the editor of the text was perplexed by the unusual shortness of the inscription, and remarked that "The words in the original are Dhambhika-gāma, and seem to mean the village Dhambhika. As the text stands, this must be accepted, but it is unusual for the people of a city to bestow a village in gift. Villages generally are granted by kings, not by the people. Assuming that the people of Nasik did grant the village, it is curious that the inscription should

be so short and that it should make no mention of the person to whom it was given or of the object of grant". (See Bomb. Gaz., vol. xvi, p. 590, $P\bar{a}ndu$ -Lena Caves, No. xviii, Inscr. No. 20.) The difficulty here mentioned vanishes if we understand the word $gr\bar{a}ma$ as meaning an estate. According to the $D\bar{a}na$ -mayukha a donor should at least give a $gr\bar{a}ma$ to a Brāhmaņa; if unable to give so much, he should at least give land measuring a go-carma. From this it is clear that the grant of a $gr\bar{a}ma$ to a Brāhmaņa could be made by anyone. However in such cases the permission of the king was necessary. The ground for this will be discussed in the chapter dealing with the sale and purchase of land.

There is another most important inscription in the same place containing the words *tac ca kṣetraṃ vikṛṣyate sa ca* grāmo na vasati evaṃ sati, meaning "it was thought that thatfield would be cultivated; but as that field (sa ca <math>grāmo) is not under cultivation so ", clearly showing not only that a kṣetra could be described as a grāma, but also that the word vasati was used in the sense of 'cultivation', as well as in that of 'habitation'.

The definition given by the Kāmikāgama, Kāranāgama, and Mayamata of the ekabhoga-grāma or kuṭika-grāma also shows that grāma means an 'estate'. According to them an ekabhoga-grāma means a property or an estate which can be enjoyed by one family, consisting of the owner and his servants.¹

It is to be regretted that all the translators of the ancient Indian law books should have committed the mistake of trans-

¹ Viprair athänyair varņair vā bhogyo grāma udāhrtah. Eko grāmaņiko yatra sabhrtya paricārakah. Kuţikantadvijānīyād ekabhogas sa eva tu. Kāmikāgama. Prāg-ukta-guņa-yuktāya vedārthanipuņāya ca. Kuryāt taj jñānanidhaye dānam syād uttamottamam. Ekabhogam iti khyātam prašastam atidurlabham. Kāraņāgama. Anyad ašaktānām ced dānam dašabhūsurāntamekādi. Ekakuţumbisametam kuţikam syā(t ta)d ekabhogam iti kathitam.

Mayamata.

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(Quoted in EI., vol. xv, No. 5, p. 55.)



Take, for instance, the Smrti of Yājňavalkya. According to that work, the disputes about a boundary of a field should be settled by the sāmantas possessing equal grāmas (sama $gramah = having equal estates).^1$ As to the meaning of sāmanta, Kātyāyana says that it means only an owner who possesses a neighbouring estate, whether such be a house, a field or a portion of land (grama). He says further that if the neighbouring sāmantas are personally interested in any dispute, then it should be settled by the sāmantas next to them, and if they also are not disinterested, then it should be decided by the sāmantas next adjoining. This whole group is termed lotus-shape. It appears from the Artha-śāstra of Kautalya that it comprised forty people (sāmanta-catvārimsat-kulyā) in number, who had the privilege of being present at the time of sale and purchase of land and of settling disputes in connexion with fields, houses and estates.²

¹ Sāmantā vā samagrāmāš catvāro'stau dašāpi vā | Raktasragvasanāh sīmām nayeyuh kşitidhāriņah. (Commentary.)

Grāmo grāmasya sāmantah kṣetram ksetrasya kīrtitam | Grham grhasya nirdistam samantāt parirabhya hi. (Kātyāyana.) Samsaktakās tu sāmantas tat samsaktās tathottarāh | Samsakta-sakta-samsaktāh padmākörāh prakīrtitāh. (Ibid.)

(Yajñavalkya-smrti; Vyavahāra-prakaraņa 9, sloka 152, pp. 232-3.) Sāksyabhāve tu catvāro grāmāh sīmāntavāsinah | Sīmāviņisrasma human

Sīmāvinirņayam kuryuh prayatā rāja-samnidhau. (Manu-smrti, vili, 258.)

² Sāmanta-pratyayā vāstu-vivādāb. Grham ksetram ārāmas setubandhas tatākam ādhāro vā vāstub. (p. 166.)

Jňäti-sämanta-dhanikäh kramena bhūmi-parigrahān kretubhyā bhaveyub. Tato'nye bāhyas sämantacatvārimšatkulyā grha-prati mukhe vešma irāvayeyub. Sāmanta-grāma-vrddheşu ksetram ārāmam setubandham tatākam ādhāram vā maryādāsu yathāsetu-bhogam anenārgheņa kah kretā iti tirātra-ghusita-vītam avyāhatam kretākretum labheta. (p. 168.) (Kantalya's Artha-fastra.)
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If we take $gr\bar{a}ma$ to mean an estate, no difficulty arises. Everything seems reasonable and natural. All disputes were to be settled by the $s\bar{a}mantas$ of the adjoining estates. According to my interpretation, if a house in a street was to be sold, it was sold in the presence of forty householders residing in the same street or in the immediate vicinity. If a field in a village was to be sold, it was sold in the presence of the landowners (*sāmantas*), forty in number, holding estates in the vicinity of that field.

But things take a very different complexion to those who look on grāma as signifying a 'village'. The whole of the above-mentioned text then becomes meaningless. Interpreting sama-grāmāh as denoting the people possessing equal villages, would mean that disputes, sales, and purchases, etc., connected with a field in a village, were to be settled by the people living in other villages or, in other words, that each village was governed by a group of forty villages. The constituent villages of the group would vary in the case of different villages; and if two or more disputes or sales, etc., were going on simultaneously, the inconvenience and difficulties arising from such a regulation may readily be conceived !

Such an obviously absurd system of administration could never have existed in Ancient India. Why should the *sāmantas* of certain villages interfere with the affairs of others, possibly at some distance. Why should they be required to waste their time in travelling such distances in order to give an opinion in a dispute connected with a field or a house wherein they had no interest, and about which they knew nothing whatever ? It would have been a great injustice to the landowning classes of a village to have internal affairs settled by strangers and to count for nothing in their own dwellingplace. Furthermore, it is ridiculous to suppose that landowners could have been forced to wander about from one village to another and neglect their own estates. It is possibly from such considerations as the above that certain scholars

have translated sāmantāh vā samagrāmāh as "the neighbours living in the same village". The use of sama, however, in the sense of 'same' is unusual, if not doubtful, in Saṃskṛta. The word sama, when joined to another word generally means 'having equal'. 'Same,' on the other hand, is ordinarily expressed by the Saṃskṛta word samāna, or tat.

It is interesting also to note how Kautalya employed the term. In prakaraņa 173, which deals with the Paragrāmikayoga, he uses it for an 'estate'; grāma-ghāta for laying waste the countryside; grāma-vadha or grāma-avaskanda for capturing a fort representing, or counted in the revenue records as, an estate; para-grāma for an estate belonging to others, etc. In prakaraņa 171 also, the word grāma is used in the same meaning (estate). Groups of five and ten estates, which were under the supervision of a gopa, are referred to by the words pañca-grāmī and daśa-grāmī.¹

Going further back to the period of the Vedas and Upanisads we find that the word $gr\bar{a}ma$ was used more clearly for an estate. For instance, in the *Bodhāgana-dharma-sūtra* we find the word $gr\bar{a}ma$ explained by the commentator as $v\bar{a}stu$,² which is defined by Kautalya as an estate containing land, garden, house and well, etc.³ In the *Chändogya-upanisad*, in the story of Raikva the Brahmajñānin, a deserted place

¹ Svāmino dūşya-grāmam (p. 401); Grāma-vadho'vaskande ca (p. 402); Grāma-ghāta-pravistām vā (p. 403); Grāma-ghāta-daņdasya (p. 402); Vijigīsuh paragrāmam avāptukāmah (p. 394). See also Prakaraņas 173 and 171; pp. 394-403. (Kautalya's Artha-sāstra.) Tatpradistah pañcagrāmīm daša-grāmīm vā gopaš cintayet. (Ibid., p. 142.)

² Nirgatya grāmānte grāma-sīmānte vā'vatisthate tatra kuţīm maţham vā karoti krtam vā pravišati.

(Commentary.)

Grâmănto văstu-sîmă. Itarah ksetra-sîmă. Kuți eka-sthūņam veśma. Mațho bahu-sthūņah. . . (Bodhāyana-dharma-sūtra, iii, î, sūtra 13, p. 300.)

³ Sämanta-pratyayä västu-vivädäh. Grham ksetram äräma-setubandhas tatäkam ädhäro vä västub. (Kanţalya's Artha-söstra, p. 166.)

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(vijanadeśa) is called a $grāma.^1$ Samgrāmāh samitayah of the Atharvaveda perhaps means an assembly of the people possessing estates.² It appears that the word *āranya* was used for those estates which were under forest, as it occurs in contrast to the word grāma in several places.³

To sum up, we shall not be far from the truth if we understand $gr\bar{a}ma$ to mean an estate, comprising cultivated and fallow lands as well as pasture, and including any buildings, wells, etc., existing thereon; the area, in fact, that constituted the territorial unit for the purpose of revenue assessment.

III. SMALLER TERRITORIAL DIVISIONS : THEIR NUMBER AND SIZE

From the foregoing meanings of the Samskrta word grāma it is clear that it was used to express many other things besides an inhabited hamlet or a village. In official revenue records it seems to mean an estate which paid government taxes and the king's dues. The "Kundavura thirty" of the copper-

¹ So'dhastācchakatasya pāmānam kasamānam upopaviveša. . . .

(The *Šāmkara-bhāşya* :---ity uktah kṣattā anviṣya tam *vijane deše* adhastāc chakatasya gantryāh pāmānam kharjūm kaṣamāŋam kaņdūyamānam drstvā...)

tam hābhyuvāda Raikvedam sahasram gavām ayam nisko'yam asvatarīratha iyam jāyā yam grāmo yasminnāsse mā bhagavah sādhītī.

(The Sāmkara-bhāsya:---ayam ca grāmah yasminnāsse tişthasi sa ca tvadarthe mayā kalpitah. . . .)

(Chândogya-upanişad; Adhāya IV, khanda 1-2, mantras 8 and 4.)
² Ye samgrāmāh samitayas teşu cāru vadāma te. (Atharva-veda, xii, i, 56.)
Samgrāme samyatte samayakāmah. (Taittirīya-samhitā, ii, i, 8, 4.)

For an estate-owner the word grāmaņī appears to be used in Vedic literature. See :---

Grāmaņyo grhān paretya mārutam sapta-kapālam purodāšam nirvapati... (Šatapatha-brāhmaņa, 3, 1, 6.)

Mārutah saptakapālo vaišyasya grāmaņyo grhe. (Maitreya-samhitā, ii, 6, 5 ; iv, 3, 8.)

Sindhuküläśritä ye ca grämanīyā mahābalāh. Mahā-bhārata, Sabhāparva, xxxii.)

³ Yadgräme yadaranye yatsabhäyäm yadindriye. (Atharva-veda, v, xx, 17.)

See also the Chandogya-upanisad, v-x, 3.

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plate grant can be explained as meaning a place for the collection of revenue which comprised thirty estates.¹ The Miraj plates of Jayasimha II record that the king granted an estate (translated as a village in Ep. Ind., vol. xii, No. 34), called Mādadūjhūru, belonging to the group of the Karațikallu three hundred, which was in the Edadore two thousand.2 Dr. J. F. Fleet thought that the Edadore two-thousand was a stretch of country between the Rivers Krishnā on the north and Tungabhadra on the south, comprising a large part of the present Raichur district.3 At present this district contains altogether 893 villages.4 Taking the word grāma as meaning an estate, we have no reason to distrust the above-mentioned figures. The Karatikallu was probably a fairly large village, approximating to a town; and if we divide 2,000 by 300, the number of such towns would come to about six. There were small centres of revenue collection (samgrahana) like Elambe, Kukkanur, Kisukād, Kundavura, Torugare, etc., comprising somewhere between twenty and seventy estates.⁵ The number of such centres of revenue collection comes to nearly forty, if fifty may be taken as the average number of estates in each centre (samgrahana).

It has already been shown that we need find no difficulty in explaining the numerical appellations occuring in the Southern Indian inscriptions, provided we take $gr\bar{a}ma$ as meaning an estate. But it is interesting to note that these same numerical appellations seem to have proved a stumblingblock to writers from 326 B.c. down to modern times. The confusion dates from the time of Alexander the Great, when information about the kingdom of Poros was gathered in detail. "This country, it is said," writes the Greek historian

¹ EI., vol. xvi, No. 8, p. 35; vol. xii, No. 32, p. 290.

² EI., vol. xii, No. 32, p. 296, notes by Dr. Fleet; IA., vol. viii, p. 18; EI., vol. xii, No. 34, p. 303.

³ I.A., vol. viii, p. 18; EI., vol. xii, No. 32, p. 296, notes by Dr. Fleet; EI., vol. xii, No. 34, p. 303.

4 Imp. Gaz., vol. xxi, p. 30.

⁶ EL, vol. zv, No. 6, p. 79; vol. zii, p. 298; vol. zvi, No. 8 B, p. 37; vol. zvi, p. 28, No. 7; IA., vol. zzw, 1901, p. 259 fl.

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Plutarch, "contains 15 tribes, 5,000 considerable cities, and villages without number." ¹ General Bunbury formed the same opinion as Dr. Fleet about these large numbers, and could not help remarking that "when the Greek writers tell us that the district between the Hydaspes and the Hyphasis alone contained 5,000 cities (?), none of which was less than that of Cos (Strabo, xv, p. 686), and that the dominion of Poros, which was confined between the Hydaspes and the Acesines—a tract not more than 40 miles in width—contained 300 cities (ibid., p. 698), it is evident that the Greeks were misled by the exaggerated reports so common with all Orientals, and which were greedily swallowed by historians of Alexander with a view of magnifying the exploits of the great conqueror ".²

Taking the grama as synonymous in meaning with the English word 'estate', we can readily understand the system of distributing land followed for revenue purposes by the Hindu kings. It appears that in ancient times, a country (deśa) was divided into janapadas, janapadas into ganas or say parganas, and ganas into grāmas. For instance, the rāstra of Vanavāsaka contained 12,000 estates (grāma); that of Nolambavādi (Nulumbavādi), 32,000; that of Gangavādi, 96,000; that of the three Mahārāstras, 99,000; and that of Southern India, 750,000.3 Vinayacandra in his Kāvya-śiksā gives the numbers of estates for Eastern, Western, and Central India, as follows: (1) Konkana, 1,414 ; (2) Candrāvatī, 1,800; (3) the janapada on the banks of the Mahī river, 2,200; (4) Surāstra, 9,000; (5) Lāta-deśa, 21,000; (6) Gurjara-deśa (including Aparanta), 70,000; (7) Ahūda and Brähmana-pätaka (both together), 100,000; (8) Dähala, 900,000; (9) Mālava-deša, 1,892,000; and (10) Kānyakubja (empire ?), 2,600,000. After giving these figures, he adds that the countries the numbers of which are not given should

¹ McCrindle, The Invasion of India by Alexander the Great, p. 309.

² Ibid., p. 309, note ; Bunbury, Hist. of Anc. Geog., i, p. 453.

³ Bomb. Gaz., vol. i, pt. ii, p. 298, n. 2.



be taken as belonging to northern and southern India.¹ For this reason I take the number 2,600,000 as representing $gr\bar{a}mas$ (estates) of the Kānyakubja empire. It is interesting to note that the countries mentioned above are very much the same as those which constituted the empire of Harsavardhana.

As to the authenticity of these figures, they can be verified from other sources. Take, for instance, the Konkana 1,414 of Vinayacandra. The Bhāndūp plates of Chittarājadeva mentions a town named Puri, "which is marked as the chief town of a province consisting of fourteen hundred villages" (grāmas or estates).2 The Thānā plates of A.D. 1017, the Bhādāna grant of A.D. 997 and the Khārēpāțan plates of A.D. 1095 all mention the number of estates (grāmas) in Konkana as 1400.3 After careful study, Dr. Fleet arrived at the conclusion that "the Puri or Konkana fourteen hundred seems to answer fairly closely to the Bassein, Sälsette, Bhiwndi, and Kalyan talukas, with perhaps also the Karjat taluka of Thāņā, and the Panwēl, Pēņ, and Alībāg tālukas of Kolāba ".4 For Gujarāt (Gurjara-deśa) and Mālwā (Mālavadeśa), Vinayacandra gives the figures as 70,000 and 189,200 respectively. 'Abdullah Wassaf informs us that " it is related by sufficient informants, experienced travellers . . . that Sawālik contains 125,000 cities and villages; and Mālwā 1,893,000 towns and villages. . . Gujarat, which is commonly called Kambayat, contains 70,000 villages and towns, all populous, and the people abound in wealth and

¹ Kauńkaņa-prabhrti-caturdaśādhikāni caturdaśa-śatāni. Candrāvatīprabhrti aştādaśa-śatāni. Dvāvimśati-śatāni mahītaţam. Nava-sahasrāņi surāştrāh. Ekavimšati-sahasrāņi lāţa-deśah. Saptati-sahasrāņi gurjara-dešah pārataś ca. Ahūda laksāņi brāhmaņapāţakam. Navalaksāņi dāhalāh. Aştādaśa-laksāņi dvinavatyadhikāni mālavo eśdah. Şad-vimšal-laksāņi kānyakubjah. Anantaram uttarāpatham daksināpatham ceti. (Kāvyašiksā by Vinayacandra, quoted by C. D. Dalal in his introduction to the Kāvya-mīmāņsā, p. 24, note.)

² Ibid, ; also vol. iii, No. 40.

4 Ibid.

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² EI., vol. xii, pp. 256-7, No. 31.

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luxuries".1 In the same way we are told by Rashīdu'd-dīn in his book entitled Jāmi'u't-tawārīkh that "It is said that Guzerat [Gujarāt] comprises 80,000 [? 70,000] flourishing cities, villages, and hamlets. . . . After these comes the country of Sawālak, which comprises 125,000 cities and villages. After that comes Mālwāla, which means 1,893,000 [? 1,892,000] in number ".2 It is possible that the copyist of the Jāmi'u't-tawārīkh transcribed a 2 in the case of Mālwā and a 7 in the case of Gujarat as 3 and 8 respectively. Though Vinayacandra does not give any figures in respect of Sawälik, we know from the Prabhāvaka-carita of Hemacandra that it contained 125,000 grāmas, if we may assume Arnorāja to have been the king of Sawālik.3 Further, we are told that the country of Jalandhara contained the same number of grāmas (estates).4 These numerical territorial designations survived down to the Muhammadan period. After conquering Mālwā, says 'Abdullah Wassāf, Sultān 'Alāu 'd-dīn despatched Malik Nabu [and] Zafar Khān to conquer the province of Telingana. When they arrived on its frontier, "the Rai . . . agreed to pay an annual tribute and receive the royal collectors, and that populous territory . . . containing more than 30,000 tracts of country, was added to the Muhammadan empire." 5 The expression " tracts of country " used in this passage is remarkable, and seems to support the view that we have here an equivalent of the Samskrta grama.

Mandana-pandita in his Śilpa-śāstra gives the size of a palace as varying according to the number of estates over which a ruler ruled. According to him a ruler of 200,000 grāmas (estates) was called mahāmandalika; that of 50,000 grāmas, mandalika; that of 2,000, sāmanta-mukhya; that

Vigrahitumanäh senäm asavenäm asajjayat.

(The Prabhavaka-carila, p. 321.)

5 Elliot, The Hist. of India, vol. iii, p. 49.

¹ Elliot, The Hist. of India, vol. iii, p. 31.

² Ibid., vol. i, pp. 67-8.

^a Sapādalaksa-bhūmīšam arņorājam madoddhuram

⁴ Kuruksetre kanyakubje gaudaśrikāmarūpayoh |

Sapādalaksavaj-jālamdhare ca khasamadhyatah. 108. (Ibid., p. 302.)



of 1,000, sāmanta; and that of 100, satādhipa.1 In the Chitorgadh stone inscription of Mekala it is mentioned that the king of Mewād (Medapāța) possessed a country which contained 100,000 tracts of land (ksiti) or estates.² In the same way we are informed by the author of the Prabandhacintāmaņi that Prthvīrāja ruled over a country of 125,000 estates.³ We are further informed by Al Qazwini that the temple of Somanātha had an endowment of 10,000 estates. "Among the wonders of that place," he writes, "was the temple in which was placed the idol called Somnat. . . . Everything of the most precious was brought there as offerings, and the temple was endowed with more than 10,000 villages." 4 It is also stated by Sir E. C. Bayley that " The jāgīrs of Amīn Khān, Fateh Khān, and Tātār Khān Ghörī consisted of nine thousand villages belonging to Junahgarh (constituting) eighty-seven mahals." 5

From all the references cited above there can be little doubt that the figures referring to the numbers of gramas(estates) in the different countries given by Vinayacandra must have been based on facts. The total number of gramas(estates) in Eastern, Western, and Central India, according to him, comes approximately to 4,787,214. The number given for Southern India in the inscriptions and land grants is 750,000. If we take, as a very rough approximation, the same number (i.e. 750,000) for Northern India, we get the

¹ Grāmaikalaksadvayam asti yasya. Prokto mahāmaņdaliko narendrah ... Pañcāyuteśo nrpa maņdaliko... Sāmantamukhyo dvyayutādhiposau.... Sāmantasamjāo yutanātha eva... Grāmādhipā ye tu šatādhipāś ca.... (*Rājavallabha*, pp. 81-2.)

² Vīrāl lakşakşitikāj jagati nahi parah khyātabhuktih su(bhuktih). (*EI.*, vol. ii, No. xxxii, pp. 415-17.) (Note.—Here *lakşa-kşili* is translated by the editor as 100,000 tracts of land.)

³ Sa ca sapäda-lakşa-kşitipatinā śriprthvirājena saha sañjāta-vigrahah samarājiram adhirūdhah svasinye parājite kāndišīkah kāmapi dišam grhītvā palāyanaparah svarājadhānīm ājagāma... (The Prabandhacintāmaņi, pp. 229-300, quoted by C. D. Dalal in his introduction to the Rūpakaşatka of Vatsarāja.)

⁴ Elliot, Hist. of India, vol. i, pp. 97-8.

⁵ Bayley, Sir E. C., The Local Muhammadan Dynasties of Gujarat, p. 17.

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total number of estates in the whole of India as 6,287,214, or, in round numbers, 7,000,000.

Size of a grāma.

No record has been found of the actual area of a $gr\bar{a}ma$, which must have varied under diverse conditions in different parts of the country. In the circumstances we can only try to calculate from such data as are available to us the average area what may be assigned to it. If we take the figures already suggested above for the total 'surveyed' area and total number of $gr\bar{a}mas$ in ancient India, namely, 862,800 square miles and 7,000,000 $gr\bar{a}mas$, and if we divide the former by the latter figure, we get about 79, or say 80, acres per $gr\bar{a}ma$, or estate. But the $gr\bar{a}ma$ comprised many kinds of land—the cropped area, cultivable but uncropped or fallow land, and uncultivable areas consisting of pasture land, tanks, gardens, homestead, and perhaps jungle or hill. The most important question is, what was the average cropped area, and how are we to make an estimate of this ?

According to the Imperial Gazetteer, vol. iii, p. 97 (1907 edition) the proportion between the "occupied area" (net cropped area + current fallow) and the total area in the more fully developed provinces, Madras, Bombay, Bengal, United Provinces, Panjab, Central Provinces and Berar, is approximately as 1 to 2, and in the less developed provinces. Burma, Assam and the N.W.F. Province, 1 to 3 or 4. More than a thousand years ago, when means of rapid transport were non-existent, and when the produce of all parts of the country was not distributed, as now, throughout the markets of the world, this proportion must clearly have been very much less; and we may safely reckon that the cropped area did not on the average cover more than one-fourth or one-fifth of the total area that we have regarded as having been surveyed in some form. In such case the cropped area of an average-sized grama would cover roughly from 15 to 20 acres. Let us now see if this estimate can be tested by other methods.

From the records of the land grants it appears to have been the general practice to make a grant of one $gr\bar{a}ma$, which was evidently considered to be the appropriate area for the maintenance in full comfort of a family of, say, on the average five persons of good social status, such as Brāhmaņas. Vijayarājendra refers to the unit of taxation as one $gr\bar{a}ma$, or five families of tenants.¹ It will be suggested later (see Chapter III, ii) that the produce of one acre was quite sufficient to maintain one adult person. A family of five, assuming that ordinarily not less than two of these would be children, would therefore be maintained by 3 or 4 acres, and five families could support themselves on from 15 to 20 acres, which represents the average cropped area in an average $gr\bar{a}ma$ according to the calculation made above.

Again, the commentator of the Kumāra-sambhava writes: "*pañcabhir halair grāmaņ karṣati grāmaņī*,",² meaning a *grāmaņī* (estate-owner) ploughs a *grāma* (estate) with five ploughs. And the *Krṣi-śāstra* tells us that five ploughs mean wealth to the owner.³ It will be explained later that the area described as "one plough of land" would represent roughly 5 acres (see Chapter III, ii); so an estate-owner, according to our commentator, had about 25 acres of cultivation.

Then it appears from the Upadeśa-taràngini of Ratnamandira Ganin that Kumārapāla realized one gold gadyāņaka per grāma,⁴ a gadyāņaka being a weight equal to 144 grains. As the nişka or kalañju was exchanged for 256 copper paņas (see Chapter III, iii), the gold gadyāṇaka, which was twice as heavy as the nişka, may be taken as equivalent to 512 copper

¹ See Kara in the Abhidhāna-rājendra, pt. iii, p. 356. . . . sa cayam grāmesu paūcakulādin adhikrtya prasiddha eva. . .

 ² Kumära-sambhava, by Kalidasa, Nityam pañca-hale dhanam, 83.
 ³ Nityañ ca trihale bhaktam 84. (Krşiśástra, compiled by Daśaratha Śāstrin.)

⁴ Räjñä svadeśa-pratigrāma-svarņa-gadyāņaka-dānam dattam. Tatas tasyāh prativarsām 18 laksa 92 sahasra grāma-gadyāņakaih 946 maņapramāņam svarņam milatiem. . . . (Upadeša-tarangiņī, by Ratnamandira Gaņin, p. 258.)

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panas. If we may assume that this amount was levied as the king's due from a grāma, and if we may also assume, as we have considerable reason for doing, that the king's due was in those days about one-fourth of the income from the land, the income from a grāma to the estate-owner would be some 2,048 copper panas. If the estate were cultivated on the half-share system, the value of the gross produce may well have been double this, or say about 4,100 copper panas. In the chapter on Prices it will be shown that in the eleventh century A.D. the price of paddy was two akka or fourteen copper panas, per maund. At that period, therefore, 4,100 copper panas would represent about 292 maunds. According to Mr. N. G. Mukharji (Handbook of Indian Agriculture, third edition, p. 176) an acre produces on an average about sixteen maunds of paddy. No doubt this represents the produce on the alluvial plains of northern India. In other parts of the country the outturn would be less, so that 292 maunds may fairly perhaps be taken to have been the average produce of about 20 acres.

These different references, while it cannot be claimed that they lead to an accurate solution of the question we put ourselves, at least point to much the same result, namely, that the cropped area in an average $gr\bar{a}ma$ (estate) in ancient India probably comprised between 15 and 25, or approximately 20, acres.



CHAPTER II

ADMINISTRATION

I. JANAPADA DEFINED

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II. THE ADMINISTRATION OF A JANAPADA

CHAPTER II

ADMINISTRATION

I. JANAPADA DEFINED

A FTER giving a reasonable interpretation to the problems connected with the number of countries (deśa), their area (parikșepa or parimāna) and their divisions into petty estates (grāmas), we are now in a position to take up the much more difficult problem of the minor territorial divisions known as janapada, gana, and gulma.

As far as the *janapada* is concerned, it is translated by Dr. Śāmaśāstrin as "kingdom".¹ The use of this word in Samskṛta and Prākṛta books is very peculiar. Sometimes it is joined to the name of a town, like Kāśī, Kośala, Śākala, Madra, etc.,² and sometimes to the name of a tribe, like Śaka, Kekaya, Hūṇa, Kāmboja, etc.³ Its use in the plural is very common. In the *Chāndogyopanisad*, Śvetaketu is mentioned as going to the *janapadas* of Pāñcāla⁴; and in the *Prajñāpanopānga-sūtra* Rājagṛha is described as the capital

¹ The Artha-śāstra of Kautalya (English translation), pp. 54, 55, 253. [Note.—Janapada is translated as a "country part" on p. 143; as a "village" on p. 49.]

² Atha hainam bhujyur lähyäyanih papracoha yäjňavalkytei hoväca. Madreşu carakāh paryavrajāma. . . (Sāmkara-bhāşya:—Madreşu madrā nāma janapadāh teşu.) (Brhadāranyakopanişad, III-iii-kā, 1.)

³ Prthüdakätparatah uttaräpathah. Yatra Šaka-kekaya-vokkäna-hünavänäyuja-kämboja-välhika-valhava . . . ramatha-kara-kantha-prabhrtayo janapadäh. (Kävya-mimämsa, p. 94.)

⁴ Švetaketur häruneyah pañcālānām samitim eyāya. . . (Sämkarabhāşya :—Paňcālānām janapadānām samitim sabhām eyāya jagāma. . .) (Câhndogyopanisad, V-iii-1.)

Yathä somya purusam gandhärebhyo 'bhinaddhäksam änīyatam tato-'tijane visrjet.... (*Śāmkara-bhāsya*:--Gandhärebhyo janapadebhyah ...) (Ibid., VI-xiv-1.)

Pañcālānām parisadam ājagāma, (Apastamba-dharma-sūtra, I, ii, 5-6.)

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of the *janapadas* of the kingdom of Magadha.¹ As far as the *Artha-śāstra* of Kautalya is concerned, the term is not used in the meaning of kingdom. In my opinion it is there employed in an administrative sense and denotes a territorial division. It appears that in the days of the Buddha, and even before his time, *janapadas* enjoyed the position of self-supporting, independent states. Their boundaries were probably determined by the natural features of the country. From time to time they were annexed by powerful kings, to whose control they became subject; but their internal administration was not necessarily interfered with. Kautalya writes :---

"Possessed of sthānas [modern thānā], self-supporting, capable of supporting others, able to protect itself, independent, obnoxious to enemies, governed by a powerful sāmanta [śakya-sāmanta], free from marshes, rocky, uneven and thorny tracts and tigers, wild beasts and wildernesses, beautiful, containing erown lands, mines, timber and elephant forest, full of cows and martial people, with well-protected pastures, full of cattle, not dependent on rain for water, possessed of land and waterways, having abundant valuable commercial articles, capable of furnishing revenue and taxes, full of cultivators, having intelligent masters and servants, and a population noted for its loyalty and reliability—these are good qualities of a good janapada."²

The Kāmandakīya-nīti-sāra, following Kautalya as far as the characteristics of a janapada were concerned, adds that

¹ Khettariyä addha chavvisati vihänä pam., tam.-räyagiha-magahacampä-amgä taha tämalitti vamgäyä. . . Itthuppatti jinänam cakkinam rämakalhänam, 113. (The vivarana of Malayagiri:--Bhävärthas tv ayam--1 Magadheşu janapadeşu räjagrham nagaram, 2 angeşu campä 3 vangeşu tämalipti. . .) (*Prajääpanopänga* (Part I), fol. 57-8.) See also Saptati-sata-shäna-prakarana, fol. 24, 41.

² Sihānavān ātmadhāraņah paradhāraņaś cāpadi svārakşas svājīvah śatru-dveşi šukya-sämantah pańka-pāşāņoşara-vişama-kanţaka-śreņī-vyālamrgātavihinah kāntassitā-khani-dravya-hasti-vanavān gavyah pauruşeyo gupta-gocarah paśumān adevamātrko vāri-sthala-pathābhyām upetah sāra-citra-bahu-panyo danda-kara-sahah karma-śila-karşa-ko'bāliśasvāmya-vara-varņaprāyo bhakta-śuci-manuşya iti janapada-sampat. (Artha-šāstra of Kantalya, p. 258.)

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its administrator should be stupid and dissolute. Being absorbed in pleasure, he will never make common cause with the janapada [people] and so will never revolt against his king.1 The use of janapada in the plural, and the expression "Idrg janapadah sasto mūrkha-vyasani-nāyakah", meaning that a janapada, governed by a stupid and dissolute ruler, should be considered the best, affords clear proof that it was a portion of a kingdom, or an administrative territorial division. Kautalya gives Janapada-niveśa as the heading of a chapter which deals with colonization,² signifying by the word janapada only a portion of a kingdom where new villages should be established. When he uses janapada-kopa, he means simply a disturbance in a portion of a kingdom, and not a general revolution.3 In the Visesa-sataka of Samayasundara Ganin it is mentioned that Kunāla, together with its janapada, was completely flooded.4 Here janapada is used in the sense of territorial division. Kālahasti, in his book entitled Visva-brahma-purāņa, 5 states that

¹ Sasyākāravatī paņya-khani-dravya-samanvitā | Gohitā bhūri-salilā puŋyairjanapadairvītā. 49. Ramyā sakuñjara-vanā vāristhala-pathānvitā Adevamātŗkā ceti śasyate bhūr vibhūtaye. 50. Saśarkaroşapāṣāņā sāṭavī nitya-taskarā | Rūkṣā sakanṭaka-vanā savyālā ceti bhūr abhūh. 51. Svājīvo bhūguņair yuktah sānūpah parvatāśrayah | Šūdrakāru-vaņikprāyo mahārambha-kṛṣīvalah. 52. Sānurāgo ripudveşī pīdākarasahah pirthub | Nānādeśyaih samākīrņo dhārmikah paśumān dhanā. 53. *Idrg janapadah śasto mārkha-vyasani nāyakak* | Tam varddhayet prayatnena tasmāt sarvaŋ pravartate, 54. (Kāmandakīya-nīti-sāra, pp. 60-1.)

² Bhütapürvam abhütapürvam vä janapadam paradešäpavähanena svadešäbhisyandavamanena vä nivešayet . . . (p. 45). . . Janapadasandhi-sangraha-dronamukha-sthänīyesu. . . . (p. 147). Durga-janapadašaktyä bhrtya-karma samudāyavādena sthāpayet . . . (p. 247). (Arthašāstra of Kautalya.)

^a Tathāpy atuşyato daņda-kara-sādhanādhikāreņa vā janapada-vidveşam grāhayet. Vidvistān upāmsudaņdena janapadakopena vā sādhayet. (Ibid., p. 23.)

⁴ Kunālāpi paūcadaša dinair acchinnavarsanāt | Sārddham janapadenāmbhah pūraih prāvāhyatā'khilā, 6. (*Višeşa-šataku* of Samaya-sundara Ganin, fol. 51.)

⁵ Evam ekaikadeše ca prthag janapadāni ca | Asāvasamkhyāny asrjad višvakarmā jagatpatih, 14. (Višva-brahma-purāņa of Kālahasti, p. 46.)

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India contained fifty-six countries, and *japapadas* without number.¹

Size of a janapada

As to the size of a *janapada*, it appears that it varied according to the natural conditions of the country (*deśa*). It has been shown that before the establishment of eighty-four *deśas* (countries or kingdoms) the *janapada* enjoyed a more or less independent political position, and was governed by its own ruler or by a family or a group of families representing privileged classes. Afterwards it lost its position as a separate political entity and became tributary to some powerful ruler. As far as the holy places were concerned, the original boundaries were kept sacred and clearly defined. We find in the Purāņas the area of some *janapadas* given as follows: (1) Puruṣottama-kṣetra, 10 yojanas²; (2) Seturāmeśvara, 10 yo.³; (3) Prabhāsa-parimaṇḍala, 20 yo.⁴; (4) Kuru-kṣetra, 12 yo.⁵; (5) Indraprastha, 4 yo.⁶ (= 1 × 4 = 4);

¹ It appears that the *janapada*, after losing its separate independence, maintained its position as a territorial division. After the conquest of India by the Muhammadans, the land administration of the country continued as it was before: Muhammadan rulers did not make any remarkable change as far as the territorial units of the administration and the collection of the revenue were concerned. The *janapada*, under the name of *dastăr* as " A sub-division of a Sirkar, or aggregate of several adjacent Parganas" (Wilson, p. 129), continued in Muhammadan times, together with its code, or *janapada-dharma*, under the title of a *dastāru* 'l-amal.

² Samudrasyottare tire mahānadyāś ca daksiņe, 15.

Tatam ärabhya tat ksetram räjmänam ca pävanam.

Vartate tat samärabhya samantäd daśa yojanam, 16. (From the Ksetra-mähätmya of the Skanda-purāna.)

³ Daśayojana-vistīrņam śatayojanam āyatam

Jänakiramaņo rāmah setum evam akārayat, 96. (From the Gargasamhitā.)

⁴ Yojanānām daša dve ca prabhāsaparimandalam

Madhye 'sya pithikā proktā pañca-yojana-vistrtā. (From the Prabhāsamāhātmya of the Nārada-purāna.)

⁵ Muktidam supavitram ca yojana-dvädaśāyatam

Prabhūta-toya-vistīrņam jāštam tat kurusattamaiķ, 13. (From the Sarasvatī-māhātmya of the Mahābhārata.)

⁶ Indraprastham idam ksetram sthäpitam daivataih purä | Pürvapašoimayos täta ekayojana-vistrtam, 75. Kälimdyä daksine yävad yojanänäm catustayam | Indraprasthasya maryädä kathitaisä maharsibhih, 76. Padmapuräna uttarakhandam. (*Tirthävali-prabandha*, p. 166.)

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(6) Mathurā-maṇdala, 20 $yo.^1$; (7) Brahmāvartta-kṣetra, 5 $yo.^2$; (8) and Nāsika-kṣetra, 4 $yo.^3$ These eight janapadas had a total area of about 85 yojanas; the average area thus amounts to $10\frac{1}{2}$ yojanas, or in round numbers 10 yojanas. It has already been pointed out that a country (*deśa*) had an average area of about 100 yojanas, so it was probably divided into 10 *janapadas*, and each *janapada* in its turn was divided for administrative purposes into 4 sthānas, each sthāna being under the administration of a sthānika.

It is a pity that the information contained in the Buddhist $J\bar{a}takas$ cannot be regarded as scientifically accurate. There is no doubt, however, that they contain valuable material.

The figures denoting the area or circuit of a *janapada* were sometimes written after the names of prominent towns. This practice has led to misunderstanding. The areas of Kāśī and Mithilā, for instance, are given in Buddhist books as 12 and 7 *yojanas* respectively.⁴ These figures were discredited on the ground that they were too big. But the people of those days did not intend the names to be confined to the areas covered by houses. By "Kāśī" and "Mithilā", I am of opinion, were meant the areas included within

¹ Vimśatir yojanänäm tu mäthuram mandalam mama | Pade pade 'śvamedhasya phalam bhavati nänyathä, 11. (Varihapuräne-kşetramähätmyam. See the Tirthävali-prabandha, p. 168.)

² Pañca-yojana-mätreyam vedī srastuh kratoh sati. (Brahma-samhitāyām utpalāranya-māhātmyam. Ibid., p. 163.)

³ Tasmād apy aparam tīrtham janasthānam iti śrutam

Caturyojana-vistīrņam smaraņān-muktidam nrņām.

(Brahmapurāņe-nāsika-ksetra-māhātmyam. Ibid., p. 239.) ⁴ Tadāpana vārāņasiyā pākāra-parikkhepo dvādasayojaniko hoti idam assā antaravāhiram pana tiyojanasatika-rattham; "Now, at that time the perimeter of the ramparts of Vārāņasi measured 12 yojanas, and this country, including the inside and outside, measured 300 yojanas." Amhākam mahantam rajjan sattayojanikam mithilāngaram tiņi yojanasatāni rajja-pariochedo hetthimantena solasa itthi-sahassāni laddham vattati (Jātaka No. 489): "Our kingdom is great one; the city Mithilā measures 7 yojanas; the exact definition, specification of the kingdom is 300 yojanas: (our son) should have 16,000 women at the very least." (JRAS., 1907, p. 643.)

Videha = 300 yojanas (Jātaka No. 406, ed. Fausboll). (JRAS., 1907, p. 642.)

the administration of the *janapadas* known by these names. Moreover, the average area of these two *janapadas* amounts to 10 *yojanas*, which corresponds with the average area calculated from the Purānas.

While the original size of a *janapada* was small as compared with a *deśa* (country), it must be remembered that the importance and influence of a *janapada* in its relations with its *deśa* depended upon its chief or leader for the time being. If the leader of a *janapada* were a man of outstanding character, he might, and very often did, extend his authority over other *janapadas*, over a whole *deśa*, or even over several *deśas*. While, therefore, a particular *janapada* may have been only 10 yojanas in area or "circuit", it might at times, under a strong ruler, have extended its authority or control (*rājya*) over a wide area, perhaps as much as 300, or even 500, yojanas.¹ When we find mention in ancient writings (e.g. the *Jātakas*) of the sway of Kāśī and of Mithilā extending over 300 yojanas, we must regard such statements in the light of the above remarks.

Figures relating to the extent of a janapada : their authenticity or exaggeration discussed

Owing to the incorrect interpretation of the words grama, janapada, etc., and to the want of a clear understanding of the system of administration and the distribution of estates the conditions of Ancient India have hitherto never been properly understood. "In the face of all this," writes Dr. J. F. Fleet, "we must, I think, reluctantly come to the

¹ The following text appears to be quite reasonable provided the interpretation regarding the figures given above be accepted as correct.

Kāpana — assa rājiddhi tiyojanasatānam dvinnam mahārajjānam issariyasirī: "Now, what was his sovereign power? The splendour of the lordship of two great kingdoms consisting of 300 yojanas." (Dīgha-nikāya, 2, 9, op. cit. ed. Davids and Carpenter, 1, 148.) (JRAS., 1907, p. 643; see also ibid., pp. 641-56.)

Attano vijite pañcasata-yojana-parimandale manusse sannipātāpesi; "He assembled all the men in his realm, which had a circuit of 500 yojanas." (JRAS., 1907, p. 643.)



conclusion that, while we can obtain satisfactory results from the statements about countries in the Buddhist books. if we interpret the statements as denoting areas,¹ the statements in the same works about the cities are gross exaggerations, if not absolutely imaginative. Is it possible that they are really imaginative, like (of course) the assignment of 16,000 villages to the Videha country, and that they were made in rivalry of tales about Babylon itself, which seems to have been well known to the ancient Hindus under the name of Baveru ? " 2 According to the interpretation proposed by me no difficulty arises. Videha may certainly have contained 16,000 villages, provided 'village' be taken in the sense of 'survey village' or 'estate'. As regards the figures given in the Jātakas for the length and breadth of Madhya-deśa,² which have been regarded as "impossible " by Dr. J. F. Fleet, it may be noted that his criticism appears to have been largely due to misinterpretation of the text, which gives the length as 300 yojanas and the breadth as 150 and not 250 (since addha-tiyāni-śatāni cannot possibly be here interpreted as 250 : the meaning is "half of 300", i.e. 150). In any case there seems to be no mathematical mistake in the figures, as Dr. Fleet evidently thought. Moreover, before we decide these figures to be "impossible", we must satisfy ourselves, firstly, as to what extent of country was understood at the time to fall within the limits of the

¹ Ibid., p. 649.

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^a So äyämato tini yojanasatäni vitthärato addhatiyäni parikkhepato navayojanasatäni: "It is 300 yojanas in length, 250 [should be 150] in breadth, and 900 in perimeter". . . Äyämato tiyojanasate vitthärato adthati (v. 1, teyya) yojana-sate parikkhepato navayojanasate majjhimapadese. Note on this by Dr. Fleet: "But this is still less analogous to the statement which we have under consideration. Moreover, its details are, from any point of view, impossible." (JRAS., 1907, p. 644.)

Note.—No doubt the expression addha tiyàni satàni is generally usedin Aśoka's inscriptions in the sense of 300 less by half a hundred (= 50).At the same time it is quite clear that the compiler of the*Jätaka*storymeant by <math>addha tiyàni satàni only half of three hundred, i.e. 150. Whetherin his time this expression began to be used in a different sense or he committed a mistake is a matter which requires further investigation.



name Madhyadeśa, and, secondly, as to the length of the particular *yojana* intended. Again, it is possible that the figures were merely based on the number of days taken by pilgrims journeying from one end of the country to the other while visiting sites of pilgrimage; and we know how intricate and diverse were both the system of pilgrimage and the routes followed by pilgrims.

II. THE ADMINISTRATION OF A JANAPADA

If the interpretation given to the word janapada, as meaning a small territorial division, be accepted, we can pursue our inquiries in connexion with the administration of Ancient India. There is no doubt that in the time of Kautalya the janapada was the unit of local administration. The area under its jurisdiction on an average was 10 square yojanas. As far as its administration was concerned, there were three classes of servants belonging to three different departments, (1) Military, (2) Revenue, and (3) Police. The gaulmika and gana were perhaps connected with the officers commanding gulma and gana squadrons, their duty being to protect the country against enemies, wild people, and thieves; the grāmika, daśin, śatin, sahasrādhipati and mandala were perhaps connected with the collection of the revenue; the gopa and the sthānika probably belonged to the police and helped the officers of the revenue department in carrying out their duties.

1. Military Department

1. Gulma. According to the Manu-sm_ti, there should be a gulma for from two to five grāmas, and a samgraha for one hundred grāmas.¹ The strength of a gulma was supposed to

¹ Dvayos trayāņām paňcānām madhye gulmam adhisthitam | Tathā grānnešatānāň ca kuryād rāstrasya samgraham. 114. Grāmasyādhipatim kuryād dašagrāmapatim tathā | Vimšatīšam šatešaň ca sahasrapatim eva ca. 115. Grāme dopān samutpanaān grāmikah šanakaih svayam |

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amount to nine elephants, nine chariots, twenty-seven horses and forty-five soldiers.¹ Traders hired soldiers from this force, and paid a fixed charge called *gulma*.² Sometimes tolls were collected at the headquarters of the *gulma*. The secret police took their orders from this body to guard the country and watch persons of suspicious character.³ The King's taxes and other dues were first collected at the *gulma* headquarters, where there was also a prison where thieves, robbers, and suspects were kept in custody.

2. Gana. For the protection of a quarter of a janapada, a squadron called gana, nominally consisting of twenty-seven elephants, twenty-seven chariots, eighty-one horses and 135 foot soldiers,⁴ was maintained under an officer, perhaps called gananäyaka or ganapaka, or gana. I suspect, however, that these figures were the strengths 'on paper'. In the Näsik Cave Inscription No. 15, Rehhila is mentioned as ganapaka.⁵ Dr. Bühler took ganapaka to mean "protector or leader of a gana" and the gana to mean a body of troops consisting

Samsed grāma-dašešāva dašešo vimšatīšine. 116.

Vimśatiśas tu tat sarvam śateśāya nivedayet |

Samsed grāma-śateśas tu sahasra-pataye svayam. 117.

Yāni rāja-pradeyāni pratyaham grāmavāsibhih |

Anna-pänendhanädini grämikas täny aväpnuyät. 118. (Manu-smrti, vii, 114-18.)

Daśī kulam tu bhuñjīta vimśī pañca kulāni ca |

Grämam grämasatādhyakṣah sahasrādhipatih puram. (Ibid., vii, 120.) ¹ Narāņām pañca-pañcāsad esā pattir vidhīyate |

Senāmukham ca tisras tā gulma ity abhišabditam. (Mahābhārata, v. 5,270.)

² Para-visaye tu paŋya-pratipaŋyayor argha-mūlyam ca ägamayya śulka-vartaŋyatiyähaka-gulma-taradeya-bhakta-bhāga - vyaya - śuddham udayam paśyet. (Kautalya, Artha-śästra, p. 99.)

³ Mä gulmädhikärikaih samyamita-karacarano räjakulam pravešyase. (p. 117).

Puruşah. Jayatu kumärah. Ärya gulmasthänädhikrto dîrgharakşo vijñāpayati. Esa khalv asmābhih kaṭakān niskrāmann agrhītamudrah salckhah puruso grhītah. Tat pratyaksīkaroty enam ārya iti. (Mudrārāksasa, ed. Tattravivecaka Press, 1916, p. 123.)

⁴ See Gana in Böhtlingk and Roth's Sanskrit Worterbuch, vol. ii (1856-8), p. 635.

⁶ Duhitä ganapaka rebhilasya bhäryayä ganapakasya visvavarmasya.... (Bomb. Gaz., vol. xvi, p. 579.)

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of three gulmas or battalions. Dr. Bhagavānalāla Indrajī regarded ganapaka as a title. It appears to me that the word ganapaka stood for the head of a gana and the gana for a territorial division. As the protection of the gana formed one of the functions of the gana squadron, Dr. Bühler's interpretation of the term seems correct, though it does not include all the aspects of a ganapaka's office. He was not merely a military leader, as Bühler suggests, but also the hereditary civil head of the gana government.

Some opposition to this interpretation of gana is naturally to be expected from those writers who believe that gana denoted some democratic form of government. The only difficulty that arises is from the fact that the words used for territorial divisions are also used for the people living therein (e.g. kula, grāma, janapada, mandala, gulma, etc.). There is no doubt that in ancient times gana meant an aggregate of kulas 1 as well as an aggregate of grāmas, or estates. In section (prakarana) 173 Kautalya uses gana in the limited sense of a territorial division : ganavāsin means there a person living in a gana.² The origin of all the theories advanced to prove the existence of some democratic form of government in Ancient India is probably due in great measure to a misunderstanding of the social position and political powers of the classes of people alluded to under such titles as kula, gana, rājan, bhoja, etc. It is to be regretted that some passages alluding to these classes are only partially quoted and others interpreted in a sense that cannot correctly be attached to them. Take for instance the ganarāyāni or ganarājyāni of the Ācāropānga-sūtra.3 The expression was used there to denote merely some privileged classes of

¹ Kulänäm hi samühas tu gaņah samprakīrtitah. (Kātyāyana, Viramitrodaya, p. 426.)

² Sörtha-gaŋaväsibhir átivähikaih kanyävähikair aśvapaŋya-vyavahäribhir upakaraŋahärakair dhänyakretrvikretrbhir vä. (The Artha-kästra of Kautalya, p. 403.)

³ Arāyāni vā gaņarāyāņi vā juvarāyāņi vā dorajjāņi vā verajjāņi vā viruddharajjāni vā. (*Ācārānga-sūtra*, ii, 3, 1, 10.)

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people, like the $r\bar{a}j\bar{a}nakas$ of the $R\bar{a}ja$ -tarangin \bar{i} or the Chamba State inscriptions.¹ The commentator of the Aupapätikasūtra mentions eighteen gaņarāyas of Cețaka-rāja, all of whom were titled people of the State.² In a similar way, the text of a dialogue between Nārada and Vāsudeva has been misinterpreted.³

It is interesting to note that in Muhammadan times the gana was maintained as a territorial division and was sometimes described by the word pargana (para-ganah or pra-ganah of the Samskrta) and sometimes by the fiscal term mahāl. To understand the meaning of these terms, it is necessary to look into the arrangement of territorial and fiscal divisions adopted by the Emperor Akbar. He divided his empire into twelve subas, and these into 127 sarkars, and 2,737 parganas.4 It appears that in the time of Akbar the old Hindu countries were divided, on an average, each into two parts called sarkārs. This splitting up of the old territorial divisions may have been done with a view to reduce the power of the local rulers. As stated already, Ancient India contained eighty-four countries (desa). As Southern India was not under Akbar's rule, we may perhaps estimate that his Indian empire comprised about sixty-three of the old Hindu countries (desas), deducting twenty-one countries

¹ The Antiquities of Chamba State, part i, pp. 110-19.

⁸ Evam dupado ärenam räinnä khattiyä mähanä bhadä johä pasatthäro mallai leechai leechaiputtä anne ya bahave räisara talavara mädamviya kodumbi aibbha setthisenä vaisatthavähapabhitiyo.... (The Vivrti of Abhayadera Süri: 'Mallai leechaitti mallakino leechakinas ea räjavisesäh, yathä srüyante eetakaräjasyästädasaganaräjäh "navamallai navaleechai käsi-kosalagä atthärasa ganaräyäno" iti, 'räisara talavara mädamviya ibbha setthi senävai satthaväha pabhitio'tti räjäno-mändallikä lävaräyuvaräjäh, animä dyaisvaryayuktä iti keeit, talavaräh paritusta-narapativitirna-patta-bandha-vibhüsitäh räjasthäntyäh mändavikähmandapädhipäh kautumbikäh katipaya-kutumbapabhavo'valagakäh ibhyäh maddravya-nicayäntarito mahebho na dräyate, śresthinab éridevatädhyäsitasauvaraa-patta-vibhüsitöttamängäh senäpatayah nipati-nirüpitäs eaturanga-sainya-näyakäh särthavähäh särthanäyakäh...'. (Aupapätikasätar, fol. 58.)

³ Hindu Polity, by K. P. Jayaswal, pp. 191-7, 125-30.

⁴ Ain-i-Akbari, vol. ii (Jarrett's translation), pp. 115 f.

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situated in Southern India from the total number (eighty-four). Akbar divided his empire into 127 sarkārs, which would mean two sarkārs on an average for each of the old countries (deśas). No change appears to have been made as far as the janapada and gana were concerned. If we divide 2,737 by 127, we see that each sarkār contained on an average about twenty parganas; so that each of the old Hindu countries would have comprised about forty parganas. It has been calculated above that according to Kautalya's Artha-śāstra and other Samskrta works the number of janapadas averaged about ten per country. As each janapada was divided into four sthānas ¹ or ganas, we shall not be far out if we estimate that each ancient Hindu country contained on the average about forty sthānas or ganas, or parganas.

2. Revenue Department

1. Gana and varga. It appears probable that in the revenue department the numbers of families, or kulas, were entered under the head gana, and the sources of revenue under the head varga. According to the Artha-śāstra of Kauţalya the number of vargas was seven, viz., (1) fort (durga), (2) state (rāṣṭra), (3) mines (khani), (4) vegetable and flower garden (setu), (5) forest (vana), (6) pasture (vraja), and (7) trade routes (vanik-patha).² Kāmandaka made them eight by adding colonization (śūnyānām ca niveśanam).³ After taking possession of the Hindu kingdoms the Muhammadans perhaps adopted the same fiscal arrangements, calling the vargas maḥals, where this word is used in the sense of a head of taxation furnishing revenue to the government.

³ Krşir vanikpatho durgam setuh kuñjara-bandhanam | Khanyākaro vanādānam, šūnyānāñ ca nivešanam. 77. Astavargam imam sādhu svasthavrttam vivarddhayet | Jīvanārtham ihājīvyaih kārayet karanānvitaih. 77.

(Kāmandakīya-nīti-sāra, p. 82.)

¹ Samāhartā caturdhā janapadam vibhajya. . . (Artha-sāstra of Kautalya, p. 141.)

² Šamāhartā durgam raştram khanim setum vanam vrajam vaņikpatham cāvekseta. (Artha-Sāstra of Kautalya, p. 59.)

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The ancient janapada probably contained no more than Trade routes (vanikfour or five vargas on an average. patha), mines (khani), and forests (vana, i.e. containing valuable products such as elephants, timber, etc.) probably never all existed simultaneously in one janapada. No doubt each janapada contained agricultural estates (rāstra), pastures (vraja), and a fort (durga, i.e. the administrative headquarters). Taking this into consideration, it is probable that the average number of vargas in a janapada was much the same as the number of ganas, and possibly this may account for the fact that the number of mahals under the early Mughal emperors approached that of parganas. For instance, it will be noticed that when Todar Mal's rent-roll was prepared the numbers of parganas and mahals often closely corresponded. In fact parganas and mahals seem to have been often confounded.1

2. Collection of Revenue. It has already been mentioned that the collection of revenue was entrusted to the charge of officers called daśin, śatin, sahasrādhipati, mandala, etc. Taking the word grāma to denote a survey village oran estate, daśin, śatin, sahasrādhipati would mean an officer over ten, one hundred, and one thousand estates respectively. If a large village consisted of one hundred estates, the officer in charge of the collection of revenue from the estates would be called *śatin*. There might be two or three *śatins* in the case of a very large village, approaching to a town.² Apart

¹ According to H. H. Wilson, the word mahāl is used in the following meanings: "A province, a district, as the Jangal-maháls, on the west of Bengal; a division of a Taálluk, or district, yielding revenue according to assessment. . . . Under the Mohammadan government the term was also applied to a head or department of miscellancous revenue derived from a tax on some particular class of things or persons . . . so in Karnata, Mahálu (. . .) meant revenue, or sources of revenue, chiefly territorial, but comprising other objects." (H. H. Wilson's Glossary, 1855, pp. 318-19.) The Arabic word is properly mahall. In this thesis I have used the current term, mahāl.

² Note,-Some light seems to be thrown on this subject by the names of village officers in the district of Maldah, mentioned in Sir W. Hunter's *Statistical Account of Bengal*. "The system of mandals and saturns has existed in this district from the time of the Muhammadan conquest. A

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from these officers, there were prominent persons in each village belonging to the sāmanta class, called mandala, cakradharin, cakravartin, ganarājan, etc. Possibly they were also in charge of revenue collections as far as the people belonging to their class were concerned. The crown lands were entrusted to the charge of an officer called sitādhyakṣa.1 This officer has been mistaken by some writers for the superintendent of agriculture. It appears to me that he was nothing more than a mere overseer, and not highly paid. According to the Artha-śāstra of Kautalya, he was allowed to spend altogether 1,000 panas a month.2 He employed grāmabhrtakas, or village servants, day labourers and slaves and prisoners to get the state lands cultivated.3 Sometimes he let these lands to cultivators, who were obliged to supply him, and occasionally other officers also, with vegetables, grain and other produce without payment.

3. Police Department

According to the Kamandakīya-nīti-sāra, the people should be protected from the oppression of (1) servants employed by the king and feudal chiefs ($\bar{a}yuktaka$), (2) thieves (cora), (3) enemies (para), (4) court-favourites ($r\bar{a}ja$ -vallabha), and (5) from the greed of landowners (prthivīpati-lobha).⁴

Kautalya also advises a ruler to avoid harassing the people by imposing oppressive fines and taxes and forced labour;

satum is a head rayat. At the present day every village has a mandal, and in large villages there are two or three satums under him. The mandal is appointed by the Zamindar, with the concurrence of the rayats." The satum appears to be the *satin* of Manu. (A Statistical Account of Bengal, vol. vii, p. 66.)

¹ The Artha-śāstra of Kautalya, pp. 115-18.

² Sarvādhyakşāśca sāhasrāh. (Ibid., p. 247.)

² Şanda-väţa-go-päla däsa karmakarebhyo yathäpuruşa-pari-väpambhaktam kuryät. Sapäda-panikam mäşam dadyät. Karmänurüpam kärubhyo bhaktavetanam. (p. 118.)

Bahu-hala-parikrstäyäm svabhümau däsa-karma-kara-danda-pratikartrbhir väpayet. (p. 115.) (The Artha-Mastra of Kautalya.)

⁴ Ayuktakebhyaś corebhyah parebhyo rājavallabhät, Prthivīpati lobhācea prajānām pañeadhā bhayam. (Kāmandakīya-nīti-sāra, p. 149.)



he urges him to protect herds of cattle from thieves and wild beasts, and the highroads from molestation by courtiers, workmen, robbers and outpost guards; and he also advises him to avoid taking possession of any country liable to attack from enemies and wild tribes.¹ The people were evidently not well protected, and, in order to avoid the cupidity of government servants, they began to hoard their money and live in a poor style.² In the time of Mahāvīra, however, Haribhadra Sūri tells us in his Kalpa-sūtra that the people were free from troubles and calamities ; they were not overburdened by heavy tolls and taxes, and were not harassed by the police and soldiers employed in collecting taxes and dues. There were also no soldiers to summon them to arms.³ It would seem probable from this statement that Haribhadra was comparing the favourable rule of Mahāvīra with the evil conditions existing in his day.

From the Artha-śāstra of Kautalya we learn that each janapada was divided into four sthānas, and each sthāna was governed by a sthānika (corresponding to the modern thānādār, or dārogha). In that work the words sthāna and durga (fort)

¹ Para-cakräţavī-grastam vyädhi-durbhikşā-pīditam Deśam parihared rājā vyayakrīdāś ca vārayet. Daņda-vişti-karāvādhaih rakşed upahatām krşim Stena-vyāla-vişagrāhaih vyädhibhiś ca paśuvrajān Vallabhaih kārmikaih stenair antapālaiś on pīditam Šodhayet paśusanghaiś ca kşīyamāņa-vaņikpatham.

(The Artha-śāstra of Kauţalya, p. 49; English translation, p. 52.) ² Rājabhayāc caurabhayād vā bhūmiştham dravyam dhārayati. (Mrcchakatika, p. 103.)

Äynr vittam grhacchidram . . . nava-gopyäni sarvadā. (Dvātrimsat. puttalikā-simhāsana, p. 69.)

⁵ Ussukkam ukkatam ukkittham adijjam amijjam abhadappavesam adamdakodamdimam adharimam. . . (The Vierti of Haribhadra Süri : Ussukkam (nechulkām) šulkam vikretavya-krayānakam pratimandapj kāyām rājadeyam grāhyam. Ukkaram (utkarām) karo gavādin prati prativarsam rājagrāhyam dravyam tena rahitām. . . ukkittham (utkrstām) adijjam (adeyām), amijjam (ameyām), abhadapravesam = nāsti kasyāpi grhe rājādeša dāpanārtham bhatānām rājapurusānām pravešo yatra sā . . . adamda kodamdimam = dando yathāparādha-rājagrāhyam dhanam, kudando mahaty aparādhe alpam rājagrāhyam dhanam, tābhyām rahitām. . . (Kalpa-sütra, p. 253.)



are generally coupled together,¹ and we may, therefore, presume that each *sthāna* generally contained a fort called *sthānīya*, which, again, was garrisoned by a force—half soldiers, half police—who are frequently referred to in copperplate grants and other inscriptions as *cāra-bhaṭas*, *chāṭabhaṭas*, *chāḍa-bhaḍas*, *chāṭas* and *bhaṭas*, etc.²

It has already been stated that the area under the jurisdiction of the sthānīya (thānā) was perhaps called gaņa (= modern pargana). The sthāna is mentioned in the Praśnavyākaranānga under the name of cāraka-vasati, that is the station of cāțas and bhațas, and is described as a very terrible place. A graphic account is there presented of the ancient

¹ Janapadas sarvakarmanām yonih; tatah prabhavah; tasya sthānam ātmanaš ca āpadi durgam. (p. 307.)

Durge hi kośa daņdotpattir āpadi sthānam ca janapadasya. (p. 323.)

Āpadyaprasāro vā janapada-madhye samudaya-sthānam sthānīyam nivešayet. (p. 51.)

Aştaśata-grāmyā-madhye sthānīyam, catuśśatagrāmyā droņamukham ... daśa-grāmī-samgraheņa samgrahaņam sthāpayet. (p. 46.)

(The Artha-sāstra of Kautalya.)

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It is interesting to note that the old word *sthāna* has survived in the word *thānā*, of which H. H. Wilson gives the following definition :---

"A station, a military post, a police-station ; under the native governments it was a military post or garrison, a place, sometimes with a small fort, where a petty officer, with a small irregular force, was posted to protect the country, preserve the peace, and to aid in making the collections : under the present system it properly applies, in Bengal, to the police jurisdiction into which the Zilas were divided, each *Tháná* averaging about twenty miles square, under a *dárogha* and establishment : in the Upper Provinces the site of a *Tháná* is regulated by consideration of area and population, and generally corresponds with the divisions of a *Parqana* (Beng. Reg. 1792, No. xlix, and Reg. xxii, 1793) : its common use denotes any policestation, whether under a *dárogha* or a subordinate officer." (H. H. Wilson's *Glossary*, 1855, p. 518.)

² The name has survived up to modern times in the state of Chamba as $c\bar{a}r$: "This is the title of the head of a parganā," writes Dr. Vogel, "who is responsible for the internal management of his district, for the collection of revenue and the apprehension of oriminals. It belongs to the duties of the $c\bar{a}r$, in case the head of the State, his relatives or officials—and in modern times European travellers also—visit his parganā, to collect load-carriers and supplies. It should be remembered that the carrying of loads on such occasions is forced labour ($b\bar{c}q\bar{a}r$) paid according to a fixed rate out of which the $c\bar{a}r$ receives his commission." (Antiquities of Chamba State, p. 132.)

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police-station,¹ as will be seen from the following extract. [The translation is somewhat free.]

"In similar manner some persons caught in the act of theft by the *cārabhațas* employed for arresting thieves were, on being seized, beaten with sticks, bound with ropes and taken quickly to the police-station (*cāraka-vasati*). There they were thrashed with whips, and threatened by abuse. Seized by the neck, they were cast into a prison just like a hell. The *gaulmika* then began to frighten and abuse them. They were stripped of their own clothes, and rags put on them. Thereupon the prisoners began to beg for mercy (*utkodālañca*) but the police put them on the rack, or handcuffed them, or bound them with hair ropes or iron chains, or put leg-fetters on them, or tied them up in various other ways. The police tore some to pieces on the rack, or pressed them between two planks; others they shut up in iron cages or in pits or blind wells. Some they tied to posts; others were broken

¹ Taheva kei parassa davvam gavesamänä gahitä ya hayä ya baddharuddhā ya turiyam atidhādiyā puravaram samappiyā coraggaha-cāra-bhadakappadappahära-niddaya-ärakkhiya-khara-pharusacādukarāna tehi vayana-tajjana-galac challucchanāhim vimaņā cāragavasahim pavesiyā niraya-vasahi-sarisam tatthavi gomiya-ppahāra-dumaņa-nibbhacchaņakaduya-vadana-bhesanaga-bhayābhibhūya akkhitta-niyamsanā malinadamdi-khamda-nivasanā ukkodālamcapāsa-maggaņaparāyaņehim (dukkhasamudiranehim) gommiya-bhadehim vivihehim bamdhanehim, kim te ?, hadinigada-valarajjuya kudamdaga-varatta-loha-samkala-hattham duyabajjha-patta-dāma-kanikkodanehim annehi ya evamādi ehim gommikabhamdo vakaranchim dukkhasamudiranchim samkodamodanähim bajjhamti mamdapunnä sampuda-kaväda-lohapamjara-bhūmighara-niroha-kūvacäraga-kilagajüya-cakka-vitata-bamdhana-khambhälana-uddhacalana-bamdhana-vidhammanahi ya vihedayanta avakodaka-gadha-urasirabaddhauddhapüritaphuramta - urakadagamodanāmedanāhim baddhā va nisasamtā sisāvedha uruyāvalacappadagasamdhi bamdhanatattasalāgasūivākodaņāņi taechaņavimāņaņāņi ya khāra-kaduya-titta nāvaņajāyanäkäranasayäni bahuyäni päviyamtä urakkhodidi-nnagädhapollanaatthisambhaggasupamsuligā galakālakāloha-damda-ura-udara-vatthi-paripīlitāmacchamtahiyayasamcu-nniyamgamamga anattikimkarehim keti avirahivaveriëhim jamapurisasannihehim pahayā te tattha mamdapunnā cadavelävajjhapatta-päräimchivakasalatavarattanottappahärasa-yatäliyamgamamgā kivanā lambamtacammavaņaveyaņavimuhi-yamaņā ghaņa-kotțimaniyalajuyala-samjodiyamodiyā ya kīramti niruccārā ēyā annā ya evamādīo. . . (Prašnavyākaranānga, fol. 53-4.).

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upon the wheel; others were forced to embrace hot iron posts; others hung by the feet, head downwards; others had their heads bent down and tied to their chests ; others had their mouths filled with earth, and nosebags tied over their faces. Some had their entrails or their lungs torn out ; others were pierced with hot needles or iron rods; and then salt, ashes or the juice of limes rubbed into their wounds. Some had sharp wooden stakes thrust into their breast, and their ribs thus broken ; others had iron spikes driven into their breast, belly, anus, or back, causing them the utmost torment and convulsion. Some, arrested for no offence by the police, were bound in various ways, and then flogged with whips until their flesh was torn, and hung in pieces from their limbs, thus suffering intense agony; others had their limbs broken by being pounded with heavy clubs. Some were prevented from performing the offices of nature ; others were deprived of their power of speech (? by having their tongues cut out) . . ."

The ancient sthāna (thānā) : a place of terror owing to cāțas and bhațas stationed there.

From the above-quoted passage it is clear that the ancient sthāna, or thānā, was a place of terror, and that the cāțas and bhațas located there to protect the pargana were a terror to the populace. Although their duty was to guard the inhabitants and arrest thieves, robbers and persons of suspicious character,¹ they probably used their power to fill their own pockets, and the general opinion was that it would be a good thing if the country were rid of them.² In the Yājñavalkya-smrti they are mentioned together with thieves

¹ On the duties of cāta-bhatas the following text has a bearing :---Jyam pallikā cora rājāpatthyakārivarjja acāta-bhata pravešyā. (EI., vol. No. 21, pp. 219-21.)

² Ussukkam ukkaram . . . abhadappavesam adamdahodamdimam. . . . (Kalpa-sütra, p. 253.)

Tenam kälenam tenam samaenam campā nāms nayarī hotthā, . . .

ukkodima, gäyagamthi bheya-bhada-takkara-khamda-rakkharahiyä

(The commentary : --- utkocah, autkotikäh, gätragramthi-bhedakäh,

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and record-keepers (kāyasthas).1 In the Mrcchakatika the friend of the hero remarks in Prakrta that " Even the most daring and wicked will not dare to go to a place where the cātas, courtiers, etc., reside.2 In the Pinda-niryukti the Jain monks are prohibited from taking alms from the hands of cāra-bhatas.3 The opening sentences of many of the Jain books mention that in the time of Mahāvīra the country of Magadha (or Rājagrha) was free from these terrible, cruel people, and that owing to this the people were happy and prosperous. The Brahmanas and their tenants were, it appears, protected from the cruelties of these officials by special charter. As a rule it is clearly stated in the grants of land that it was " not to be entered by the soldiers and policemen a-chāta-bhata-praveša, also written a-cāta-bhata-praveša] " 4 [and "messengers",5 and not to be meddled with by any royal officers [sarva-rājakīyānām ahastapraksepaņīyam, or rājakīyānām ananguli-praksepaņīyah]" 6 and "was free from tolls, taxes and molestations" [sa-śulka-kara-vādhā-parihāra].7

bhatāh, cārabhatāh valātkāra-pravrttayah taskarāh khamdarakkha == dandapāšikāh sulkapālā vā ebhih rahitāh.) (Aupapātika-sūtra, p. 1.)

(Note.—According to the commentary on the Aupapätika-sätra, chāțabhațas or cățabhațas should be derived from the Samskrta căra-bhața. Monier-Williams appears to be quite right in understanding căța to have the same meaning as cāra.)

¹ Cäta-taskara-durvytta-mahāsähasikādibhih | Pīdyamānā prajā rakķet kāyasthaiś ca višeşatah. (Yājňavalkya-smyti, Vyavahāra, pp. 334-5.)

² Bho vayasya ganikā hastī kāyastho bhikşuś cāto rāsabhaś ceti yatraite nivasanti tatra dustā api na jāyante, p. 158. (The commentary :---Cātah pratārakah, yo viśvāsya paradhanam harati sah. "Kşudra-vişayabhoktā" iti Lallā Dīkşitāh, Mrcchakatika, p. 158.)

³ Kabvatthiya appähana dinne annanna gahana pajjattam

khamtiyamagganadinne uddāhapaosa cārabhadā. 579.

(the commentary :--- Nünam amī sādhuvesa-vidambinaš cārabhatā iva luņtākā na sādhu sadvrttā iti . . .). (*Piņda niryukti*, fol. 158-9.)

⁴ EI., vol. iii, No. 8, p. 52; vol. iii, No. 37, pp. 269–70; vol. iii, No. 40, p. 292; vol. xii, No. 23, p. 204; vol. xii, No. 31, p. 267.

⁵ Ibid., vol. iii, No. 8, p. 52.

⁶ Ibid., vol. iii, No. 8, p. 52; vol. iii, No. 30, p. 217; vol. iv, No. 8, pp. 74-5; vol. xi, p. 84; vol. xii, No. 19, p. 145; vol. xii, No. 31, p. 267; vol. xii, No. 34, p. 313.

7 Ibid., vol. iii, No. 30, p. 217; vol. xi, No. 11, p. 18; vol. xii, p. 145; vol. xii, No. 34, p. 313.



The term cata discussed

Owing perhaps to misapprehension of the system of administration in force in ancient India, some writers have sought to explain cāta as flatterer, deriving the word from the Samskrta cātu, meaning flattery.1 The Sūrat Plates of Vyäghrasena make it quite clear that the cāțas and bhațas acted partly as police and partly as military, and were appointed to arrest robbers and persons guilty of high treason.² The Talcher grant of Kulastambha mentions them along with the government employés and grant-holders, and remarks that they always try to please the rajans.3 In the Pinda-niryukti they are described as being inwardly wicked and as following a life unworthy of good men.⁴ Bana also in many places mentions cāra-bhatas together in one compound, like the chāta-bhatas of the land grants.5 According to him also they were hated by the country people on account of their cruelty and greed. In one place he describes them as talking and laughing with the slaves and servants of the nobles after taking plenty of grain from the fields; and in another place he writes that the poor were grumbling at the cruelty and illtreatment received at their hands.6

It appears therefore from the above references that *cāțas* and *bhațas* were persons employed for watch and ward, for collecting revenue, and for arresting thieves and robbers.

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² Ibid., vol. xi, No. 21, pp. 219-21.

³ Ibid., vol. xii, No. 20, p. 157. "Rājaprasādina cātţa-bhatţa-mahāsāmamta-bhoga-janapadādyānadhikaranajanān"; vol. xvi, No. 2, p. 14. "Rājarājapurusātavikacāţādibhih."

⁴ Pinda-niryukti, fol. 159.

^b Cäru - cărabhață-sainya-nyasyamāna-nāsīra-mandalādambara - sthūlas thāsake (Harşa carita, p. 229); Catula - dāmara - cāra - bhața - bharitabhuvanāntaraih (ibid., p. 232).

⁶ Kvaoit sveechä-mrditoddäma-sasya-ghäsa-vighasa-sukha-sampannänna-pustaih kekikalaih kilakiläyamänair mentha-vantha-vathara-lambanaekika-lunthaka-ceta-cäta-candäla-mandalarändiraih stüyamänam. (*Harsacarita*, p. 238.)

Cirantana-cätäparädhämácäbhidadhänaih. Ibid., p. 238.

¹ EI., vol. xi, No. 17, p. 176.

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Some of them were in the service of estate-owners, and others were under the officers in charge of *parganas* and *janapadas*.

Duties of the cāta

Taking the *cāța* of the land-grants as equivalent to *cāra*, we can form a fair idea of the system of local administration, with the help of Samskrta works relating to law and administration. Hitherto *cāra* has generally been translated 'spy'. 'Policeman' appears to be a more appropriate meaning. *Bhața* is used in Samskrta for soldier. So the *cāra-bhațas* were persons employed as *chaukīdārs*, policemen and soldiers.

As far as the management of a *janapada* was concerned, they were employed by the revenue collector (*samāhartr*) to examine the records and ascertain the correctness of accounts in respect of fields, houses and *kulas* (families), and to keep an eye on the coming and going of the people and the movements of secret police employed by the enemy.¹ Some of them probably were stationed at the toll gates, to ascertain the actual quantity and value of the goods exported and imported.² As the country was full of powerful nobles intriguing against each other, each seeking to enhance his own power by bringing weaker estates under his own control, the administration of a *janapada* was not a simple matter. According to the *Mahābhārata* policemen (*cāra*) should be stationed in the markets, parks, places of assembly, streets

¹ Samähartr-pradiştäs ca grhapatika-vyañjanä yeşu grämeşu pranihitäs teşäm grämänäm ksetra-grha-kulägram vidyuh. Mäna-sañjätäbhyäm kseträni, bhoga-parihäräbhyäm grhäni, varna-karmabhyäm kuläni ca. Teşäm janghägram äyavyayau ca vidyuh. Prasthitägatänäm ca praväsäväsa-käranam anarthyänäm ca stri-puruşänäm cära-pracäram ca vidyuh. (The Artha-šästra of Kautalya, p. 142.)

² Evam vaidehaka-vyañjanāh sva-bhūmijānām rāja-paņyānām khanisetu vana-karmānta-ksetrajānām parimāņam argham ca vidyuh. (The Artha-šāstra of Kauțalya, p. 142.)

Evam vaidehaka-vyañjanāh . . . parabhūmijātānām, vāri-sthalapathopayātānām sāra-phalgu-paņyānām karmasu ca śulka-vartanyātivāhikagulma-taradeya-bhāga-bhakta-paŋyāgāra-pramāņam vidyuh. . . (Ibid., p. 174.) Evam samāhartr-pradistās tāpasa-vyañjanāh karsaka-goraksakavaidehakānām adhyaksāņām ca śaucāšaucam vidyuh. (Ibid., p. 143.)

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and gardens, since they were responsible for the public security.¹ They were divided into (1) regular $(ag\bar{u}dha)$ and (2) secret $(g\bar{u}dha)$ police. Both were remunerated either by grants of land or capital, i.e. money or goods.

According to Kautalya the $c\bar{a}ras$ (policemen) connected with the management of estates ($gr\bar{a}mas$) were to be granted rent-free lands, those stationed at toll-gates and markets to be provided with capital to live as traders, and those living in the guise of ascetics (i.e. the spies) to be furnished with both land and capital.² It would appear that the administration of the country was not satisfactory, even after posting policemen at all these places, owing to the dishonesty of the government officials. Sometimes the underlings fleeced the tenants and cultivators in order to increase the revenue receipts, and sometimes they filled their own pockets and in their accounts entered less than what had actually been realized. All kinds of details were required of them, but they managed to retain their illegal income without being detected.³

Administration of a town and the extent of its jurisdiction (Pura-rājya)

From the above references, it seems clear that a janapada was divided into four sthānas (thānās) for administrative,

¹ Cārāmś ca vidyāt prahitāt pareņa bharatarsabha | Āpaņeşu vihāreşu samavāyeşu vīthişu. 11. Ārāmeşu tathodyāne paņditānām samāgame | Vešeşu catvare caiva sabhāsvāvasatheşu ca. 12. Evam vihanyāc cāreņa paracāram vicakṣaņah | Cāre ca vihite sarvam hatam bhavati bhārata. 13. (Mahābhārata. Šānti-parvan, 68, 11-13.)

² The above inference is drawn from the following text:---Upadhābhiś śuddhāmātyavargo gūdhapurusān utpādayet. Kāpatikodāsthita-grhapatika-tāpasa-vyaňjanān satri-tīksņa-rasada-bhiksukīś ca. p. 18.

Pravrajyā pratyavasitah prajňāśaucayukta udāsthitah. Sa vārtā-karmapradistāyām prabhūta-hiraņyāntevāsī karma kārayet. Karmaphalāc ca sarva-pravrajitānām grāsācchādanāvasathān pratividadhyāt..., p. 18.

Karşako vrtti-kşînah prajñā-śauca-yukto grhapatika-vyañjanah. Sa krşi-karma-pradistāyām bhūmāv iti. Samānam pūrveņa. p. 18. (The Artha-šāstra of Kautalya.)

³ The above view is based on the following text: ---Matsyā yathāntah salile caranto | Jňātum na śakyāh salilam pibantah | Yuktās tathā kāryavidhau niyuktāb | jňātum na śakyā dhanam ādadānāh. (Ibid., p. 60.)

See also Visvagunadaria-campü (1899 ed.). pp. 85-6.



and into four ganas (parganas) and vargas (mahāls) for fiscal purposes; and all these subdivisions were under the officer called samāhartr. The management of a town was entrusted to an officer called nāgaraka.¹ As in the case of rural areas, the towns were probably similarly divided up into ganas and sthānas.² A question arises as to the extent of the jurisdiction of a nāgaraka. Were the suburbs included within the limits of the jurisdiction of this officer? My inquiries lead me to think that suburbs were considered to be part of a town, and were under the same administration. If a theft occurred near the town, inquiry was made by the nāgaraka, and not by the sthānika or pradestr of a rural subdivision.

Take, for instance, the city of Benares. In ancient times its jurisdiction extended 5 krośas, or 1 yojana, all round the temple of Madhyameśvara, while the city proper was considered to extend only 1 krośa round that temple.³ Hiuan Tsang, it seems, gave the figures relating to the city proper. According to the Linga-purāna and the Skanda-purāna the length of Benares was about 2 krośas, or 20 li, while Hiuan Tsang gives between 18 and 19 li.⁴ In the same way the jurisdiction of Gayā lay within a radius of 5 krośas, while the city proper (Gayā-šīrṣa) seems to have had a radius of only 1 krośa.⁵ It appears that the radius of the jurisdiction (pura-rājya) of a first-class city was generally fixed at 5 krośas or 1 yojana; because many of the sacred

¹ The Artha-śāstra of Kautalya, pp. 143-7.

² Samähartıvan nágarako nagaram cintayet. Daśakulim gopo, viméatikulim catväriméatkulim vä. . . Evam durgacaturbhägam sthänikaś cintayet. Ibid., pp. 143-4.

⁹ Pañca-krośātmakam lingam jyotirūpam sanātanam. (Skanda-purāņa-Kāšīkhaņda.)

Mukti-kşetra-pramāņam ca krośam krośam ca sarvatah | Ārabhya lingād asmāc ca puņyadān madhyameśvarāt. (Ibid.) (Tristhalī-setu, p. 103.)

4 BRW., vol. ii, 1884 ed., p. 44.

⁶ Să gayeti suvikhyätä trişu lokeşu viśrută | Pañca-krośamitä să ca parvataih samalamkrtä. 44. (Bhavisyad-uttarapuräna-gayāmāhātmya.)

Pañca-krośam gayāksetram krośam ekam gayāśirah. (Vāyupurānagayāmāhātmya.) (Tirthāvalī-prabandha, pp. 200-10.)



cities, such as Puruṣottama-kṣetra,¹ Prabhāsa-kṣetra,² Puṣkara,³ Ayodhyā,⁴ Prayāga,⁵ Haripura,⁶ Karavīra,⁷ Gayā, Kāśī, etc., were considered to be holy ground within those limits. The cities proper, on the other hand, according to statements made in the Purāṇas, extended from a central point to a radius of from 1 to 2, or $2\frac{1}{2}$ krośa; and Hiuan Tsang gives figures varying from about 10 to 20 *li*. The accounts given by these two authorities may be regarded as in substantial agreement.

¹ Paňcakrośam idam ksetram samudräntarvyavasthitam. (Skandapurāna-Kşetramāhātmya, ibid., p. 85.)

² Nämaprabhäseti yadā sarvatra jagati śrutam |

Samantāt pañcakrośākhyam puņyaksetram hi tat smrtam.

(Sarasvatī-māhātmya, ibid., p. 125.)

³ Yojanābhyantare tāvat puņyam puşkara-samjňakam. 15. (Padma purāņa-puşkaramāhātmya, ibid., p. 158.)

⁴ Sahasradhäräm ärabhya yojanam pürvato diśi | Paścime ca tathä devi yojanam sammato'vadhih. 66.... Etat kşetrasya samsthänäm harer antargrham smrtam. 67. (*Rudra-yāmala-kşetramāhātmya*, ibid., p. 166.)

⁵ Paňcakrośätmakam ksetram satkonam viśvatonnatam | Prakrstam sarvayägebhyas tuläyäm adhirohatu. 21.

(Ibid., p. 184.)

⁶ Pañcakrośam haripuram nagaram yojanatrayam.... (Padmapurāna-kşetramāhātmya, ibid., p. 253.)

⁹ Tanmadhye pañcakrośam ca bhuvi käśyā yavādhikam | Kşetram vai karavīrākhyam kşetralakşmī vinirmitam.

(Ibid., p. 277.)


CHAPTER III

WEIGHTS, MEASURES, COINAGE, AND RATE OF INTEREST

I. WEIGHTS

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- II. MEASURES
- III. COINAGE
- IV. RATE OF INTEREST

CHAPTER III

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GOVERNA

WEIGHTS, MEASURES, COINAGE, AND RATE OF INTEREST

I. WEIGHTS

I N the preceding chapter I have dealt with the general administration of a *janapada* from the revenue, military, and police points of view. In the present chapter I propose to take certain other subjects connected with the economic organization, which have hitherto never been systematically treated, namely, the systems of weights, measures, and coinage and the rates of interest in force. The material for such a study is widely scattered in many Samskrta texts and old inscriptions. The attempt to collate the available information is worth making, if only because the figures arrived at, though they may not be as accurate as we should like them to be, afford important help towards instituting a comparison between the conditions of ancient India and those of mediaeval and modern India. These subjects will be dealt with in the order indicated.

Origin of ancient Indian weights

On the evidence at our disposal it is not possible to assign the origin or introduction of ancient Indian weights to any definite period. A careful study of the following table of the weights used for weighing gold, silver, and copper seems, however, to suggest foreign influence.

TABLE NO. III

(A)

Ancient Indian Standard Weights. 1 rati = $\frac{1}{2}$ māsaka = 1.8 gr. approximately. 2 ratis = 1 , = 3.6 gr. ,

(B)

Weights used for weighing gold, copper, and silver For gold and copper. 5 ratis = 9 gr. = 1 mäşaka. 2 ratis = 3.6 gr. = 1 mäşaka. 80 ,, = 144 gr. = 1 karşa. 32 ,, = 57.6 gr. = 1 karşa.

For gold, silver, and copper. 320 ratis = 570 gr. = 1 pala.

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It is rather interesting to note in the above table that the weights called $m\bar{a}_{s}aka$ and karsa, whether used in connexion with gold or with copper, have the same meaning; but when used of silver express quite different weights. There does not appear to have been any superstition to account for this peculiar difference, because the weight *pala* represents the same weight, whether used in respect of gold, copper, or silver.

Dr. F. W. Thomas appears to be quite right in regarding the weight karsa as having originated in some foreign country. He writes "The word karsa in the sense of a certain weight, whence the coin kārṣāpaṇa, paṇa, etc., is regarded by Cunningham (Coins of Ancient India, p. 6) as ' probably indigenous, as it is derived from krish, to mark or furrow'. This view is no longer tenable, since the Iranian lexicon provides us with the word karsa in the sense of a certain weight, and Dr. L. H. Gray has already (Journal of the American Oriental Society, vol. xx, pp. 54-5) equated it to the Sanskrit word. Moreover, the money of the Aramaic colony in Egypt during the sixth century B.C. was reckoned in karsas : see Professor Sachau's Aramäische Papyrus und Ostraka (Leipzig, 1911, Index), E. Meyer, Der Papyrusfund von Elephantine (Leipzig. 1912, pp. 56 seqq.). Whatever be the ultimate source of the word, whether Egypt or Babylon or elsewhere, it must rank with the Vedic mana, or mina, as an importation from western Asia" (JRAS., 1916, pp. 366). In the same way the origin of the weight dhanaka can be traced to some foreign country. According to the Nārada-smrti and the Brhaspatismiti it was equal to four copper panas or, say, four masakas of silver 1 (= 14 gr.), thus fully corresponding in weight and name to the Persian weight and coin known as danag. It appears to me that the weights used for weighing gold and copper bullion were Indian weights, while those used for weighing silver bullion had their origin in some foreign country.

¹ See Chapter III, p. 90, Note 1.

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The development of ancient Indian weights

As in the case of their origin, the development of ancient Indian weights is also very obscure. When the kingdom of Magadha came into power, it appears that some effort was made to remove the diversity of weights. Bhattojī Dīksita, in his Siddhanta-kaumudī, refers to a tradition when he writes nandopakramāni hi mānāni, i.e. that all kinds of weights and measures began from the time of Nanda. Perhaps from that time two systems of measures and weights, viz. Māgadha and Kālinga came into prominence. The former appears to have been very popular.1 Kautalya advises rājans (rulers) to appoint a supervisor of weights and measures and to punish heavily any person using counterfeit weights. "With a view to prevent deception, he (the superintendent of commerce)," Kautalva says, " shall also supervise weights and measures. A difference of half a pala in such measures as are called parimānī and drona is no offence. But a difference of a pala in them shall be punished with a fine of twelve panas. Fines for greater differences shall be proportionally increased. A difference of a karsa in the balance called tulā is no offence. A difference of two karsas shall be punished with a fine of six panas . . . Fines for differences in weight in other kinds of balances shall be calculated on the basis of the above rule." 2

The charge for stamping weights and measures was four $m\bar{a}sas$; and a fine of twenty-seven and a half panas was imposed for using unstamped weights or measures. Traders

¹ Kälingam mägadham ceti dvividham mänam ucyate.

Kālingān māgadham śrestham mānam mānavido janāh. 40.

(Sarngadhara-samhilā, Venkațeśvara Press, Samvat,

1976 (1909), p. 14.)

² Tulā-māna-bhāndāni cāvekseta, pautavāpacārāt.

Parimäni-dronayor ardha-pala-hinätiriktam adosah. Pala-hinätirikte dvädaśa-pano dandah. Tena palottarā daņda-vrddhir vyākhyātā.

Tulāyāh karsa-hīnātiriktam adosah. Dvi-karsa-hīnātirikte sat-paņo daņdah. Tena karsottarā daņda-vrddhir vyākhyātā.... Tulā-mānavišesānām ato'nyesām anumānam kuryāt.

(Kau. Artha., pp. 204-5; cf. English translation, p. 250.)



were obliged to pay one $k\bar{a}kan\bar{n}$ a day as supervision tax. They were provided with standard weights and measures at the following prices¹:—

TABLE NO. IV

Measure of weight.

Price of each measure in copper pana and māşaka. 1 māşaka. 6 māşakas. 4 pana. 14 panas (= 20 māşakas). 20 panas. 63 panas.

Kudava (= 4 palas; 1 pala = 576 gr.). Prastha (= 4 kudavas). Ädhaka (= 4 prasthas). Drona (= 16 prasthas or 4 ādhakas). Pratimāna (= a set or iron weights). Tulā (balance).

Thus it is quite clear that in the time of Kautalya government interference was thought essential to protect the public from counterfeit weights. It appears also that some attempt was made to do away with diversity in weights, and establish uniformity of system. It is interesting to note that the weights used in respect of grain follow to a large extent some common ratio, but at the same time show considerable discrepancies in detail. According to Dr. L. D. Barnett this indicates "that different ages and provinces followed different standards".2 In the same way Professor Rapson remarks that "The fact would appear to be that in Ancient India, as in Modern India, very great diversity prevailed in the weight systems of different districts, but that underlying this diversity there were certain general principles of very wide, if not of universal, application".3 "The various systems of weight used in India combine uniformity of scale with immense variations in the weight of units." 4 Even at present

¹ Caturmäşikam prätivedhanikam kürayet. Apratividdhasyätyayah sapādah sapta-vimśati panah. Prätivedhanikam käkaŋikam aharahah pautavädhyaksäya dadyuh.

(Kau. Artha., p. 105.)

Sapāda-paņo droņa-mūlyam, Ādhakasya pādonah Saņmāsakāh prasthasya. Māsakah kuduvasya. Dviguņam rasādīnām mānamūlyam. Viņšati paņāh pratimānasya. Tulā-mūlyam tri-bhāgah. (Ibid., p. 105.)

² L. D. Barnett's Antiquities of India (ed. 1913, London), p. 206.

⁸ Catalogue of the Coins of the Andhra Dynasty, by E. J. Rapson (1908 ed.), p. clxxxi.

4 Ibid.

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in Benares the weights used in one market differ from those used in another. The same diversity prevails in the system of counting. In one town, for instance, the numerical term $saikar\bar{a}$ (literally meaning a unit of one hundred) may mean 125, and in another 180, and so forth.

Mediaeval and modern equivalents of ancient Indian weights

Dr. L. D. Barnett has already taken great pains to compile a careful account of the different measures of weight in his Antiquities of India (pp. 206-10). It is unnecessary, therefore, to detail them here. From the Artha-śāstra of Kautalya it appears that four kinds of drong, namely, containing 1621, 175, 1871, and 200 palas respectively, were in use as standard weights.1 The uniform difference of 121 palas between each of these dronas is very remarkable, and was no doubt intended to serve some definite purpose. What this purpose was, must be a matter of speculation until further evidence be forthcoming. It may have been connected with the then prevalent system of realizing the government dues, or the dues payable to the collectors or the other middlemen, in a proportion of the grain. The use of different varieties of the same (nominal) measures of weight has evidently been established from ancient times in India; and perhaps we find a perpetuation of such a system in the different sections of the same market at the present day.

According to Kautalya the measures of weight called kudava, prastha, and $\bar{a}dhaka$ (4 kudavas = 1 prastha; 4 prasthas = 1 $\bar{a}dhaka$; 4 $\bar{a}dhakas$ = 1 drona) were also (like the drona) of four different varieties² (see column A, B, C, and D of Table No. V). Then there was a fifth variety of drona, constantly used in works on law and medicine,

¹ Atha dhänya-mäsa-dvipala-satam dronam äyamänam. Saptäšiti-pala-satam ardha-palam ca vyävahärikam, Pañca-saptati-pala-satam bhäjaniyam. Dvisasti-pala-satam ardha-palam cäntahpura-bhäjaniyam.

(Kau. Artha., p. 104.)

² Tesäm ädhaka-prastha-kudumbäs caturbhägävaräh. (Ibid.)

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containing 256 palas 1 (see column E of the same Table). Further there are the measures of weight used in the Southern Indian inscriptions (see column F of the Table). In the Table I have arranged these six varieties of measures in separate columns (A, B, C, D, E, and F, respectively), showing also the equivalent of each in respect of all the other measures (from kudava to vaha). I have also calculated, for convenience of comparison, the equivalent of each measure, and of each variety thereof, in Akbarī $d\bar{a}ms$ (1 $d\bar{a}m = 324$ grains) and in modern avoirdupois weight. The figures must not be accepted as exact; they are only approximate. In fact it is no easy task to assign any definite value to the Southern Indian weights. The trouble starts with the marakkāl. According to H. H. Wilson marakkāl, commonly markal or mercal, is "A grain measure in use at Madras. containing eight padis or measures, and being one-twelfth of a kalam : it formerly consisted of 750 cubic inches, but is now fixed at 800 cubic inches: 400 marakkāls = one garisa, or garce. A marakkāl of rice or of salt weighs 960 rupees = 12sers, or 24 lb. 6 oz." From this it appears that a marakkal consisting of 750 cubic inches was equal to 221 lb. According to Mr. Moreland in the sixteenth century A.D. and afterwards the Southern Indian maund was equal to from 25 to

¹ Catuh karsaih palam proktam daśa-śāṇamitam budhaih | Catuhpalaiś ca kudavam prasthādyā purvavan matāh. 39. Paläbhyam prastir jñeya prastas ca nigadyate ! Prasrtibhyam anjalih syat kudavo'rdha-śaravakah. 23. Astamānam ca samjñeyam kudavābhyām ca mānikā | Sarāvo'stapalam tadvaj jñeyam atra vicaksaņaih. 24. Sarāvābhyām bhavet prasthaś catuhprasthais tathādhakam | Bhājanam kamsapātram ca catuhsastipalam ca tat. 25. Caturbhir ädhakair dronah kalasonalvanonmanau | Unmānaś ca ghato rāśi-droņa-paryāya-samjňakāh. 26. Dronābhyām surpa-kumbhau ca catuhşaşti sarāvakāh | Sürpäbhyām ca bhaved droņī vāho gonī ca sā smrtā. 26. Droni catuştayam khârî kathitâ sükşma-buddhibhih | Catuhsahasra-palikā sanņavatyadhikā ca sā. 28. (Sarngadhara-samhita, Venkatesvara Press, Sam. 1976 (A.D. 1909), pp. 10-13.)

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27 lb.¹ The *drona* used in the law-books and other Samskrita works was approximately equal to 21 lb. After careful study of both prices and wages I come to the conclusion that it will not be unreasonable if for the purpose of calculation we regard the *marakkāl* of the Tanjore inscriptions as equivalent to the *drona* of other Samskrita books. Accepting the Akbarī *dām* as weighing approximately 324 gr., or 180 *ratis*, we can convert the ancient Hindu weights into terms of *dāms* and avoirdupois weights (see Table V).

From Table V it is clear that the prastha of different weights was used for different purposes. It weighed approximately 18, 20, 21, 22 and 28 dams. It appears from the Ain-i-Akbari that prasthas of these weights were current down to the sixteenth century A.D. Abu'l-Fazl writes :--"Formerly in Hindustan, the ser weighed 18 and in some places 22 dam. In the beginning of His Majesty's reign it was current at 28, and is now fixed at 30, each dām being 5 tank".2 According to Mr. Moreland the ser (prastha) of 18 dams was current in Gujarat until 1634-5, and it was afterwards made equal to 20 dams.3 These two kinds of ser appear to be very ancient. According to Kautalva they were used in the ladies' apartments of the palace and in giving allowances to servants called antahpura-bhājanīya and bhājanīya respectively.⁴ In the table they are denoted by the letters A and B. The prastha of 36 dams, which was exactly double of the Gujarāt ser (prastha), was current in Bengal down to 1642, or later.⁵ The prastha of 28 dams, which is used in all Samskrta books on law and medicine, was current down to the time of Akbar. It was afterwards made equal to 30 dams by Akbar.6

- ¹ Moreland's From Akbar to Aurangzeo, 1923, ed. p. 336.
- ^a Äin-i-Akbari, vol. ii, p. 125.
- ³ Moreland's From Akbar to Aurangzeb, 1923 ed., p. 335.
- ⁴ Pañca-saptati-pala-éatem bhājanīyam, Dvişaşţi-pala-śatam ardhapalam cāntahpura-bhājanīyam.

- ⁵ Moreland's From Akbar to Aurangzeb, 1923 ed., p. 336.
- ⁴ Ibid., Appendix D, pp. 333-7.

⁽Kau. Artha., p. 104.)



Taking all these facts into consideration, it becomes increasingly apparent that the Muhammadan rulers did not show such originality in respect of weights as has been commonly supposed by writers on this subject. No doubt, as sovereigns of a large portion of India, they prescribed certain weights to be standard weights; but these were weights which had already been in popular use from a very early period in India.

II. MEASURES OF LENGTH AND SPACE

1. Measures of length

As in the case of weights, the origin and development of the ancient Indian measures of length are also involved in much obscurity. According to Böckh "the basis of the Greek and Roman metrical systems was that which had prevailed from very early times among the Chaldaeans at Babylon, from which or from some common origin the Egyptians derived their metrical system ; and which was carried by the commerce of the Phoenicians into Greece, when it passed over into Italy".¹ It is rather interesting to note that we find a remarkable correspondence between the ancient Indian measures of length, up to the fathom, and the Babylonian measures. This will be evident from the following table :—

	TABI	LE NO. V	71	
	In the	Greek Syst	em	
4 digits	m	ake a palm	1.	
3 palms		,, span	1.	
2 spans		" cubi	t.	
4 cubits		" fath	om.	
4 palms , ,		" foot	(= 12.135 inches).	
	In the i	Roman Sys	tem	
4 digits	m	nake a paln	a.	
3 palms		" span	. All and a state of the state	
11 feet (2 spans)		" cubi	t.	
4 palms	·	" foot	(= 11.62 inches).	
	In the i	Indian Sys	lem	
4 digits (angulas)	· • 11	nake a paln	a (dhanurgraha).	
3 palms (12 angulas)	" span	ı (vitasti).	
2 spans (24 angulas)		" cubi	t (hasta).	
4 cubits		" fath	om (danda = nälikä).	
31, 32 palms (14 or 1	15 angulas),, foot	(pada = 10.5 or 11.25 i	inches

¹ Smith's Dictionary of Greek and Roman Antiquities, London, 1872, p. 754.

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The similarity between the Babylonian and Indian measures of length indicates a common origin. There is little room for doubt, on the other hand, that India developed its own measures of length and breadth. In preparing the following table of measures, I have taken 4 digits (*angulas*) as equal to 3 inches; and for the sake of comparison I have added another column (Col. No. 4) showing the modern equivalents of ancient measures of length as proposed by Sir A. Cunningham.

TABLE NO. VII¹ (A)

Acco	rding to	Kautalya and other			According to Cun-	
		authors.		Inches.	ningham.	Remarks.
(1)	(2)		(3)	(4)	(5)
4 a	ngulas	= 1 dhanurgraha	=	3	-	According to Kau- talva.
8		= 1 dhanurmusti		6		
10	55	= 1 kşudrapada	=	7늘	-	" Mahädeva.
12	"	= 1 vitasti or pradeśa or chava-purusa	ı=	9	-	" Kauțalya.
14	"	= 1 śama or śala or pada (foot)		10 <u>1</u>		""
15		= 1 pada (foot)		11.25		" Mahādeva.
30	23	= 2 padas or 1 pra-	-	22.5		"Kautalya.
28	"	= 1 hasta or 1 pra- krama	-	21	-	(used in measur- ing pasture land, cubic measures, balances, etc.).

¹ Tatra piśila-mānam paňcadhā vadanti bāhvor antarālam ekam. Baddha-muşţīratnir iti dvitīyam. Aratnir iti trtīyam. Dvātrimsad angulam iti caturtham. [Saţtrimsad angulam iti pañcamam.]

(Śrauta-sūtra by Satyāşādha, part i, p. 287.)

Angulādi-pramāņam tu sulba ācārya uktavān. Vedimānopayogitvāt tat-pramāņam aham bruve. Caturdašāņavo yāvat tāvad evāngulam bhavet. Trayastrimsat tilā vā syāt košasthā angulam tv iha. Dasāngulam ksudrapadam prādešo dvādašāngulah. Pytham ? trayodašāngulyās tāvad evottaram yugam. Padam pañca-dašāngulyā tāvad evottaram yugam. Pada-dvayam prakramah syāt prādešau dvāv aratnikah. Jānu dvātrimšadangulyah sat trimšadbāhu samyake. Catuhšatāngulam tv aksah sadašītyangulam yugam. Īsā pramāņam angulyas tv astāšītyangulam satam. Aratnayas tu catvāro vyāyāmasya pramāņakah. Aratnayas tu pañcaiva puruso vyāma eva ca.

(Ibid., p. 289.)

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र्थय • भा	/					According	
Acco	ording to	o K	autalya and other			to Cun-	
		nuth	ors.		Inches	mingham	Remarks
1	1)		(9)		(9)	(A)	(5)
04	1)	June			(.)	(4)	(0)
248	ingulas	-	prajapatya-nas-	=	18		According to Kau-
			ta or 1 aratni				talya.
24	,,	===			18	/	Mahādeva.
24				-	18		the Danama.
	"		33 33	and the	10		,, the Danama
90			1.1. 1.1		~		yukna, etc.
32	,,	=]	l kişku or I kamsa	==	24		,, Kautalya.
42	,,	=]	l kişku	-	311		,, ,,
							(used by sawyers.
							blacksmithe and
							blacksmiths, and
							used in measur-
							ing the grounds
							for the encamp-
							ment of the army.
							for forte and
							nologon)
20			1 2=		0.		paraces.)
-04	32		i janu	-	24	1	", Mahadeva.
54	,,		l hasta		401		" Kautalya.
							(used in measur-
							ing timber
							formata
91			I www.ii www.o		60		Torests).
0±	22	-	i vyama		03		" " "
							(used in measur-
							ing ropes and the
							depth of a place).
86		-	Vuga		64.5	and the second	Mahādara
96	23		I danda or A arata	:	70	E.01 \$4	,, Manadova,
00	"		i danda or ± arati	1	14	5.01 10.	" Kautalya.
90	"		i vyayama	-	72	5.81 it.	", Mahadeva.
96	.,	=	I dhanuh or nalika	L ==	72	,,	,, Kautalya.
			or purușa				
108	.,	=== (l gārhapatya-	-	81		
			dhanuh				(used in measure
							ing the needs and
							ing the roads and
100							fort walls).
120	,,,	-	l purușa or vyama	-	90	1 1 1 - 1 1 1 1 1	" Mahâdeva.
180	,,	== 1	l purușa (= īșā)		135		Kautalva.
192		-	I danda or 6 kam-	-	144	and the second second	
	"		sas or 1 nali				(used in monour,
			GLAS OF A HUIL				ing lands monted
							ing lands granted
							rent free to Brah-
							maņas).
10	dandas	-	l rajju	-	1440	116.2	
				1	$= 40 \mathrm{vds}$		
9	raiine		1 paridaéa		9990	020.4	
1 9	rajjus		I particea	-	10 11 100	202.4.	37 93
TX9	22	-	i nivartana (cubic) ===	40 × 120		22 93
-			measure)		yds.		29 23
300	dhanuh	1 ===	1 naivā				22 22
1000	22	===	l goruta	-	2250 yds.	2017 vds.	
2000	10	-	I gavvűti		4500 vds	4034 vds	
4000		1	1 kroke	-	9000 yda	8069 vda	37 32
2000	22		Inciona	-	19000 yds.	10100 yds.	55 55
0000	7.9		r yojana	1	18000 yds.	10138 yas.	22 23
				(=	10 miles	$(=9\frac{1}{2}$ miles	
					approx.)	approx.)	

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(B)

Ancient Indian measures of length current up to the Muhammadan period. 24 angulas = 1 prājāpatya-hasta = 1 covad of 18 inches On the east coast. 42 ", = kişku = 1 Ilāhī gaz of 32 in. In Sindh. 54 ", = 1 hasta = 1 Ilāhī gaz of 40 in. In Northern India.

(C)

Modern equivalents of ancient Indian measures of distance accepted by me for the purpose of calculation.

1 yojana = about 10 English miles. 1 krośa = "," $2\frac{1}{2}$ ", ","

In the section dealing with weights it was shown that the Muhammadan emperors had selected some of the Hindu weights, and authorized their adoption. We see the same thing in the case of measures of length. According to the $D\bar{a}na-may\bar{u}kha$ there were three kinds of measures, having the same name and following the same scale, current in ancient India. These were based upon the different digits (*angulas*) of six, seven, and eight barley corns.¹ This opinion is confirmed by Abu'l-Fazl, who writes :—

"Throughout Hindustan there were three such measures current, viz. long, middling, and short. Each was divided into twenty-four equal parts and each part called <u>Tassüj</u>. A <u>Tassüj</u> of the first kind was equal to eight ordinary barleycorns placed together breadthways, and of the other two respectively, to seven and six barley-corns. The long gaz was used for the measurement of cultivated lands, roads, distances, forts, reservoirs, and mud walls. The middling was employed to measure buildings of stone and wood, bamboo-built houses, places of worship, wells and gardens, and the short gaz for cloth, arms, beds, seats of state, sedan chairs, palanquins, chairs, carts and the like."²

According to Mr. Moreland "the measures of length prevailing in Northern India were known as gaz; they varied greatly, and Akbar attempted to standardize them in his

¹ Astau yükä yavam prähur angulam tu yavästakam, Astabhis cängulam tiryag yavänäm uttamam matam, Saptabhir madhyamam proktam sadbhih syäd adhamängulam iti. (Däna-mayükha, pp. 22-3.)

² Ain-i-Akbari, vol. ii, pp. 58-9.

Hahī gaz, which, according to the data given by Abu'l-Fazl, ought to be about 31 inches, but appears in practice to have been rather more than an inch longer. The Ilahī gaz was used in the North, but not universally ".1 It appears to me that the Ilāhī gaz of Akbar was the same as the kisku of 42 angulas or say of 311 inches, which was used, according to Kautalya, by sawyers, blacksmiths and government officers for the encampment of the army, for forts and palaces, and in surveying land. The diversity of measures in the time of Akbar may be understood from the fact that on the east coast the hasta (or covad) was about 18 inches; in Gujarāt, nearly 27 inches; in Sindh, about 32 inches; and in Northern India about 40 inches.² It is interesting to note that all these different measures correspond exactly with the measures mentioned by Kautalya. For instance, looking at the table given above, we find that the ancient prajapatya-hasta (east coast) of 24 angulas, or say 18 inches, and the hasta (North India) of 54 angulas, or say 401 inches, which was used in the time of Kautalya for measuring timber forests, and the kisku (Sindh) of 42 angulas, or say 311 inches, corresponding with the Ilāhī gaz, were regularly used in the time of Akbar.³

2. Measures of space

The land grants are full of technical terms connected with the system of measurement of land prevalent in ancient India. Unless their equivalents in modern measures be calculated, a mass of material regarding prices and the productivity of land cannot be utilized. According to the $D\bar{a}na-may\bar{u}kha$ a donor should give a $gr\bar{a}ma$ (estate) to a Brāhmaņa; but if he is not in a position to do this, he may give land measuring a go-carma ('cow's hide'). He defines go-carma as the area of land whereupon a hundred cows and an ox can sit easily, or the produce of which is sufficient to support a Brāhmaṇa for a year, or which is two-thirds of a

² See Table No. VII (B) p. 81 above.

¹ Moreland, From Akbar to Aurangzeb, ed. 1923, p. 337.

² Ibid., pp. 337-8.

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*Brahmadeya-nivartana.*¹ According to my calculation the *brahmadeya-nivartana* (area of land granted to a Brahmaṇa) was almost equal to an English acre.

Another important measure used in the land grants is the hala (plough). According to Buchanan "The usual extent which can be cultivated by one plough is 10 large bighahs, or 15 Calcutta bighahs, or 5 acres".² In the same way, Sir W. Hunter writes, in regard to Orissa, that "the cattle are so poor that one pair of oxen cannot possibly work more than 6 acres ".3 We may therefore take 1 hala (plough) of land as somewhere between 5 and 6 acres. In olden times one 'plough' of land was thought sufficient to provide food and provisions for one kula (family). " Taking the cost of living of a family in this tract at Rs 95 also," writes Mr. C. J. Stevenson-Moore in respect of the Gayā district, "6 acres, apart from any supplementary sources of income, can support a family in complete comfort." 4 It is interesting to learn that even many centuries before Christ the agricultural conditions and the standard of living of the people of India were very similar to those of modern times. According to Baudhāyana's Dharma-sūtra a portion of land measuring 6 nivartanas, or approximately 6 acres, should be kept free from taxes on the ground that this much is necessary to support a family. Further light is thrown by Baudhāyana on the subject of the term nivartana.

¹ Api gocarma-mätreņa samyag dattena mānavah | Dhauta-pāpo visuddhātmā svarga-loke mahīyate. (*Dāna-mayūkha*, p. 160.)

Gavām šatam vrsaš caiko yatra tisthed ayantritah | Tad dhi gocarmamātram to prāhur vedavido janāh. (Ibid., p. 160.)

Yad utpannam athäśnäti narah samvatsaram dvijah | Eka-gocarmamätram to bhuvah proktam vicakṣaṇaih. (Ibid., p. 23.)

Daśa-hastena daņdena trimšad daņdā nivarttanam | Tribhāga-hīnam gocarma-mānam āha prajāpatih. (Ibid., p. 160.)

Daśa-hastena daņdena trimšad daņdā nivarttanam | Daśa tāny eva varttāni brāhmaņebhyo dadāti yah. (Ibid., p. 23.)

² Buchanan's Dinajpur (1832), p. 234.

⁸ Wm. Hunter's Orissa, vol. ii, Appendix ii, p. 47.

⁴ C. J. Stevenson-Moore's Report on the Material Condition of Small Agriculturists and Labourers in Gaya (1898), p. 20.



It appears probable the nivartana was used in the sense of vrtti, or 'allowance', or 'livelihood'; so an area of land sufficient to support one man from its produce was called nivartana.1 Taking 5 to 6 acres of land as sufficient for a kula (family), we can understand the meaning of another term kulya-vāpa used in the land grants. According to Mr. Pargiter "the kulya-vapa consisted of 8×9 reeds, the reed being about 16 cubits long and the cubit about 19 inches; that is, its area was a little larger than an acre: a kulya of seed could certainly provide for this area (and probably more), if it contained 8 dronas or bucketfuls."² To me the kulya-vāpa appears to have represented the same area as has been described as 'one plough' of land, i.e. an area of between 5 and 6 acres which was thought sufficient for one kula. Literally kulya means things useful for, or pertaining to, a family (kulāya hitam kulyam). As each family kept their seeds separately, it appears that gradually kulya began also to mean the seed sufficient for one 'plough' of land. According to Monier-Williams' and the St. Petersburg dictionaries it was equal to 8 dronas, or approximately 80 Akbarī sers, if we may take the droņa to be the smaller drong of Kautalya. As 1 acre of rice land requires 12 to 16 sers of paddy according to its productivity,3 the area of the kulya-vāpa would come to about 5 or 6 acres, or about one 'plough' of land. Another name for the same area of land appears to have been vātikā

¹ Teşâm tadvartanād vrttir ity ucyate. 2. Šālāśrayatvācehālinatvam. Vrttyā varayā yātīti yāyāvaratvam. Anukrama-caraņāc cakracaratvam. 3. Tā anuvyākhyāsyāmah. 4. Şaņņivartanī kauddālī dhruvā samprakşālinī samūhā pālinī silonchā kāpotā siddheccheti navaitāh. 5. Tāsām eva vānyāpi daśamī vrttir bhavati. Ānava-vrtteh. 6. Yatho etat şaņņivartanīti. 1. Şad eva nivartanāni nirupahatāni karoti svāmine bhāgam utsrjaty anujňātam vā grhņāti. . . . Etena vidhinā şaņņivartanāni karoti saņņivartanī. 2.

(Bodhāyana-dharma-sūtra (Mysore, 1907), pp. 298-309.)

² EI., vol. xv, No. 7, pp. 130-43; Ind. Ant., xxxix, p. 216 (July, 1910).

^a Handbook of Indian Agriculture, by N. G. Mukerji (3rd ed., 1915, Calcutta), pp. 171-2.

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or veli.¹ According to Maya it consisted of 5 vartanakas, each vartanaka (nivartana) being 128 dhanuh or dandas²; while the nivartana of Prajāpati and Brhaspati contained 130 dandas; the difference of 2 dandas is negligible, and was perhaps due to local conditions. According to the Dictionnaire Tamoul-Français the modern equivalent of the veli is 26,755 square metres, which comes to approximately 5 or 6 acres. The superficial measures discussed above may be exhibited as in the following table :—

TABLE NO. VIII

8 dhanuh 4×8 dhanuh $4 \times 4 \times 8 (= 128)$ $10 \times 3 (= 130)$ 1 kuri	 = 1 kākaņikā. = 1 māşa. = 1 vartana. = 1 nivartana. = 576 square feet. 	According to	Maya. Kautalya. the Dictionnaire Tamoul-Français.
100 kuri 5 kanis	= 1 kani. = 1 veli.	and the second	

III. COINAGE

The origin and evolution of the system of coinage prevailing in ancient India is equally involved in obscurity. From prehistoric times in India gold was used in gilding the wheels of chariots and the horns of cattle, and in making jewellery. The demand for it was universal, and it was much prized by everyone. Owing to this gold pieces weighing krsnala, satamāna, hiraņya, suvarņa, niska, etc., were given to the Brāhmaņas as gifts in different sacrifices and ceremonies. The passages in the Satapatha-brāhmaņa referring to these gifts are very interesting, and give a good idea of the popularity of the metal.³ There is no doubt that these pieces were made

¹ SII., vol. ii, No. 66, p. 259.

² Aşţa-dhanuś caturaśrā kākaņikā tac-catur-guņam māşam. Māşacatur vartanakam tat-pañca-guņam hi vāţikā kathitā. Mayamata. (EI., vol. xv, No. 5, p. 55.)

³ Tasya hiranyam daksinä.... (Kä., 5, 2, 3, 6, p. 279.) Tasmäd dhiranyam daksinä.... (Kä., 5, 2, 3, 6, p. 279.) Hiranyamayim srajam udgätre rukmam hotre.... (Kä., 5, 4, 5, 22,

p. 304.)

Tasya triņi šatamānāni hiraņyāni daksiņā. . . . (Kā., 5, 5, 5, 6, p. 311.) Hiraņyayam daksiņā suvarņam šatamānam. . . . (Kā., 4, 1, 8, 13, p. 653.) (Šatapatha-brāhmana, Ajmer, ed. Sam., 1959.)

of equal weight to avoid any injustice or inequality. It appears that some Brāhmaņas, getting into financial difficulties, sold these pieces to other people, and thus put them into circulation. Some of the aphorisms of Pāṇini show clearly that satamāna, hiranya, and niska were used in sale and purchase.¹

Coming to the period of Kautalya and Manu and the other law-givers, we do not find any change in the popularity of gold. Its use for coinage in India proper prior to the commencement of the Mauryan period appears to be doubtful; but the metal served as the basis of different transactions; the demand for it was constant and steady.

As to its value in terms of silver or copper we are entirely in the dark. Much confusion has been created by some writers mistaking for coins the weights which were used for weighing gold bullion. There were, no doubt, weights called *suvarna* and *nişka*; but that there were coins so named at this early period appears to be doubtful.

A careful study of the fines prescribed in the Artha-śāstra of Kauţalya may possibly afford a clue to the values of gold and silver. In assessing fines the value of any article stolen was taken into consideration. According to Kauţalya the fine should be twelve times the value of the stolen article. The following table of fines has been compiled from Kauţalya's Artha-śāstra²:—

	TABLE NO.	IX
Value of stolen articles.	Fines.	Proportion between the
Panas.	Panas,	figures in columns 1 and 2.
(1)	(2)	(3)
1	3	1:12
	6	1:12
ł	9	1:12
1	12 -	1:12
2	24	1:12
3-4	36	1:12
4-5	48	1.12

¹ D. R. Bhandarkar's Lectures on Ancient Indian Numismatics (1921), p. 45. ⁸ Māşa-mūlyād ürdhvam āpādamūlyād ity apaharatas tripaņo daņdah . . Ādvipāda-mūlyād iti sat paņah. . . Ātripāda-mūlyād iti nava paņah. . . Āpaņa-mūlyād iti dvādaša paņah. . . Ādvipaņa-mūlyād iti caturviņšati paņah. . . . Ācatuspaņa-mūlyād iti sattriņšat paņah. . . Āpañca-paņa-mūlyād ita asta-catvāriņšat paņah. . . . (Kau. Artha., p. 224.)

VEIGHTS, MEASURES, COINAGE, AND RATE OF INTERES'I



In the classification of different articles it appears that gold and silver were considered to belong to the same class. Kautalya, in Section 76, assessed the fines payable for the theft of 1 $m\bar{a}saka$ of gold and silver as 200 and 12 copper panas respectively.¹ If these fines represent twelve times the value of the stolen article, then the value of the gold and silver pieces, each weighing 3.6 gr. (= 1 $m\bar{a}saka$) comes to 16.6 and 1 copper pana respectively.

The rate of exchange between copper and silver and between silver and gold bullion varied from time to time. Coins of different metals were valued in the market according to their own metallic content. All daily transactions and government accounts were probably kept in terms of copper coins. When the laws of Manu were framed, the exchange ratio between silver and copper bullion appears to have been as 1:40 or 50. The rate of exchange between silver and copper panas was fixed as 1: 16 or 20.2 Having regard to the fact that the silver pana contained 57.6 gr. and the copper pana 144 gr., it will be seen that the ratio was practically the same as in the case of bullion. It would appear that, in the Gupta period at all events, gold and silver coins were legal tender. The exchange value of gold and silver coins in terms of the copper pana, however, varied from time to time. The temporary disappearance of gold or silver coins in a particular country may possibly be explained by the operation of Gresham's law.

There is no doubt that from prehistoric times in India silver *paṇas* were issued by authorized guilds of traders and bankers, and under the authority of a city or town (*nigama* or *pura-rājya*) or district (*janapada-rājya* or *gaṇa-rājya*); but not everybody was allowed to mint coins. In the time of Kautalya the finding of instruments for minting coin

Suvarņān māşakam apaharato dvişato daņdah. Rūpya-dharaņān māşakam apaharato dvādaša paņāh. Tenottaram vyākhyātam. (Kau. Artha., p. 202.)

² Dve krsnale samadhrte vijňeyo rūpya-mūsakah | Te sodaša syäd dharanam purānaš caiva rājatah. (Manusmrti, viii, 131-8.)

iff a man's possession was quite sufficient to cause him to be punished severely. The minting of coins was probably always a prerogative of the ruler. Kautalya advised the appointment of two officers, namely *lakşanādhyakşa* (supervisor of the mint) and $r \bar{u} p \bar{a} darśa$ (examiner of coin), as well as of spies to detect private and unauthorized coining. "When a person," writes Kautalya, "causes a counterfeit coin to be manufactured, or accepts it, or exchanges it, he shall be fined 1,000 *paņas*; he who passes a counterfeit coin into the treasury shall be put to death."¹ In another place he advises the banishment of such persons from the kingdom.

It appears from the Manu-smrti and other law-books that small pieces of gold, perhaps weighing one māsaka, or about 7.2 gr., were used in paying fines. There are also passages to prove that the gold māsaka was also used on other occasions.² After the conquest of Northern India by Indo-Scythian kings gold coin weighing from 126.25 to 121.26 gr., or on the average 124 gr., came into circulation under the name of dināra. Under the Imperial Guptas two kinds of gold coins were issued, one containing the weight of the Indo-Scythian dināra, and the other that of Manu.³ Side by side with these gold coins the gold māsaka was also current in the market. As the exchange ratio between gold and silver was 1:16, the gold dināra weighing 124 gr. would naturally be exchanged for thirty-five to thirty-six silver panas, each weighing 56 gr. as will also be clear from the table below.

¹ Laksanādhyakşah catur-bhāga-tāmram rūpya-rūpam tīkşna-trapusisāňjanānām anyatamam māşa-bija-yuktam kārayot . . . rūpa-darśakah pana-yātrām vyāvahārikīm kośa-praveśyām ca sthāpayet . . . (p. 84).

Rūpadarśakasya sthitām paņa-yātrām akopyām kopayatah kopyām akopayato dvādaša paņo daņdah. Tenottaram vyākhyātam. Kūtarūpam kārayatah pratigrhņato niryāpayato vā sahasram daņdah. Koše praksipato vadah (p. 203). (Kautalya's Artha-šāstra.)

² Dāna-mayūkha, pp. 151-2; see also Šatapatha-brāhmana, Smrticandrikā, Vira-mitrodaya, etc.

³ D. R. Bhandarkar's Lectures on Ancient Indian Numismatics (1921).

EIGHTS, MEASURES, COINAGE, AND RATE OF INTEREST



TABLE NO. X

 $1-l_4^1$ silver panas (each weighing 57.6 gr.) = 1 rati of gold (weighing 3.6 gr.) = 16-20 copper panas (each weighing 144 gr.), then

 $2-2\frac{1}{2}$ silver panas = 2 ratis of gold (= 1 gold māṣāka = 1 suvarņa māṣāka = 7.2 gr. gold = 1 dīnāra of the Brhaspati-smrti and the Nārada-smrti = 1 suvarņa) = 30-40 copper panas.

16-20 silver panas = 16 ratis of gold (= 1 kalañju = 1 Pagoda = 1 Niska of the Lilāvatī = 57.6 gr. of gold). 32-40 silver panas = 32 ratis of gold (= suvarna māsakas = 115.2 gr. gold = 1 dīnāra of Gupta period). 36silver panas = 32 ratis of gold (= 1 dīnāra of 124 gr. gold).

40-50 silver panas = 1 suvarna weighing a karsa or 144 gr.

Thus

30-40 (sometimes 30-48) copper panas = 1 suvarna dīnāra weighing 7.2 gr.

36 silver paņas = 1 suvarņa dīnāra weighing 124 gr.

It is interesting to note that the Nāsik inscription No. 12 mentions the rate of exchange between suvarna and kārṣāpana as 1: $35.^{1}$ By suvarna and kārṣāpana what particular coins are meant? Does suvarna mean a suvarna māṣaka weighing 7.2 gr., or a suvarna dīnāra weighing approximately 124 gr.? According to the Nārada-smīti the kārṣāpana current in Southern India was a silver pana²; if this be true, then the suvarna referred to in the above inscription would be an Indo-Scythian dīnāra; otherwise it would be a suvarna māṣaka weighing 7.2 gr., provided the kārṣāpana mentioned there be a copper pana.

Judging from the Nāsik inscription, the references in the lawbooks and the table given above it appears that the rate of exchange between gold and silver coin was maintained within two limits, namely 1 : 30 and 1 : 48. A careful study of the weights and measures of ancient India discloses one thing very clearly, namely that the people of those days adhered strictly to the same ratio-scale. They regarded it perhaps as sacred. We find the same thing in the case of the currency. The ancient Indian law-books compiled at different dates agree

¹ Bhūyo'nena dattam varse 41 kārttika suddhe pañcadase pūrvakam, varse 45 pañcadase niyuktam bhagavadbhyo devebhyo brähmanebhyas ca: kārsāpana-sahasrāni saptati 70,000 pañca-trimsakam suvarņam krtvā suvarņasahasrayoh mūlyam. . . (Bombay Gazetteer, vol. xvi, p. 574.)

² Kārşāpaņo daksiņasyām diśi raupyah pravartate. 57. (Nāradasmŗti, p. 229.)

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in regard to the ratio-scale: all say that from 16 to 20 copper panas are equal to 1 silver pana, and that 16 silver panas can be exchanged for a gold niska. The rate of exchange between the copper pana and gold māsaka is given as 48: 1.1 There cannot be any doubt that the fluctuation in the relative values of gold, silver, and copper was as great in those days as in modern times.² Why do we not find any record of these fluctuations ? Why are all the law-books entirely silent about this ? Changes in the rate of exchange would affect the value of fines. But we do not find any reference to such fluctuation in any of the law-books. Probably such fluctuation was met by altering the weight of pure metal in the coins. If this conjecture could be accepted things would become clearer. It would have been possible to estimate approximately the fluctuations in the relative values of the metals, if the pure metal contents had been recorded in the coin catalogues.

It has already been stated that according to the Nāsik cave inscription No. 12 the rate of exchange between gold and silver coin was 1:35. Down to the eleventh century A.D. and later in the district of Tanjore the gold coin called *kalañju* was exchanged for 3 *kāšus* or for 36 *akkas*. There is no doubt that *akka* is a Prākrta form of the Samskrta word *akṣa*, which means a thing weighing a *karṣa*. Since silver coins were not popular or frequently used, it will not be safe to take the *kalañju* as a silver *paṇa*. Assuming it to be a gold *fanam* (= gold *paṇa*) no difficulty arises. The word *kalañju* was used according to the *Bālambhatṭīya* with two meanings, viz.

¹ Kārşāpaņo'ņdikā geyā tāś catasras tu dhānakāh, Tad dvādaśa suvarņas tu dīnārākhyah sa eva tu. 60.

(Ibid., p. 229.)

Tämra-karşa-krtā mudrā vijneyah kārşikah paņah.

Sā eva cāndrikā proktā tāś catasras tu dhānakāķ.

Tā dvādaša suvarņas tu dīnārākhyah sa eva tu. (Brhaspati.)

(Parāśara-dharma-samhitā, Kāņda iii, Bhāga i, p. 158.)

² On the fluctuation in the rate of exchange between gold and silver see Cathay and the Way Thither, vol. iv, p. 54 f. (Hakluyt Society, second series, No. xli, 1916, ed. by Yule and Cordier.) WEIGHTS, MEASURES, COINAGE, AND RATE OF INTEREST

māsaka weighing 2 ratis.¹

If the kalañju of Southern India followed the same weight scale as was prescribed by the law-books then it probably weighed 72 gr., or half a karsa ($= k\bar{a}su = dharana$). For the purpose of calculation I would rather take it as weighing 57.6 gr., and in value and metal content exactly the same as the niska of Bhāskara, which was equal in value to 16 drammas (= purāna = silver paņa) and 256 copper paņas. The reason for this appears from the conclusions drawn by Sir Walter Elliot, who, after examining the weights of ancient Southern Indian gold coins, remarked that "They weigh about 52 gr.; evidently derived from the kalañju, their original name being pon, which simply means gold in Tamil, becoming hon in Canarese, and the origin of the Mahommedan hun. They appear to have been in use for a great length of time, and probably constituted a considerable portion of the vast treasures transported to Delhi by the armies of Ala-ud-din and his successor in the fourteenth century ".2

Taking the *kalañju* as weighing 57.6 gr. and as being much the same as the *nişka* of Bhāskara, we get its equivalent in ancient Hindu copper *paṇas* and in the *dāms* of Akbar as follows :—

TABLE NO. XI

3 dams = 1 akka = 1 gold fanam.

7 copper panas = $3 d\bar{a}ms = 1 akka = 1 gold fanam.$

12 akkas = 36 dāms = 1 kāšu = 1 Akbarī Re. = 84 copper panas. 3 kāšu = 1 kalaňju or niska = 36 akkas = 108 dāms = 3 Akbarī Rs. = 1 hūn or pagoda.

From the above table it is clear that the *kalañju* was equal to three Akbarī rupees. Mr. Moreland has given a very

¹ Pañca-guñjo bhaven mäsah paņastaiś ca caturgunaih, Kalajo dharanam prähur mitimäna-viśāradāh. (Vişnugupta) Majjāţikā kalañja-viśeşas taulyam guňjā-dvayam viduh. (Bālambhatţīya, a commentary on the Yājňavalkya-smŗti, Āryabhūsana Press, Poona, 1914, p. 623.)

² Coins of Southern India, by Sir Walter Elliot, p. 52, note 1 (The International Numismata Orientalia). Trübner and Co., London, 1885. See also ibid., pp. 45-53.

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detailed account of the pagoda ($= kala \tilde{n} j u$ or niska of Bhāskara). He writes :—

"Gold coins, known to Indians as *hun*, but spoken of by Europeans as pagodas, were the usual currency of the kingdoms of Golconda and Bijapur, as well as of the Hindu territories further south. Two kinds were in circulation during our period, known respectively as 'new' and 'old' \ldots In the year 1621 the new pagoda was worth about $1\frac{1}{2}$ Spanish rials, or very nearly 3 rupees. \ldots Later the new pagoda was taken regularly at 8s., and the change appears to justify the inference that gold was rising relatively to silver; seeing that in 1651 the Company fixed the rupee at 2s. 3d. and the new pagoda at 8s., we may take the latter coin as worth about $3\frac{1}{2}$ rupees in the last decade of our period as against 3 rupees in the earlier years." (Moreland's *From Akbar to Aurangzeb*, pp. 331-2.)

Coming down to the sixteenth century A.D. we do not find any marked change as far as the copper pana was concerned. According to the Manu-smyti and other law-books this weighed eighty ratis, or 144 gr. The weight of the Akbari dam was 180 ratis, or 324 gr. In Surat the ancient copper pana was accepted by the Muhammadan rulers as legal tender ; they continued to mint it, and probably made it current under the name of paisā. It has already been conjectured that the fluctuation in the relative values of the metals affected the weight or the pure metal content of coins : the numerical ratio between the several descriptions of coin was kept intact. If this be the correct view of the matter, then it may be said that the dam and paisa appear to be the same as the dvipana and pana of the Hindu period. At the time of the consolidation of the British power in India in 1833 probably the rate of exchange was such as to enable the rupee to be fixed as equivalent to 32 dams (dvipana) or 64 paisa (pana). By selecting and promulgating the modern scale of currency the British Government in reality restored the ancient Indian pana under the name of paisā, and the dvipana or dām, under the name of "double paisā" (takā). The ancient WEIGHTS, MEASURES, COINAGE, AND RATE OF INTEREST

silver $k\bar{a}rs\bar{a}pana$ is represented by the modern cavannī (four anā piece), which bears the old prehistoric ratio to the pana (the modern paisā), namely, as one to sixteen.

IV. THE NORMAL RATE OF INTEREST

According to the *Smrti* of Yājñavalkya the normal rate of interest should be 15 per cent per annum, or one-eightieth part of the actual capital per mensem.¹ Kauṭalya's *Arthaśāstra* and the other law-books give the same rate.² A careful study of the inscriptions shows that the rate of interest varied from time to time. It ranged between 9 and 25 per cent per annum. From the tenth to the eleventh century A.D. the normal rate of interest in Tanjore appears to have been $12\frac{1}{2}$ per cent, as is clear from the following table :—

	Rate of int	erest	per ani	um					
Capital		in	kind	per	Purpose	of	Re	ferei	nce
in käśu.	in kāśu.	(p	addy).	cent.	expenditu	re.	1	SII	.).
200		50	kalam	$12\frac{1}{2}$	for temple ex	penses	vol. ii 76	i, pr (par	p. 75- ct i)
1		3	karüni	i ,,	>>	,,		22	
100		25	kalam	,,	,,			,,	
500		125	,,		,,	>>	- 1		
200		50	,,	27				,,	
520		130	37	22	"	33		,,	
190	241			,,,	"	32		39	
1	(1/8 akka)				"	,,		22	
112	14			.,,	>>	,,		,,	
100	121			22	>>	,,			
1		(3)	sheep)	22	.,	22			
32		(96	sheep)	"	(1 urakku of	ghee		57	
600		150	kalam		per day)		Thid	p.	95
800	100	100	THE TOP THE	33	"	33		P.	97
104	13			33	,,		.,		98
800	100			22	33	23	27		99
1000	195			33	22	\$2	22		100
500	691			"	23	"	52		101
300	271			27	**	23	"		102
800	100			22	**	22	,,		103
500	621			72	"	"	15	16	104
500	022			33	"		.,	1	105
50	22			2.0	>>	22	7		122
		1	-	22	22	75	39		ind i

TABLE NO. XII

See also : Vol. ii, part ii, p. 126 ; vol. iii, part i, p. 113 ; Vol. ii, part i, pp. 133-4, 148-9.

¹ Aéiti-bhāgo vrddhih syān māsi māsi sabandhake. (Yājňavalkyasmrti, ili, 36.)

² Sapāda-paņā dharmyā māsa-vrddhih paņa-šatasya. (Kau. Artha., p. 174.)

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According to one of the inscriptions at the Pandu-lena caves of Nāsik (No. 12) the rate of interest was from 9 to 12 per cent, if the interpretation of the expressions padikaśata and pādona-padika-śata may be taken to mean one and three-quarter padika, or silver pana, a month per hundred. The padika of this inscription seems to have meant a quarter of a pana. Interpreting the expression quoted above as meaning that 100 and 75 padikas, or say 400 and 300 copper panas, was the annual interest on 2,000 and 1,000 copper panas respectively, the rate of interest amounts 20 to 30 per cent.¹ According to the to from five Bāņa inscriptions from Gudimallam (EI., vol. xi, No. 22, p. 222) the current rate of interest was 25 per cent per annum. Taking all this evidence into consideration it appears to me that the normal rate of interest was 15 per cent per annum, as stated in the law-books, and this rate may be taken for the sake of calculation in those places where the annual rate of interest is not specified.

¹ Dattā cānenākşayanīvih kārşāpaņa-sahasrāņi trīņi 3000 samghāya cāturdiśāya . . . kaulika-nikāye 2000, vrddhih pratikaśatam (padikaśata) ; apara-kaulika-nikāye 1000, vrddhih pādona-pratikaśatam (padikaśata) . . . (Bomb. Gaz., vol. xvi, p. 574.)





CHAPTER IV

PRICES

I. PRICES OF ARTICLES OF DAILY CONSUMPTION AND USE

II. MISCELLANEOUS PRICES

CHAPTER IV

PRICES

I. PRICES OF ARTICLES OF DAILY CONSUMPTION AND USE

I T is not an easy task to get an idea of the prices of different things during the early Hindu period. Owing perhaps to the difficulty of the subject no writer seems to have taken it up hitherto. The wealth and welfare of the people cannot be discussed unless we know their daily earnings in money and its purchasing power: so a knowledge of prices and wages is essential for the purpose of a study of the economic conditions in ancient India.

As far as prices are concerned, the Southern Indian inscriptions are very important. They contain valuable material. In them the market prices are generally quoted in paddy. The difficulties connected with the weights and coins have already been removed in the section dealing with the weights and currency. To ascertain the prices current in the tenth or eleventh century A.D. in India, it is necessary to know the exchange value of other things in paddy. The comparative values may be seen from the following tables :---

TABLE NO. XIII

ARTICLES OF DAILY CONSUMPTION AND THEIR EXCHANGE VALUE AT THE BEGINNING OF THE ELEVENTH CENTURY A.D.

Commo	lities.		Quantity.	4	Quantity in palas.		Prices in kind F or cash. in (of j	rices palas paddy).	Authori- ties.
Cardamur	n seed	ls	1 kar. and 4 nā.	-	384		1 kāśu =	3072	ST
Champaka	a bud	8.	1 padakku		512	-	l kāśu ==	3072	vol. ii.
Khaskhas	roots		605 palas	-	605		l kāśu ==	3072	parts
Dāla (?)			1 nā. 3 ura, and	-	60	-	5 nā. 1 ūri. ==	180	1-3
			l ärakku				and l arak	100	10,
							of paddy		n 18
Pepper			1 āra. 14 sev.	-	6	-	5 nā, 1 ura, of=	168	P. 10
							paddy	200	33
Spices	a start	-	lära, l śev.	-	5	-	2 na lura of -	88	
							naddy	00	2,
Cummin			# 3/20 3/80 sev.	-	4	-	1 na. of nad. =	1 32	
Sugar		1	31 palas	-	31	-	a mai or para.	88	20
Ghī.			1 ura, 1 ára, 34	-	15	-	I karū. 7 nā. ==	480	>*
			śev.				of paddy	100	22
Tamarind		1	8 palas	-	8		I na of pad ==	32	
Curds			3 närī		96	-	1 kar. 1 nä. of ==	288	
							paddy	200	29
Gram			3 śev.		29	-	1 ura, of pad. ==	8	
							Land Land	1	

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TAN . MIT BUR			Qu	antity	Prices in kind	Prices	Authori-
Commo	odities.	Quantity.	in	n palas.	or cash.	in palas	ties.
					(of paddy)	
Plantains		18 numbers			= 5 nārī of pad	. = 160	p. 18.
Bark		1 kāśu in weight	=	1	= 1 nārī of pad.	= 32	1
Pulse		l nārī	===	32	= 3 nārī of pad	. = 96	3
Husked 1	rice	4 nārī		128	= 1 karū. 2 nā	. = 320) SI
					of paddy		vol. ii.
					1 .		part 1.
Ghī.		1 ārakku	=	4	= 4 nā. of pad.	= 128	p. 75.
Ghī.		21 śev.	==	2	= 2 nā. of pad.	64	1
Pulse		1 ūrī.	===	16	= 1 nã. 1 ūrī o	f = 48	
					pad.		1
Sugar		1 pala.		븡	= 1 nä. 1 ūrī o	f = 48	3
				-	pad.		,,
Curds		l nārī		32	= 3 nārī of pad	. = 96	3

Note. kar.=karūnī. nā. = nārī. pad. = paddy. ura.=urakku. āra. = ārakku. šev. = ševidu. pal. = pala.

When we know the different prices in term of paddy, the prices of other articles may be calculated in the following way :

TABLE NO. XIV

TABULATED STATEMENT OF PRICES FROM THE TIME OF KAUTALYA UP TO THE SIXTEENTH CENTURY A.D.

(1)		(2)		(3)	(4	E)			(5)			()	3)	(7)	(8)
ALL ROUGH		499			Ba	rte	r								Prices	Prices
					re	ite									per	per
					bet	0000	n					-	a series	1	maund	maund
				0	ind	oth	er	Pr	ices	me	y.	P	mar	s per	time of	in 9th
			I	Palas	pro	du	e	ma	und	lin	i		in	2 .	Kautalya	A.D.
a				of	in.	1111	2	11th	cen	tur	-y	1	the t	ime	[cal-	[cal-
Commoditi	es	Pala	s pa	iddy	cent	ur	V	4	1.D	•		0	of Al	bar	culated]	culated
							570		a.s.		28.				Conner	
							- 50	4.7	6 ke		an				Panas	
							K		R		A	R	Da	ms		Akkas
Paddy		3072		3072	1	:1	1/6	-	2	-	6				2 .	1
Cardamun	a															
seeds		384	-	3072	1	: 8	4/3	-	16	-	48	78	-	3120	16	8
Champaka	L															
buds		512	-	3072	1	: 6	1	=	12		36				12	6
Khaskhas																Photos .
roots		605		3072	1	: 5	5/6	3 ===	10		30				10	5
Dala (?)		60	-	180	1	: 3		1 ==	6		18			27	6	3
Pepper		6		168	1	: 2	8 4	2 =	56		168	251	-	1020	56	28
Spices		5	-	68	1	: 1	4 2	1 =	28	-	84	-			28	14
Cummin	14		-	32	1	: 4	27		84	-	252	3	-	120	84	42
Tamarind	а.	8	-	32	1	: 4		-	8	-	24				8	4
Curds		96		288	1		3	-	6	-	18			27	6	3
Gram		3	-	8(9)	1		3	1 ==	6	-	18			24	6	3
Pulse	5	32	-	96	1	: .	3	i nes	6	-	18			27	6	3
Salt .		12	-	12	1	:	1	1	2	-	6			24	2	1
Ghĩ .		16	-	480	1	: 3	0 5		60	-	180	4	-	158	60	30
Husked ri	ice	2	200	5	1	: 2	1 4		5	-	60	2		30) 5	5
Sugar	1.1	31	-	88	1	: 2	4 4	-	48	-	144	41	-	189	48	24
Oil .	1	-			4.8							2		1995	41	
Note.	The	rate o	of e	xcha	nge	an	ione	the	se	coi	ns is	s she	own	belo	W :	
					200		-									

3 dāms = 1 akka = 1 gold fanam = 7 copper paņas.

36 dāms = 12 akkas = I kāśu = 1 Akbarī Re. = 84 copper paņas.

36 akkas = 1 kalañju or the niska of Bhāskara = 3 Akbarī Rs.

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From the above table it will be clear that the price of ghī was 60 akkas per maund. According to the five Bāna inscriptions from Gudimallam the current rate of interest in A.D. 888 was 20 per cent per annum. The inscription No. D. records a grant of 30 kalañju of gold given by the Bana queen Madevi adigal, from the interest of which was to be met the expenditure on account of twilight offerings and lamps at the Paraśurāmeśvara temple at Tiruvippirāmabedu. Inscription E registers the grant of 20 kalanju of gold; out of the interest, amounting to 4 kalañju, 180 nālī of ghi (clarified butter) was to be purchased at the rate of 45 nālī for each kalañju. The lamp required 1 ūrī of ghī per day. According to the table of weights No. E, an uri and $n\bar{a}l\bar{i}$ are equal to $1\frac{8}{21}$ and $2\frac{16}{21}$ lb. respectively. Multiplying 1 nālī or say $2\frac{16}{31}$ lb. by 45, the price of $gh\bar{i}$ comes to 36 akkas for 124 lb. or say 24 akkas per maund. It is clear from this that the price of *qhī* rose from the ninth century A.D. to the eleventh century A.D. from 24 akkas to 60 akkas per maund, or 21 times.

A careful study of other inscriptions also shows that the normal gold price of $gh\bar{\imath}$ rose gradually during the long period concerned. Usually for one lamp, which required 1 urakku of $gh\bar{\imath}$ per day, the capital sum allowed was approximately 10 kalañju. On various occasions, instead of paying 10 kalañju in cash, ninety-six ewes, or forty-eight cows, or sixteen female buffaloes were given on condition that the keeper of these animals would provide 1 urakku of $gh\bar{\imath}$ per day for an unlimited time. The information contained in the grants mentioning $gh\bar{\imath}$ and oil lamps may be tabulated as below (see p. 100).

From the table it seems that about the end of the tenth century A.D. the quantity of $gh\bar{i}$ was reduced from 1 $\bar{u}r\bar{i}$ to 1 urakku and 1 $\bar{a}rakku$ per day, while the same capital sum of 20 $kala\tilde{n}ju$ was still granted. This reduction in quantity appears to me to be due to the reduction in the rate of interest, which came down from 20 per cent to 12¹/₂ per cent, and also due to some extent to the rise in outure · Covergenters



In land.	Amount granted In money.	In kind.	Quantity of oil.	Quantity of ghī.	Number of lamps.	Conditions.	Sources.
100 C	(32 käśn)	= 96 sheep		1 ulakku	1	perpetual lamp	
1000 kulis	15 kalanin of	gold	-	-	1	,, ,,	
-	4 <u>1</u> ,,		-	1 -	1	morning and evening only	
-	20 "	"	-	1 ulakku and 1 älakku	1	perpetual lamp	
(3 veli and	20			(1 ūrī and			
1120 kulis	20 ,	" —	-	1 4 camphor	2	perpetual lamps	
	30 kāśu -	= 90 ewes	-		1	,, ,,	
1700 kulis				-	1	,, ,, SII.,	, vol. ii, pt. iii,
		96 ewes or	-	1 ulakku	1	,, ,,	pp. 250–1.
		48 cows or	-				
		16 she-buffaloes		-	_		
	3 kāśu	= 96 ewes		1325	1	"""	" p. 252

TABLE NO. XV

See also SII., vol. ii, pt. iv, pp. 446-58, 477-97.



The prices of $gh\bar{\imath}$. Another interesting thing is that the amount granted for $gh\bar{\imath}$ lamps or oil lamps is not very different; in some cases the amount granted for oil lamps is more than that given for a $gh\bar{\imath}$ lamp. For instance, inscription No. 44 of Mahāvalī Vānarāja registers 25 kalañju of gold for an oil lamp which required 1 urakku and 1 ārakku of oil per day.¹ For the same amount of $gh\bar{\imath}$, the amount granted was 20 kalañju of gold.² Does this mean that oil was dearer than $gh\bar{\imath}$ in Tanjore ? It seems that the prices of oil and $gh\bar{\imath}$ were not very different, as in another inscription the sum granted for the same amount of oil is 20 kalañju of gold.³

According to the Indor inscription of the Bulandshahr district, a guild of Indrapura-vāsin oil makers gave 2 palas of oil per day for keeping a lamp burning in the temple of the Sungod.⁴ It appears probable that the lamp had only to be lighted at twilight. According to the Dāna-mayūkha the lamp should be lighted at night in the hollows of trees, in temples, and on roads, and at places most frequented by men. For this purpose 800 palas or 1 tulā of oil should be granted every year.⁵ The Sāñchī inscription of Dīvānaganj records the grant of one dīnāra for a perpetual oil lamp of such kind.⁶ Other inscriptions of the same period register similar amounts.

If the $d\bar{i}n\bar{a}ra$ be accepted as equal to 16 silver panas and the rate of interest as $12\frac{1}{2}$ per cent the price of 800 palas comes to 32 copper panas. According to the table of weights (No. V, Col. E) given in Chapter III (vide page 77) 800 palas

¹ S11., vol. ii i, pt. i, No. 44, p. 96.

² Ibid., No. 46, p. 98; No. 48, p. 101.

³ Ibid., No. 45, p. 97.

⁴ Corpus Inscriptionum Indicarum, vol. iii, by J. F. Fleet, pp. 70-1.

⁵ Devasya dakşine pärśve deyä taila-tulä nrpa | Phalāstakayutā rājan vartii tatraiva dāpayet. Vāsasā tu samagreņa sopavāso jitendriyab | Mahāvartti-dvayam idam sakrd datvā mahīpate. Giriśringesu dātavyam nadīnām pulineşu ca | Catuspatheşu rathyāsu brāhmaņānām ca veémasu. Vrkşamūleşu goştheşu kāntāra-gahaneşu ca | Dīpadānena sarvatra mahat phalam upāšnute. (Dāna-magūkha, p. 250.)

⁶ Corpus Inscriptionum Indicarum, vol. iii, by J. F. Fleet, p. 261.



would equal about 64 lb. Thus the price of a maund of oil would come to 41 copper *paṇas*, or say approximately 6 *akkas* per maund, if we divide 41 by 7. As the price of $gh\bar{\imath}$ in the eleventh century A.D. was approximately 60 *akkas* per maund, the rise of prices from the fifth century A.D. down to the eleventh century comes to approximately ten times. (On taking the $d\bar{\imath}n\bar{a}ra$ as equal to 32 silver *paṇas*, the rise of prices comes to only five times.)

As far as the rise of prices in the value of food-stuffs is concerned, we can get some idea from the inscriptions recording the amounts given for the feeding of Brahmanas. For instance the inscription No. 1 of Rajakesari, dated A.D. 1000, registers 200 kalañju of gold for the feeding of twelve Brāhmaņas, or say 163 kalañju of gold for each Brāhmana.¹ The amount recorded in the Sāñchī inscription of the Gupta period is 25 dināras for and oil for providing food for ten bhiksus two perpetual lamps.² At that time 1 dināra was thought sufficient for one perpetual lamp. We may therefore deduct 2 dināras from 25, and the balance, viz. 23 dināras, will represent the amount required to provide food for ten Brähmanas, or say $2\frac{3}{10}$ dināras per head. If we divide $16\frac{2}{3}$ by $2\frac{3}{10}$, we get the purchasing power of a dināra as equal to that of 71 kalañjus, or in other words we find that the prices of food-stuffs rose seven and a quarter times from the fifth century A.D. to the eleventh century A.D.

(The rise of prices comes to about four times if the $d\bar{i}n\bar{a}ra$ be taken to be equal to 32 silver panas.)

An important passage of Manu appears to corroborate this view. He imposes the penalty of death in case of theft of valuables worth more than 100 copper *panas*, or of grain weighing more than 10 *kumbhas*.³ This would seem to indicate

³ Dhänyam daśabhyah kumbhebhyo haratopyadhikam vadah | Śeşe 'py ekädaśagunam dāpyas tasya ca taddhanam. Suvarna-rajatādīnām uttamānām ca vāsasām | Ratnānām caiva sarveşām śatād apy adhikam vadhah. (Manu-smrti, viii, 320-1.)

¹ SII., vol. iii, pt. i, No. 1, p. 3.

² Corpus Inscriptionum Indicarum, vol. iii, by J. F. Fleet, pp. 31-2.

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that the value of 10 kumbhas of grain was about 100 copper panas. According to Table V above (Chapter III) 1 kumbha was equivalent to 410 lb.; so 10 kumbhas would be 4,100 lb., or 50 modern standard maunds (taking the maund at 82 lb.). If then 50 maunds of grain were worth 100 copper panas, 1 maund would be worth 2 copper panas, which is exactly seven times the price of paddy as found from the Tanjore inscriptions (Table XIV, Chapter IV).¹

The rise in the value of cows, oxen and other animals can be judged from the figures of ransom values given in the lawbooks. The principle followed in fixing the amount of ransom was to take from one-fifth to one-sixth of the actual value of the lost article as the king's due. For instance, Manu writes that the ruler, when the lost article is found, shall take one-sixth part of the value as his due from the owner.² According to Kautalya "He who proves his title to a lost or stolen biped shall pay 5 *paṇas* towards ransom (before taking possession of it). Likewise the ransom for a singlehoofed animal shall be 4 *paṇas*; for a cow or a buffalo 2 *paṇas*; for minor quadrupeds, one-fourth of a *paṇa*" (Kau. Arth., English translation, p. 233).³ Yājñavalkya, has also repeated the same amounts of ransom.⁴ If we

¹ It has already been stated that by accepting the din dra as equal to 32 silver panas the increase in prices amounts to from 400 to 500 p.c. Whether the dināra was equal to 16 or 32 silver panas depends largely upon the date assigned to the Manu-smyti and the Artha-sāstra of Kautalya. Dr. F. W. Thomas assigns the date of the Artha-sāstra of Kautalya as prior to the Christian era, while Professor Jolly holds the opinion that it was compiled much more recently. The general view appears to be that it was compiled during the Gupta Period, in which case the dināra would be equal to 16 silver panas. In the present work the writer has found it desirable to adopt the general view that the Artha-sāstra of Kautalya was compiled during the Gupta Period.

² Ādadītātha sadbhāgam praņastādhigatān nrpah. (Ibid., vili, 33.)

³ Svakaranena pañcapanikam dvipadarūpasya niskrayam dadyāt.

Catuspaņikam eka-khurasya, dvipaņikam go-mahisasya, pādikam ksudra-pašūnām; ratna-sāra-phalgu-kupyānām paňcakam šatam dadyāt. (Kau. Artha., p. 190.)

⁴ Paŋān ekaśaphe dadyāc caturah pañcamānuse. Mahisostragavām dvau dvau pādam pādam ajāvike. (Yājňavalkya-smrti, p. 224.)



multiply the amounts of the fines by six, the price of a singlehoofed animal comes on the average to 24 panas; that of a cow or buffalo to 12 panas; and that of a minor quadruped to 11 panas. In the Mulyādhyāya-parišista of Kātyāyana the price of a cow is given as 10 copper panas.¹ According to the fines, the average price of a cow was 12 panas. In some books dealing with charity it is stated that a poor Brāhmaņa who is unable to give a cow can give 1 purāna, or 16 copper panas, being the value thereof.² In the one case we see the price of a cow to have been 10 panas, and in other case 16 panas. The mean between these figures is 13 panas, or nearly the same amount as we deduced above from the ransom price given in the law-books. The price of a white ox appears to have been the same. According to the Vasistha-dharmasūtra, the penalty levied for unnatural intercourse with an animal was a white ox.³ Kautalya gives the penalty for the same offence as 12 panas.⁴ He repeats the passage of the Vasistha-dharma-sūtra almost word for word. Thus it is clear that the price of a cow in the early Hindu period was from 8 to 12 copper panas. According to the Tanjore inscriptions the price of ninety-six ewes, or forty-eight cows, or sixteen female buffaloes was 32 kāśu or 384 akkas.5 On dividing 384 by 48 the price of an ordinary cow comes to 8 akkas or 56 copper panas. If we divide again 56 by 8 and 12, we get the rise of prices as 7 and 43 times or on the average 6 times $\frac{(7+2)}{2}$

$$\frac{4\frac{3}{3}}{-}=\frac{35}{6}$$
).

As to the price of land, no definite figure can be proposed. There were two persons very greatly interested in the land, viz. the king and the sāmanta (noble). Granting land to a

² Dhenor abhāve dātavyam tulyam mūlyam na samsayah. . . . Kārsāpaņaikamūlyā hi daridrāņām prakīrtitā. . . . (Dāna-mayūkha).

⁴ Maithune dvädaśa paņah tiryagyonisv anātmanah. (Kau. Artha., p. 236.)

⁵ SII., vol. ii, No. 94, pp. 436-57; ibid., Nos. 63, 95.

¹ Daśa-kārşāpaņo dhenor aśve pañcadaśaiva tu. (Mūlyādhyāyaparisisla, MS.)

³ Tiryagyonivyaväye śuklam rşabham dadyāt. (Vasistha-dharmasūtra, p. 67.)

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Brahmana was quite a different thing from the sale and purchase of land. At the time of the sale or the purchase of land, if the presence of important witnesses was required, this was only in order to settle disputes regarding the boundaries of a farm or an estate. There is no doubt that preference was given to a near relative or a neighbour as a purchaser. As the alienation of land affected the share of the king, naturally his permission was necessary. It has already been made clear that the relations between the ruler and the estate-owners were governed by agreements (samdhis). The owner of an estate was regarded as a vassal of the king. There is no doubt that before the Muhammadan conquest of India, owing to the degeneration of the old noble families, a good number of trading class people became owners of estates and enjoyed a good position in society. Titles were conferred upon them. They were allowed to use certain things and to wear certain ornaments as privileges. Taking all these distinctions into consideration, it seems but natural that a king should take a personal interest in the alienation of landed property. The presence of important witnesses and the necessity of obtaining the king's sanction have been interpreted by Mr. Pargiter in a different way. He seems to assign too great importance to the village community when he writes that " The alienation of land was an act which took place before the leading men of the village. In fact, the alienation of land and the introduction of a new owner were evidently matters which concerned the whole village, and to which the consent of the village through its leading men was indispensable from beginning to end, although the land might belong to a private owner."¹ To my mind the presence of these witnesses was to avoid subsequent disputes, and, if such should arise, to enable them to be speedily and justly settled. Further, the permission of the king and the payment made to him, required in the case of grants of land to Brähmanas, also rested on different grounds. Take, for instance, the five

¹ Indian Antiquary, July, 1910, p 214.

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Dāmodara copper-plate inscriptions of the Gupta period. It appears that for a kulya-vāpa of land the king demanded from 2 to 3 dināras, according to the quality of land. This payment has been interpreted by Mr. Pargiter as representing the price of the land. He writes that " An interesting fact mentioned in all three plates is that there was an established rule (maryādā) fixing the price at which cultivated land was sold in this region . . . That rule was that the kulyavāpa was priced at four dīnāras." 1 It has already been made clear that originally the land belonged to the estate-owners, though the ruler was entitled to take his share, which was from one-fourth to one-sixth of the net income. If a man wanted to make a grant of land to a Brahmana rent and tax free, naturally the ruler's permission was required. It seems to me that the payment made to the ruler on such occasions represented compensation for the loss involved of his share. The real question is on what principles was the amount of compensation determined ? I think the amount demanded by the king would be at least such a sum that the interest thereon would cover the amount of taxes, rents, and dues hitherto payable to him. Taking the rate of interest as 15 per cent, his share per acre would come approximately to onefourteenth dināra. According to the Upadeśa-tarangini of Ratnamandira Ganin the taxes per grama were 1 gold gadyāņaka (perhaps equal to 2 dīnāras).2 If a grāma, or estate, contained on the average 80 acres of land, whereof 20 acres were under cultivation, and we divide 2 dināras by 20, the taxes per acre of cultivated land would amount to one-tenth dināra.

Other inscriptions would seem to corroborate my view. According to the Tarpandighi grant of Laksmanasena the annual income of an area of land which required 125 ādhakas

¹ Indian Antiquary, July, 1910, p. 214.

² Rājňā svadeśa-pratigrāma-svarņa-gadyāņaka-dānam dattam.

Tatas tasyāh prativarsam 18 laksa 92 sahasra-grāma-gadyāņakaih 946 maņa pramāņam svarņam militisma. . . Šrī Kumārapālanīpeņa 18 deša-rājyam prāptam. (*Upadeša-tarangiņī*, p. 258.)
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of seeds was 150 kapardaka-purānas.¹ Now, we already know that 1 kulya-vāpa of land required 32 ādkakas of seed; so that 125 ādhakas would suffice for about 4 kulya-vāpas. As 1 kulya-vāpa was approximately from 5 to 6 acres, 4 kulya-vāpas would represent at least 20 acres. If we divide 150 kapardaka-purānas by 20, we find the annual income per acre to have been about 8 kapardaka-purānas, or half a dīnāra (as we have already stated that 1 dīnāra may be taken as equal to 16 silver panas). The interest, at 15 per cent, on half a dīnāra would approximately be one-fourteenth dīnāra.

If we take $p\bar{a}_{t}aka$ for the $v\bar{a}_{t}aka$ or $v\bar{a}_{t}ika$ of Maya (as pa and va are often interchangeable), the annual income of 4 $p\bar{a}_{t}akas$ of land in the Pundravardhana-bhukti was 200 $kapardaka-pur\bar{a}_{n}as$ according to inscription No. 15 of E1., vol. xv. As 4 $p\bar{a}_{t}akas$ were equal to 20 acres, the annual income per acre comes to 10 $pur\bar{a}_{n}as$, or approximately half a suvarna or half a $d\bar{i}n\bar{a}ra$, if the exchange ratio between gold and silver at that period were as one to twenty.

In the above paragraphs, I have sought to interpret such inscriptions and references as I have been able to find relating to the value of land. From these it would appear that the dues per acre payable to the ruler amounted to about from one-tenth to one-fourteenth of a $d\bar{i}n\bar{a}ra$, and the income per acre to the estate-owner was about half a $d\bar{i}n\bar{a}ra$.

II. MISCELLANEOUS PRICES

A careful study of the Samskrta and Pāli literature discloses considerable material towards ascertaining the prices of different commodities in ancient India. Caution must, however, be exercised before accepting such figures as altogether reliable. The prices in the Southern Indian inscriptions, which are of special importance in this connection, have already been dealt with above. The figures given there denoting the

¹ EI., vol. xii, No. 3, pp. 9-10.

prices may be accepted as correct; the only doubtful factor is the value to be assigned to the coins and the weights named.

As regards the prices of diamonds and other precious stones we find much material in the *Brhat-samhitā* of Varāhamihira, in the *Garuḍa-purāna* and in other *purānas*.) We have some manuscripts also in Samskrta and Hindī containing information on this subject. If, in addition, we collect all the material available from the authorities dealing with the Muhammadan period, sufficient material might be obtained to compile a separate treatise on precious stones and their values in ancient India.

It may be mentioned in this connection that the Kharosthī inscriptions edited by Professor Rapson also call for special study, as containing valuable material on the subject of prices. Furthermore some of the appendices of Kātyāyana, namely the Chāga-parišista, the Pari-bhāsā, the Istikā-parišista, the Samkhyā-parimāna, etc., are quite useful, and call for careful editing and publication. The authorities on Mathematics also mention the prices of some commodities.

A general survey of the available material on prices is given below.)

(i) Prices of commodities according to the Samkhyā-parimāna.

We have already drawn conclusions from the amount of fines and ransoms, from the wages and allowances paid to a day-labourer and from the inscriptions and other authorities that the price of an ox or a cow was about 12 panas and the wage of a labourer was from half a pana to one pana per day. The appendix of Kātyāyana on prices is very important. Unfortunately it has not yet been published. The total number of appendices attributed to Kātyāyana and referred to by Vyādi in his Carana-vyūha is eighteen. A copy of the MS. was presented by me to Professor Bernard Geiger of Vienna. The prices given in the Samkhyā-parimāna are shown below :---





TABLE NO. XVI

Con			Price					
						(in co	opper pan	as).
Cow (best) .							32	
Calf .							4	
Ox (ordinary)							6	
Bull .						64 E -	8	
Cow (ordinary)							10	
Horse (ordinary)					1		15	
Hiranya ? .		. 8					10	
Cloth (ordinary)							1	
Chäga (sheep or g	(oat)						8	
Sheep (best)							12	
Slave-girl .							50	
Elephant .						6 V	500	
Dolā (common ki	nd of	pälki)				5	
Chariot .							6	
House (thatched	?)						8	1
A REAL PROPERTY AND A REAL PROPERTY.								1

(See Appendix No. A.)

(ii) Prices of fragrant woods and spices

The prices of fragrant woods and spices in Rome as given by Pliny and compiled by McCrindle (*Ancient India*) were as follows :—

TABLE NO. XVII

Imported articles.)enarii.	Shillings.	Pence.	Farthings.	
Ginger					6	a pound	4	4	2	
Pepper					6	,,	4	4	2	
Long pe	pper				15	>>	10	11	1	
White p	epper				7	,,	5	1	1	
Black pe	epper				4	.,	2	11	0	
Bdelliun	a .				3		2	2	1	
Costus (white)	1.0.1			5		3	7	3	
Nard oil	(spike	-nard)			100		72	11	0	
Amomu	m grap	е.			60	**	43	8	0	
Cardam	um				3		2	2	1	

(iii) Prices of pearls and precious stones

(a) Prices of Pearls.—According to Varāhamihira the prices of pearls in India in his time were as follows ¹ :—

¹ Pala-daśa-bhāgo dharanam tad yadi muktās trayodaśa surūpāh Triśatī sapañca-viņšā rūpaka-saņkhyā krtam mūlyam. 13. Sodaśakašya dvišatī viņšatirūpasya saptatih sašatā Yat pañca-viņšati-dhrtam tasya šatam trimšatā sahitam. 14. Trimšat saptati-mūlyam catvārimšac-chatārdha-mūlyam ca

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TABLE NO. XVIIIA

Names	of	dij pe	fferent earls.	strings	of	Weight in guñjās.	Number of pearls in a string.	Prices in kārsāpaņas
Pikkā			· .			32	13	325
Piccā			1.00			32	16	200
Arghā				1.1		32	20	170
Ardhä						32	25	130
Ravaka						32	30	70
Sikthä						32	40	50
Nigarā						32	55	40
Cūrņā						32	80	30
,,						32	95	25
,,					•	32	200	12
,,		•		•		32	300	6 .
,,		•	Print John	100	•	32	400	5
				1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		32	500	3

Weight of pearl. P

Prices in kārsāpaņas.

4 māşakas	5300
31 ,,	3200
3 ,,	2000
21 ,,	1300
2 ,,	800
11 ,,	353
1 mäşaka	153
4 guñjäs	90
3 "	70
21 ,,	35

Şaştih pañconā vā dharaņam pañcāstakam mūlyam. 15. Muktāšītyā trimsac-chatasya sa-pañca-rūpaka-vihīnā Dvi-tri-catuh-pañca-satā dvādasa-şat-pañcaka-tritayam. 16. p. 992.

Pikkā piecārghārdhā ravakah siktham trayodašādyānām Samjūāh parato nigarāš cūrņāš cāšīti pūrvāņām. 17. p. 993.

Māşaka-catuştaya-dhrtasyaikasya śatā hatā tripañoāśat Kārsāpaņā nigaditā mūlyam tejo guņa-yutasya. 9. Māsaka-dala-hānyāto dvātrimšad vimšatis trayodaša ca Astau ca šatāni šata-trayam tripañcāšatā sahitam. 10. Pañca-trimšam šatam iti catvārah krsņalā navati-mūlyāh Sārdhās tisro guñjāh saptati-mūlyam dhrtam rūpam. 11. Guňjā-trayasya mūlyam paňcāšadrūpakā guņayutasya Rūpaka-paňca-trimšat-trayasya guňjārdha-hīnasya. 12. p. 991.

(Brhat-samhitä by Varåhamihira, E. J. Lazarus and Co., Benares, 1895, part ii.)

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(b) Prices of gems.—The following prices of pure, transparent and illuminating gems are given by Varāhamihira¹:—

TABLE NO. XVIIIB

	Weigh	t of gem.	Price in kārsāpaņas.
1 123 1 8 4 9	pala ,, karşas karşa māşakas ,,	(Padmarāga) ,, ,, ,, ,, ,,	26,000 12,000 20,000 6,000 3,000 1,110 500
-	"	,,	

As to the prices of diamonds the following list is given by the same authority.

We	eight of dia	mond.	Price	in kārsāpaņas.
18 ta	ndulas (or	grains o	f rice)	150,000
20	.,	35		200,000
16		1.7.9		133,000
14	,,	,,		100,000
12	,,	,,		66,667
10		"		40,000
8	,,	,,		12,000
6	,,	77		8,000
4	,,	,,		2,000

¹ Şadvimśatih sahasrāny ekasya maneh pala-pramāņasya Karşa-trayasya vimšatir upadiştā padmarāgasya. 7. Ardha-palasya dvādaša karşasyaikasya şat sahasrāni Yac cāşta-māşaka-dhrtam tasya sahasra-trayam mūlyam. 8. Māşaka-catuştayam daša-šata-krayam dvau tu pañcāšata mūlyau Parikalpyam antarāle mūlyam hinādhika-guņānām. 9.

(Ibid., p. 1000.)

[Commentary.]

Ardha-palasya dvādaša-sahasrāņi mūlyam. Ekasya karşasya sat sahasrāņi. Yaś ca padmarāgo'stābhir māşakair dhrtas tulitas tasya sahasratrayam rūpakāņām mūlyam. 8.

(Ibid., p. 1001.)

Sita-sarşapäştakam tandulo bhavet tandulais tu viméatyä Tulitasya dve lakşe mülyam dvi dyünite caitat. 12. Päda-tryamśärdhonam tribhäga-pañcāmśa-sodaśāmá ca Bhägaś ca pañca-viméah śatikas sähasrikaś ceti. 13.

(Ibid., p. 986-7.)

See also Garuda-purāna, Adhyāyas 68-80.



(iv) Prices of jewellery in the Cola country circa A.D. 1100.

TABLE NO. XIX

(a) One sacred mukuta (crown), containing :-

348 karañju 1-10 mañjādi gold

859 diamonds weighing $7\frac{3}{4}$ karañju
 $4\frac{3}{10}$ mañjādi

309 large and small rubies and other stones

125 halahalam of superior quality

122 halahalam

and of cust

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41 bluish rubies (nīlagandhi)

10 unpolished rubies = weighing $14\frac{3}{4}$ karañju $7\frac{8}{10}$ mañjādi

669 large and small pearls = weighing 36 karañju 1 mañjādi 1

Total weight of the crown = 407 karañju 9 mañjādi. Price 5,000 kāśu. (SII., vol. ii, No. 7, p. 81.)

(b) One ear-ring (vāli), containing :---

1 karañju 8 8 mañjādi gold

9 pearls weighing 1 karañju 10 mañjādi

Total weight of the ear-ring = 2 karañju $9_{1\sigma}$ mañjādi. Price 15 kāśu. (SII., vol. ii., No. 7, p. 82.)

(c) One vruttu, containing :--

2 karañju and 1 kunri of gold

6 diamond crystals weighing 20 mañjādī

2 smooth rubies weighing 6 mañjādī

2 pearls weighing 9 and ⁷/₁₀ mañjādī.

Total weight of the vruttu = $2\frac{1}{2}$ karañju and $1\frac{7}{10}$ mañjādi. Price 15 kāśu. (Ibid.)

(d) One sacred garland (tiru-malai), containing :---

861 karañju and 420 mañjādi of gold

505 diamonds weighing 2 karañju $3-\frac{9}{10}-\frac{1}{20}$ mañjādi 110 large and small rubies weighing $5\frac{1}{2}-\frac{1}{2}$ karañju

94 strung pearls weighing 9 karañju and 1 kunri.

Total weight of the garland = 1031 karañju and 1 mañjādi. Price 1,000 kāśu. (Ibid.)

(e) One sacred armlet containing :---

89 karañju 110-10 of gold

441 diamonds weighing 3 karañju and 23 mañjādi

54 large and small rubies weighing 61 karañju 210 mañjādi

68 strung pearls weighing 54 karañju 3 mañjādi and 1 kunrī.

Total weight of the sacred armlet $= 104\frac{1}{2}$ karañju and 4 mañjadi. Price 1,250 kāśu. (Ibid., p. 83.)

(f) One sacred pearl ornament, containing :---

69% karañju 2 10 to mañjadi of gold

309 diamonds weighing 11 karañju 410 mañjādi

80 large and small rubies weighing 6 karañju 78-3 mañjādi 1,462 pearls weighing 961 karañju

Total weight of the pearl ornament = 1741 karañju. Price 1,500 kāśu.

(g) One pottu for the arm of the goddess, containing :----

18ª karañju 3 % mañjādi of gold

1 smooth ruby weighing 1 mañjādi 1 kuņri

137 strung pearls weighing 73 karañju 415 mañjādi.

Total weight of the pottu = 263 karañju 4 to mañjādi. Price 80 kāśu. (Ibid., p. 83.)



(h) One bracelet, containing :---

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844 karañju 3 mañjādi of gold

675 diamonds weighing 4 karañju 4 mañjādi 1 kunrī.

60 large and small rubies weighing 11 karañju 3 mañjādi 1 kunrī.

Total weight = 90³/₄ karañju 1 mañjādi. Price 800 kāśu. (Ibid., p. 84.)

(i) Ekāvalī (single-string), containing :-

35 old pearls, 2 corals, 2 lapis lazuli, 1 talimbam, 1 padugan, 1 kokkuvay Total weight = 4 karañju 84 mañjādi. Price 11 kāśu. (Ibid., p. 73.)

(j) One sacred girdle, containing :-

971 karañju 4 20 mañjādi of gold

667 large and small diamonds weighing 2 karañju 1-10 mañjādi 83 large and small rubies weighing 10³/₄ karañju 3²/₁₀ mañjādi 212 pearls weighing 18 karañju 2 mañjādi.

Total weight = 129 karañju $\frac{7}{10}$ mañjādi. Price 4,500 kāśu. (Ibid., No. 8, p. 87-8.)

(k) One ring (anklet ?) for the foot of the goddess, containing :---

73 karañju 310-20 mañjādi of gold

455 diamonds weighing 11 karañju 2-10-10 mañjādi.

39 rubies weighing 4 karañju 10 mañjādi.

Total weight of the ring = $78\frac{3}{4}$ karañju $1\frac{8}{10}$ mañjādi. Price 500 kāśu. (Ibid., p. 88.)

(1) One sayalam for the foot of the goddess, containing :---

372 karañju 34 mañjādi of gold

360 diamonds weighing 3 karañju 4 mañjädi

72 rubies weighing 21 karañju 21 mañjādi

42 pearls weighing 2 karañju 8 mañjādi 1 kuņrī.

Total weight = 433 karañju 3 mañjādi 1 kunrī. Price 350 kāšu. (Ibid.)

(m) One sacred crown (mukuta) containing :--

270 karañju 820 mañjādi of gold

525 diamonds weighing 2 karañju 310-10 mañjādi

227 crystals weighing 5 karañju 4-10 mañjādi

16 strung pearls weighing $1\frac{1}{2}$ karañju $4\frac{1}{10}\frac{1}{21}$ mañjādi 385 strung pearls weighing 13 karañju 7 mañjādi Total weight = 229 $\frac{1}{2}$ karañju $2\frac{1}{10}\frac{1}{20}$ mañjādi. Price 700 kāšu. (SII., vol. ii, No. 8, p. 90.)



CHAPTER V

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POPULATION OF THE COUNTRY

N^O definite figure can be suggested for the population of ancient India. Perhaps because the people in those days did not attach much importance to this question, the Samskrta and Pāli literatures give us no information on the point.

For the purpose of revenue collection, however, lists of estates were kept in the record department. It appears that the size of an estate $(gr\bar{a}ma)$ was governed by the possession of a *kula* (the family of a *sāmanta*). Hypothetically each *sāmanta-kula* was considered to be the owner of an estate $(gr\bar{a}ma)$ which contained pasture, fallow and cropped land. It is rather interesting that the same word *kula* was used to denote an area of land which could be ploughed by two yokes of oxen; the seed sufficient for sowing this area was called *kulya*; and a person belonging to a *sāmanta-kula* was expressed by the word *kulāna*, meaning "nobleman", and a lady by the word *kulā-duhitr*, etc.

After taking all these facts into consideration, we can read the numbers of estates ($gr\bar{a}mas$) as the numbers of $s\bar{a}manta$ kulas (families) and vice versa. It has already been calculated roughly that ancient India consisted of 7,000,000 $gr\bar{a}mas$ (estates), and that each $gr\bar{a}ma$ represented from fifteen to twenty persons. Multiplying 7,000,000 by fifteen and twenty we would arrive at a total population for ancient India of between 105,000,000 and 140,000,000.

According to the Buddhist books, Vaišāli contained 7,707 $r\bar{a}jans$ (estate-owners).¹ If we may presume that by Vaišālī the *janapada* of Vaišālī is meant, and calculating at the rate of ten *janapadas* to a *deša* (country), this would mean that there

¹ Chapter VI, Note 8.

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were about 77,070 $r\bar{a}jans$ or $s\bar{a}mantas$ (estate-owners) in the desa in which Vaisālī was included. If that desa again can be regarded as an average-sized country, this would mean that the whole of ancient India (with its eighty-four desas) contained about 6,473,880 $r\bar{a}jans$ or $s\bar{a}mantas$. Taking from fifteen to twenty persons for each estate, the population of the whole of India would come to between 100 and 130 millions. The total population of Vaisālī janapada is given in Buddhist books as 168,000.¹ Multiplying this by 840, we get the population of India as 141,120,000, or in round numbers 140 millions. We should note here that the janapada of Vaisālī, owing to its fertility, was probably more thickly populated than many other janapadas.

It has already been suggested that each estate contained on a rough average 80 acres of land, of which 15 to 20 acres may perhaps be taken as being under cultivation. According to Mr. Moreland "at the beginning of the present century there were from 100 to 120 persons to each 100 acres of 'normal cultivation' in some of the western districts of the United Provinces, while there were from 60 to 70 persons to 100 acres in other districts lying further south ; the difference between these figures is adequately explained by permanent features of environment, and the conclusion is that it has probably persisted with relatively little change, and that the western districts required somewhere about 100 to 120 persons, and the southern somewhere about 60 to 70 persons to cultivate 100 acres in the time of Akbar and throughout the intervening period." 2 According to the Dana-mayūkha also the go-carma, equivalent to about two-thirds of an acre, was sufficient to provide one person with food.³ It will not be unreasonable, therefore, if we make an estimate of the population on the basis of one person to each cultivated acre. Multiplying

¹ Hindu Polity, by K. P. Jayaswal, p. 51, n. 5.

² W. H. Moreland's India at the Death of Akbar (1920 ed.), pp. 110-11.

³ Chapter III, p. 83, Note 1.

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 $7,000,000 \ grammas$ by fifteen and twenty, we get 105,000,000 and 140,000,000 acres of land under cultivation, or say the same numbers of people living in India.

In estimating the population of a country from its maximum war strength we must keep this fact before our sight, that two out of the four classes of the people provided no fighting men in those days. There is no doubt that the śūdras and ksatriyas formed a large proportion of the population; the former included all the industrial, agricultural and labouring classes, and the latter only landowners, officials and soldiers. After careful study of the economic condition of ancient India, I come to the conclusion that perhaps each rajan or sāmanta-kula was required to provide one soldier in time of war, when demanded by the king. According to the Mahābhārata the whole of India took part in the great war. We may perhaps assume that to bring the grand total of forces engaged on that occasion up to eighteen aksauhinis, each country was represented by its full fighting strength. Eleven aksauhinis were on the side of the Kauravas and seven on the side of the Pandavas.1 Whoever wrote about this war, there is no doubt that he knew the conditions of the country accurately. His figures for the rival armies will be found upon investigation to correspond in a significant measure with the number of estates (grāmas) given above. One aksauhinī of the army is defined in Samskrta dictionaries as containing 21,870 elephants, 21,870 chariots, 65,610 horses, and 109,350 foot.² Taking five persons to each elephant and chariot, the total strength of each aksauhini comes approximately to 400,000. If we multiply this by eighteen, we get the total war strength of India at that time as 7,200,000 men. It has already been calculated that the number of gramas (estates) in ancient India was approximately 7,000,000. The correspondence between two figures conveys the impression that

¹ Ekādaśaitāh śrī-juşţā vähinyas tava pārthiva. 25.

Päņdavānām tathā sapta mahāpurusa-pālitāh. 26.

(Mahābhārata, Bhīşma-parvan, Adhyāya 16, p. 25.)

² See Akşauhini in Monier Williams's Sanskrit-English Dictionary.

ancient India had reached a stage of civilization in some respects very similar to the feudal system of Europe. Each rāja-kula or sāmanta-kula was obliged to be represented in the time of war. Possibly the distribution of land was based on this principle. If we may assume that on the average each grāma (estate), or each fifteen to twenty persons of the population, furnished one fighting man, we should arrive at a total population, as calculated from the war strength of the country, of between 108,000,000 and 144,000,000.

The authenticity of the figures in the Mahābhārata relating to the forces engaged in the great war may be tested by the facts given by Greek historians. It has been explained that ancient India was divided into eighty-four countries (deśas). Dividing eighty-four by eighteen, we get one aksauhini for every four and two-thirds countries or in round numbers every five countries. According to the Greek historians the armies of the eight countries which gave battle to Alexander the Great were as below ----

TABLE NO. XX

THE WAR STRENGTH OF THE EIGHT ANCIENT INDIAN COUNTRIES ACCORDING TO THE GREEK HISTORIANS

			Foot-				Authority : McCrindle's "Invasion
	Countries.		soldiers.	Cavalry.	Chariots.	Elephants.	of India."
1.	Malloi and						
	Sudracæ		90,000	10,000	900 (700 ?)	?	p. 252, 234
2.	Aphrikes		20,000	10,000	?	15	p. 272
3.	Porus .		50,000	3,000	1,000	130	p. 278
4.	Agalassian		40,000	3,000	?	?	p. 285
5.	Kingdom ne	ixe		And a state of the			**
	to Sibi		40,000	?	?	?	p. 232
6.	Assakenians		30,000	20,000	?	30	p. 66
7.	Ambri and						3 (M)
-	Sigambri		80,000	60,000	?	?	p. 324
8.	Cuphitas		200,000	?	?	?	p. 323
				-	-		
	Total		550,000	96,000	1,900	175	

(a) Total man-power of eight countries = 550,000 + 96,000 + 54,000(approximate figures for chariots and elephants) = 700,000. (b) Total man-power of 84 countries, or of the whole of India =

700,000

× 84 = 7,350,000 (= 18 akşauhinīs).

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From the above table it is clear that the fighting strength of the eight ancient Indian countries comes to 550,000 foot, 96,000 cavalry, 1,900 (?) chariots, and 175 (?) elephants, or in round numbers approximately 700,000. On this basis the fighting-strength of four and two-thirds countries would be 408,333, or in round numbers 400,000. If we divide 700,000 by eight and multiply the quotient by eighty-four, we get the war strength of the whole of India as 7,350,000. According to the Mahābhārata the war strength of four and two-thirds countries and of the whole of India was nearly the same as calculated from the figures furnished by the Greek historians, namely 400,000 and 7,200,000 respectively. An estimate based upon the figures given in the Ain-i-Akbari leads to a remarkably similar conclusion. In the time of Akbar the man-power of forty-seven sarkars, according to Abu 'l-Fazl was as shown below :---

TABLE NO. XXI

			TO THE AN	n-i-Akbarī		The Article
Name of Sū	ba.	No. of sarkārs.	No. of parganas.	Cavalry.	Infantry.	Äĩn-i-Akbarī, vol. ii.
Bihar .		7	199	11,415	449.350	p. 153
Allahabad		10	177	11,375	237,870	p. 160
Oudh .		5	38	7,640	168,250	p. 173
Malwa .		12	301	29,668	470,361	p. 198
Delhi .		8	232	31,490	242,310	p. 285
Lahore .		5	234	54,480	426,086	p. 315
Total		47	1,181	146,068	1,994,227 =	= 2,140,295

THE WAR STRENGTH OF THE FORTY SEVEN SAREARS

(a) Total man-power of the whole of India calculated from the figures given in the $\bar{A}in-i-Akbari = \frac{2,140,295}{2}$ 84 × 2 = 7.650.384 approximately (= 18 akşauhinis).

(b) Total man-power of 4% countries = 428,059 approximately (= one akşauhini).

Thus the fighting strength of forty-seven sarkars in the time of Akbar was approximately 2,140,295 (i.e. 146,068 cavalry, 1,994,227 infantry). It has already been computed that two sarkars of Akbar may be taken as equal to one ancient Hindu country (deśa). On dividing 2,140,295 by

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forty-seven and multiplying the quotient by 84×2 , the manpower of the whole of India would come to 7,650,385, or in round numbers about 7,500,000. According to Abu'l-Fazl "the Zamindars of the country furnish more than four millions, four hundred thousand men" (the \bar{Ain} -*i*- $Akbar\bar{i}$, vol. i, p. 231) and the empire of Akbar "consisted of one hundred and five $Sark\bar{a}rs$ ". (The \bar{Ain} -*i*- $Akbar\bar{i}$, vol. ii, p. 115.) Dividing 4,400,000 by 105 and multiplying the quotient by 168 (= 84×2), we get the war strength of the whole of India as 7,040,000.

Thus we arrive at very similar figures from different sources. Seldom do we find authorities so diverse in their nature as the *Mahābhārata*, the Buddhist books, the Greek accounts, palæographic evidence and the \bar{Ain} -i-Akbarī furnishing such similar facts and figures. Had India already been surveyed in the time of Candragupta Maurya? Were details of the country well known to the Emperor Aśoka, whoerected pillars all over the land and sent Buddhist missionaries to Ceylon? Should most of the credit which is usually given to Sher Shāh and Todar Mal for the settlement of the land really be given to someone else?

Adopting the above methods of arriving at an estimate of the total population, it would seem to have lain between 100,000,000 and 140,000,000; but it cannot be too clearly stated that this estimate must only be regarded as a conjectural approximation.

As far as can be ascertained from the evidence available to us, I am inclined to think that the population of the country as a whole did not greatly vary between the early Hindu period and the first advent of the Muhammadans, and it may be supposed to have lain roughly between the above limits.

The people of ancient India may be regarded as divided into two main classes: (1) the upper orders, often described as the 'twice-born' classes, and (2) the lower orders, or the 'masses', a term which comprises a vast population of diverse origins generally included in the comprehensive

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title śūdra. In the ancient fabric of Indian society there was no separate group comprising the 'middle classes' as this expression is ordinarily understood in English. The absorption of western ideas of recent years may have led to the application of this term to certain strata of the population which appear to correspond with the middle classes so-called in Europe; but the distinction is really foreign to the Indian genius. No account of the social structure of ancient India would be complete without reference to the commercial and trading classes. Certain aspects of their organization have already been the subject of careful study ; but the economic conditions under which commerce and trade were carried on, the cost of production, prices realized, the taxes, tolls, and port dues paid, the organization of industries and the distribution of wealth, etc., have not yet been dealt with on a thorough. or scientific basis. The subject is one that would call for a separate and lengthy treatise. Moreover, the centres of trade and commerce were the large cities and towns, with which the present work is not directly concerned. In the present thesis I concentrate attention upon the main orders, and deal with the two most representative sections thereof, namely, (1) the landowning, aristocratic or ruling classes, and (2) the working or labouring classes as a whole.





CHAPTER VI

THE LANDOWNING CLASSES

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THE LANDOWNING CLASSES

A^T the close of Chapter I a rough estimate of 7,000,000 was given of the total number of grāmas (estates) in ancient India, based upon evidence derived from a variety of sources. What was the position in society of the owners of those grāmas, and what power did they possess to protect themselves and their estates against the high-handedness of the royal servants, policemen, etc. ?

As far as the Buddhist story-books are concerned, it appears that these 'estate' owners were called *rājans*, *rājānakas*, *amātyas*, *rājanyakas*, *sāmantas*, *maulas*, *rāyas*, *gaņas*, *gaņarāyas*, *bhojas*, *kulaputras*, *kṣatriyas*, *rājaputras*, etc. The eighty-eighth story of the *Avadāna-śataka* connected with Kapphina, the king of a country in Southern India, is most interesting. The king is described therein as surrounded by 18,000 *amātyas* (counsellors or courtiers). Seeing so many around him, he became proud, and asked, "Is there any more powerful king than I?" "No," replied the *amātyas*. Shortly afterwards he received some presents from traders coming from Central India. He inquired about the government of their country. They replied that some countries (*deśa*) were governed by *rājans* and some by *ganas*.¹ It appears to

¹ Athāpareņa samayena rājā mahākapphiņo'stādašāmātya-sahasraparivņto mrga-vadhāya nirgatah. Purastāt prsthataś ca sarva-balaugham avalokyāmātyān āmantrayate. Asti bhavantah kasyacid evamrūpo balaughas tadyathā mamaivaitarhīti. Tatah priyavādibhir amātyair abhihitam. Deva nānyasya kasyacid iti. Atha madhyadeśād vaņijo daksināpatham gatah. Tai rājāo mahākapphiņasya prābhrtam upanītam. Rājāā uktā bho vanijah kas tatra rājeti. Vaņijah kathayanti. Deva keeid deśā gaņādhīnāh keeid rājādhīnā iti. . . Etad vacanam upaśrutya samahānagaravāsino rājāno bhītās trastāhs amvignā āhrsta-romakūpāh samgamya samāgamya ekasamūhena śrāvastīm anuprāptāh. . . Tatab kapphino rājāstādaśāmātya-sahasra-parivīto'nupūrveņa caňcūryamāņah śrāvastīm anuprāptah. Prātisīmāš ca rājāno rājānam mahākapphiņam pratyudgatāh. Tair mahāsatkāreņa nagaram pravešitam. . . .

me that the distinction here indicated is between rule by individual nobles $(r\bar{a}jan)$ and rule by territorial groups (gana). Further on in the same story we find mention of $r\bar{a}jans$ of towns, and of $r\bar{a}jans$ residing in the court. The opening sentence of each story of the Avadāna-sataka mentions that Buddha was honoured by the $r\bar{a}jans$, $r\bar{a}ja$ -mātras, etc.¹ In the Aupapātika-sūtra ugras, bhojas, nāgas, kauravas, ikṣvākavas are grouped together with the rājanyakas and rājānakas (rāinna o nāya).²

The Greek historians mention a state in the Panjab that was governed by 5,000 aristocrats, who exercised their authority with justice and moderation.³ By aristocrats they appear to mean sāmantas or rājans (nobles). According to these historians the kingdom of Porus contained 5,000 cities, villages, and towns.4 In other words, it probably contained 5,000 grāmas (estates) and a corresponding number of sāmantas or rājans who owned these estates. India also, like Greece, had cultivators, tenants, sub-tenants, landless labouring classes, day-labourers, slaves, etc., who possessed no political power. The whole of India was under the grip of powerful families of nobles (sāmantas). We learn that the Andhaka-vrsni league was controlled by the powerful families of Śvāphalka, Caitraka, Śini, Vāsudeva, etc. Pāņini, Kātyāyana, and Patañjali mention the Andhaka-vrsnis as agricultural communities containing few of the above-

1 (Avadāna-šataka, part ii, pp. 103-4.)

Buddho bhagavān satkrto gurukrto mānitah pūjito rājabhī rājamātrair dhanibhih pauraih śreșthibhih.... (Ibid.)

^a Teņam kāleņam teņam samacņam samaņassa bhagavao mahāvīrassa amtovāsi bahave samaņā bhagavamto appegaīyā uggapavaīyā bhogapavaīyā rāiņņa, ņāya koravva. khattiapavvaīyā bhadā johā seņāvaī pasatthāro setthī ibbhāaņņe ya bahave evamāiņo uttama-jāti-kula-rūpa-viņayaviņnāņavaņna-lāvaņna-vikkama-pahāņa-sobhaggakamtijuttā...viharamti. (Aupapātika-sūtra, fol. 26.)

² IIR., p. 121, Megasthenes, p. 67. Quoted by K. P. Jayaswal in his Hindu Polity. See p. 84.

* McCrindle's Invasion of India by Alexander the Great, p. 309.

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good following, and became very powerful.¹

Kautalya uses the word samgha to signify a class; and the expression sāmanta is often used by him evidently in the sense of the 'class of sāmantas'—the ruling class or patrician class, so to speak. The *śrenīs, kṣatriyas*, etc., of Kāmboja and Surāṣṭra were devoted to trade, or service in the army as hired soldiers. The countries of the Liechavi, Vrji, Malla, Madra, Kukuru, Kuru, and Pāñcāla peoples were under the heel of the nobles. Kautalya expresses their mode of living by the term rājan.² At first sight this expression seems very strange; but a careful study of the economic condition of that period will show that it is only natural. Even nowadays, when inquiry is made of a man's profession, the answer given is often—he is a gentleman, or he is a *thākura*, *rānā*, *rāva*, or a *navāb*.

As far as the *janapada* of Vaišālī was concerned, it was entirely under the control of noble families ($r\bar{a}ja$ -kulas) of Licchavis. Its political condition was very much the same as that of England after the Norman conquest. The population of Vaišālī *janapada* was about 168,000, and the number of $r\bar{a}jans$ (estate-owners) about 7,707.³ The government officers, presidents, vice-presidents, chancellors of the exchequer, courtiers, etc., were selected from these $r\bar{a}jans$.⁴

¹ Rājanyavācinām bahuvacanāntānām yo dvando'ndhaka-vrsņisu varttate tatra pūrvapadam prakrti-svaram bhavati. Švāphalka-caitrakāh (after Dīksita), śini-vāsudevāh. . . Andhaka-vrsņaya ete na tu rājanyāh. Rājanya-grahaņam ihābhisikta-vamsyānām ksatriyānām grahaņārtbam. Ete ca nābhisikta-vamsyāh. . . Bahuvacana-grahaņam kim. Samkarsaņa-vāsudevau. (Kāšikā, pp. 546-7; see K. P. Jayaswal's Hindu Polity, p. 41, note 1.)

^a Samgha-läbho danda-mitra-läbhänäm uttamah..., Kämbhojasurästra-ksatriya-śrenyädayo värtä-śastropajīvinah. Licchivika-vrjikamallaka-madraka-kukura-kuru-päñcälädayo räja-śabdopajīvinah. (The Artha-śästra of Kautalya, p. 378.)

³ Tattha niccakālam rajjam kāretvā vasamtānam yeva rājūnam sattasahassāni sattasatāni satta ca (.) rājāno homti tattaka; yeva uparājāno tattakā senāpatino tattakā, tattakā bhamdāgārikā. (Jātaka, I, 504; quoted by K. P. Jayaswal in his Hindu Polity, p. 51, notes 4 and 5.)

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⁴ Hindu Polity, by K. P. Jayaswal, pp. 45-8.

"Amongst them," says the *Lalita-vistara*, "the rule of showing respect to the highborn, the middle ones, the oldest, the elders is not observed; every one considers himself to be the rājan, 'I am the rājan, I am the rājan." " 1

At the time of the Buddha there was talk about the Vaiśālī federation (gaṇa). The popular opinion was that the gaṇas, or federations of powerful ruling families (rāja-kulas), could not last long. One noble, actuated by jealousy or greed, oppressed another, either by military force or through the police (cāra), or by intrigue, or by employing the policy of conciliation, subsidy, and division. Once divided, the federations become an easy prey to an enemy, and perish.²

The Śākyas of Kapilavastu, the Koliyas of Rāmagrāma, the Videhas of Mithilā, the Mallas and Vrjis of Kuśinagara and Pāvā, and the Morias of Pippalīvana, all these noble families (rāja-kulas) were united under a federation called gaņa. In the Panjab the federations of Kāthians (Kāthakas), Adraistai (Aristas ?), Oxydrakai (Ksudrakas), Malloi (Mallas ? or Mālavas ?), Abastanoi (Ambasthas ?), Xathroi (Ksatriyas), Glausai or Glaukanikai (Glauchukāyanakas ?) were very powerful. In fact, the whole of India was under the control of nobles. In a part of Southern India they were designated Kerala-putto, or Kerala-putras. Before the Muhammadan conquest the rājā-putras of Central India had attained special prominence. The rājānakas of the inscriptions, the rājans

¹ Nocca-madhya-vrddha-jyeşthänupālitā, ekaika eva manyate aham rājā aham rājeti . Na kasyacic chisyatvam upagacchati. . . . (*Lalita-vistara*, sarga iii, p. 21.)

* From Gaņānām vrttim icchāmi śrotum matimatām vara. 6. Yathā gaņāh pravarddhante na bhidyante ca bhārata....

To Bhedão caiva pradânão ca bhindyante ripubhir ganāh. 31.

Tasmät samghätam evähur gaņānām śaraņam mahat. 32.

(Mahābhārata, Šāntiparvan, sarga 107.)

Read the passages and authorities quoted by K. P. Jayaswal in his *Hindu Polity*, pp. 64-79 and 48-55 in the light of the interpretation given above.



of the Licchavis, and the *sāmantas* of Kautalya's *Arthasāstra* refer to the same class of people.

It appears that, owing to these *sāmantas*, the political condition of the country was very unsettled. No *janapada* was free from them.

Frequently they held secret relations with thieves, wild people, and foreigners. "In the absence of such sources (e.g. mines, forests, pastures, etc.) of his own." writes Kautalya, "he (sāmanta) should acquire them from some one among his relatives and friends. If he is destitute of an army, he should, as far as possible, attract to himself the brave men of corporations (srenis), of thieves (cora-gana), of wild tribes, of mlecchas, of spies (qudha-purusa) who are capable of inflicting injuries upon enemies." 1 The soldiers in the service of these sāmantas are mentioned in the Praśnavyākaranānga-sūtra by the word pāikka; and it is stated that | " these paikkas (payikas) belong to the class of thieves, as their commanders (senāpati) encourage the bands of robbers and outlaws. They live in forts situated amidst the forests and hills. They can be recognized easily by their dress, which is of black, green, red, yellow and white colours." They wear their own special belts without numbers. Impelled by greed, they attack the country and estates belonging to others; they plunder the cargoes of ships in distress, owing to storms, etc."² People were so afraid of them that it was

¹ Teşām alābhe bandhu-mitra-kulebhyah samārjanam utsāhahīnaśrenī-pravīra-puruşānām cora-gaņāţavika-mleecha-jātīnām parāpakāriņām gūdha-purusānām ca yathālābham upacayam kurvīta. (Kau. Artha., p. 306 ; English translation, p. 362.)

² Avare päikka-cora-samghä senävati-cora-vamda-pägaddhikä ya adavidesa-duggaväsï käla-harita-ratta-pita-sukkilla-anega-saya-oimdha-pattabaddhä para-visayae abhihananti luddhä dhanassa kajjo rayanägarasägaram ummī-sahassa - mäläläukula-vitoya - pota-kalakalomta - kaliyam päyäla - sahassa - väyavasa - vega - salila - uddhammamänadagarayarayamdhakäram..., (fol. 45).

(Commentary.)

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Tathāpare---rājabhyo'nye päikka-cora-samghāh---padāti-rūpa-caura-samūhāh, tathā senāpatayah, kimsvarūpāh ?---caura-vrnda-prakatsakāś ca tat-

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considered dangerous to go by the royal road in the night or early in the morning.¹ They were a great hindrance to the development of agriculture, trade, and industry.2 It was for this reason that people belonging to the professional classes often had to leave their villages and flee into the forests.3 Naturally a strong king was well advised to get rid of these sāmantas, and turn them into an agricultural community. It is a pity that Dr. Sāmaśāstrin translated sāmantas as "kings" in the chapters of the Artha-śāstra dealing with the king's policy towards the ruling class (sāmanta class).4 It would have been better if the word samanta had been left untranslated. The economic and political condition of the country was quite different from what we see to-day. The problem before the administrator was how to bring the whole country under the administration of a central government, how to turn these haughty independent nobles into loyal subjects, and reduce their political power. Looked at in this light, the sections of Kautalya dealing with state policy towards sāmantas seem quite intelligible and need no special

pravarttakā—ity arthah, atavī-deśe yāni durgāņi-jala-sthala-durga-rūpāņi teşu vasanti ye te tathā, kāla-harita-rakta-pīta-śuklāh pañca-varņā iti yāvat aneka-śata-samkhyās cihna-paṭṭa vadhā yais te tathā paraviṣayān abhighnanti, lubdhā iti vyaktam, dhanasya kārye—dhana-krte ity arthah, tathā ratnākara-bhūto yah sāgarah sa tathā tam cātipatyābhighnanti janasya potān iti sambandhah, ūrmayo vīcayas tat-sahasrāņām mālāh paňktayas tābhir ākulo yah sa tathā, ākulā—jalābhāvena vyākulita-cittā ye vitoya-potāh—vigata-jala-yāna-pātrāh sāmyātrikāh kalakalimta'tti kalakalāyamānāh—kolāhalam kurvāņās taih kalito yah sa tathā, . . . (fol. 50.)

(The Praśna-vyākaraņānga transmitted by Sudharma Svamin.)

- ¹ See Chapter VII, p. 164, Note 5.
- ⁸ Vallabhaih kārmikais stenair antapālais ca piditam Šodhayet pašu-samghais ca ksīyamāņa-vaņik-patham.

(Kau. Artha., p. 49.)

³ Kvacit te vaņijo rāstre nodvijanti karārdritāh krīņanto bahunālpena kāntāra-krta-višramāh. 23. Kvacit krsikarā rāstram na jahaty atipīditāh Ye vahanti dhuram rājāš te vahantītarān api. 24.

(Mahābhārata, Šāntiparvan, adhāya 89.)

⁶ Artha-śāstra of Kauţalya translated into English by Dr. Sāmašāstrin, pp. 317-76, book vii. MINISTRY OF OL



interpretation or justification. On the other hand, taking sāmanta as meaning a king, it would look as if Kautalya had no regard for the rights of other kingdoms.

There is no doubt that Kautalya was strongly opposed to any claim to independence on the part of these aristocrats. Already in his time there were a good number of people belonging to the class of sāmantas. They were merely the landowning class, who claimed freedom from the oppression of government servants and policemen. He wanted to reduce all powerful sāmantas into peaceful, loyal landowners, and, if possible, to bring their property directly under the control of the king. A few quotations will suffice to give a clear idea of his policy. He writes, "Having kept a sāmanta engaged with another sāmanta, a wise king should proceed against the third sāmanta, and, having conquered him, take possession of his territory."¹ "There can be no greater evil to kings than alliance with a sāmanta of considerable power, unless one is actually attacked by one's enemy."²

The policy of a Hindu king was to divide them and then rule (*dividere et imperare*).³ The occasion of a marriage was always thought the best time to create dissension among them.⁴ If not successful at such a time, he should arrange to damage their property and possessions by night through the agency of spies,⁵ or else he should arrange to depose

¹ Sāmantenaiva sāmantam vidvān āyojya vigrahe

Tato'nyasya hared bhümim jitvä paksa-samantatah.

(Kau. Artha., p. 280.)

² Yadbalas sämantah tadvišişta-balam äsrayeta.... Mahādoşo hi višişta-bala-samāgamo rājňām anyatrāri-grhītāt. (Ibid., p. 267.)

^a Sarveşām āsannāh satriņah samghānām parasparanyanga-dveşavaira-kalaha-sthānāny upalabhya kramābhinītam bhedam apacārayeyuh-"asan tvā vijalpati" iti. (Kau. Artha., p. 378.)

⁵ Viväda-padeşu vä dravya-paśu-manuşyäbhighätena rätrau tiksnäh kalahän utpädayeyuh. Sarveşu ca kalaha sthäneşu hinapakşam räjä kośadandäbhyäm upagrhya pratipakşa-vadhe yojayet, bhinnän apavähayed vä. (Ibid., pp. 378-9.)



them on a charge of disloyalty,¹ or bring about a quarrel between two parties and then help the weaker with funds and men. When all such methods failed, the ringleaders should be poisoned through wine sent as *naisecanika* by their family members, or offered by a sweetheart as a token of love ²; or they should be induced to fight against each other on account of some woman.³

As far as the confiscation of their property was concerned, Kautalya was quite right in saying that such a policy followed by any king would set all the *sāmantas* against him : his rule could not last long. The *sāmantas* from fear of losing their property would make common cause, and combining secretly would revolt against his rule.⁴ Owing to this, the policy followed by a Hindu king was to give them as far as possible high positions and appointments in his state. The courtiers, privy councillors, military leaders, collectors-general, body-

¹ Ekadeśe samastān vā nivešya bhūmau caisām pañca-kulim dašakulim vā krşyāyām nivešayet... Rājašabdibhir avaruddham avaksiptam vā kulyam abhijātam rājaputre sthāpayet... Pratipanneşu kkrtya-paksopagrahārtham artham daņdam ca presayet. (Ibid., p. 379.)

² Vikrama-käle śaundika-vyañjanäh putra-dära-pretäpadesena" naisecanikam" iti madana-rasa-yuktān madya-kumbhān satašah prayaccheyuh. (Ibid., p. 379.)

3 From :---

Bandhaki-poşakāh plavaka-naţa-nartaka-saubhikā vā praņihitāh strībhih parama-rūpa-yauvanābhis-saṅgha-mukhyān unmādayeyuh.... To :---

Bhikşukī vā priya-bhāryam mukhyam brūyāt—" asau te mukhyo yauvanodrikto bhāryāyām mām prāhiņot; tasyāham bhayāl lekhyam ābharaŋam gatāsmi; nirdosā te bhāryā; gūdham asmin pratikartavyam aham api tāvat pratipatsyāmi" iti. evamādişu kalaha-sthānesu svayam utpanne vā kalahe tikşnair utpādite vā hīna-pakşam rājā kośa-dandābhyām upagrhya viguņesu vikramayed apavāhayed vā. (Kau. Artha, pp. 380-1.)

⁴ Na ca hatasya bhūmi-dravya-putra-dārān abhimanyeta.

Kulyan apy asya sveşu pătreşu sthapayet. (Ibid, p. 313.)

Karmani mrtasya putram räjye sthäpayet. Evam asya dandopanatäh putra-pauträn anuvartante. Yas tüpanatän hatvä baddhvä vä bhümidravya-putra-därän abhimanyeta, tasyodvignam mandalam abhäväyottisthate. . . (Ibid., p. 313.)



guards, etc., were appointed from among them.¹ The conditions of that time were such as to make it desirable to restrict these appointments to certain families. If a king were childless, he selected his successor from among these powerful sāmantas. Sometimes he managed that his wife should have a child by some friendly sāmanta. When all methods failed, it appears that the administration was continued by the federation of nobles, related to him and already in attendance at court as courtiers.² It appears that Kautalya approved of this system of administration, as long as any danger was ahead, and the heir-apparent was unfit to protect the kingdom from calamity.

The relations of these sāmantas with the king were also based on agreements (samdhi) which varied in different cases. A sāmanta could either—

(1) Provide a fixed number of troops or the best fighting men of his army, whenever so required (*ātmāmişa-saṃdhi*), or

(2) Supply a commander of his army and place his heir in the king's custody as a hostage (*puruṣāntara-saṃdhi*), or

(3) March with his army against another country, whenever ordered to do so (adrsta-purusa-samdhi), or-

(4) Give to the king the ladies of his household and the leading men of his estate as hostages to assure his allegiance (dandopanata-samdhi), or

¹ Pitr-paitāmaho vašyah samhato datta-vetanah | Vikhyāta-pauruşo janyah kuśalah kuśalair vytah.

(Kāmandakīya-nīti-sāra, sarga 4, śloka 63, p. 63.)

Pitr-paitāmaham nityam advaidhyam hrdayānugam

Mahal laghu samutthänam mitram käryärtham isyate. (Ibid., śloka 68, p. 64.)

Janapado'bhijātah . . . vairāņām akartety amātya-sampat. (Kau. Artha., p. 15.)

² Vrddhas tu vyädhito vä räjä mätr-bandhu-tulya-guņavat-sämantänäm anyatamena ksetre bijam utpädayet. Na enikaputram avinitam räjye sthäpayet. Bahünäm eka-samrodhah pitä putra-hito bhavet | Anyaträpada aisvaryam jyestha-bhägi tu püjyate. Kulasya vä bhaved räjyam kulasangho hi durjayah | Aräja-vyasanäbädhah sasvad ävasati ksitim. (Kau. Artha., p. 35.)



(5) Pay a certain amount of money in a lump sum every year (*parikraya-samdhi*), or

(6) Give as much money as could be carried on a man's shoulders as subsidy (*skandhopaneya-samdhi*), or

(7) Give an exorbitant amount of money (kapālasamdhi), or

(8) Cede a portion of territory to the king (ādistasamdhi), or

(9) Cede his whole territory with the exception of his headquarters (*ucchinna-samdhi*), or

(10) Give the produce of his lands (apakraya), or

(11 Give even more than his lands produced (paribhūṣaṇa).¹

The $K\bar{a}mandak\bar{i}ya-n\bar{i}ti$ -sāra specifies twenty forms of tribute, and adds that each among them had numerous minor heads.² All these kinds of tribute were classed by Kauţalya under four heads, namely, (1) Treasury, (2) Army, (3) Personal Service, and (4) Estates.

Even after pursuing such a policy as has been described above, it was not an easy task for a king to keep these powerful *sāmantas* under control. As long as a king was strong, they paid their tribute. But they never did this willingly.

¹ From :— Pravrtta-cakrenäkränto räjñä balavatäbalah Samdhinopanamet tärnam kośa-dandätma-bhümibhih.

To :--

Kuryād apeksaņam pūrvam paścimau tv ābalīyasam Ādāya phalam ity ete deśopanata-samdhayah.

(Ibid., pp. 270-1.)

² Balinä vigrhitah san nrpo'nanya-pratikriyah Äpannah sandhim anvicchet kurvänah käla-yäpanam. 1. Kapäla upahärać ca santänah samgatas tathä Upanyäsah pratikärah samyogah puruşäntarah. 2. Adrsta-nara ädista ätmämise upagrahah Parikrayas tathocchinnas tathä ca paradüşanah. 3. Skandhopaneyah samdhić ca sodašah parikirtitah Iti sodašakam prähuh samdhim samdhi-vicakşanäh. 4. (Tathäntarbheda-rüpena bhavaty eko'py anekadhä.) (Kä mandakiya-niti-sära, p. 124.)

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Seeing a powerless king on the throne, they collected their own friends and began to delay payment on some plea or other; and gradually the whole kingdom turned into anarchy. Each sāmanta began to call himself independent. Frequently a powerful sāmanta who had attained the command of the whole army dethroned or murdered the king, and established his own authority. He demanded payment of tribute and other dues. Those who refused or delayed payment on any plea were regarded as enemies : a policy of secret poisoning or murder was adopted towards them.

When the king, on the other hand, was successful in his policy of weakening the power of the $s\bar{a}mantas$, it can well be understood that many such once important families became humbled and reduced in circumstances; and these, losing their former independence and influence, came to occupy an inferior position, and set up as large or small farmers, or took to trade or banking or other professions. Similarly descendants of collateral branches of original $s\bar{a}manta$ families would, as time passed, have to adopt a separate means of livelihood. All such persons are understood for the purpose of this thesis to be included within the $s\bar{a}manta$ agricultural community or the $s\bar{a}manta$ class.

In the rise or fall of a sāmanta family its economic, social and political conditions played an important part. Probably at the ceremonies connected with marriage, tonsure, sacred thread, etc., the attendance of the nearest relatives was thought essential, as it is at present. Owing to family quarrels each group was often divided among many hostile parties. Sometimes these quarrels developed into a kind of civil war, and resulted in the extermination of the whole group. It is rather interesting to observe that social disputes occurred of much the same character as nowadays. The dialogue between Vāsudeva and Nārada in the Mahābhārata, often quoted to establish a theory regarding the democratic or republican form of ancient Indian kingdoms, deals only, in my opinion, with disputes and quarrels originating from

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the divisions of the important families of sāmantas into separate parties. These groups were often called gaṇa, cakra, mandala, etc. The headman appointed or selected by them was termed cakradharin or mandala, etc. As the sāmantas, after losing their political power, took to trade, industry or agriculture, mandala, cakradharin, cakravartin, caturdhurīna, etc., gradually began to mean a headman of traders or industrial people, or of agriculturists, etc.

Side by side with these agriculturist sāmanta families, there were descendants of royal servants who were appointed as grāmika, grāma-bhrtaka, etc., called grāma-kūtas, mahattaras, etc. As the central government was generally not strong enough to protect the people from the greed of the powerful sāmantas, naturally the people, to save themselves from trouble and calamity, preferred to live under some form of organization. It appears that the labouring classes organized themselves under the kāya; the industrial and professional classes under the śreni; and the trading classes under the nigama.



CHAPTER VII

THE LABOURING CLASSES

I. THE WAGES OF LABOUR

GOVERNA

MINISTRY OF

II. THE STANDARD OF LIVING OF LABOUR

CHAPTER VII

THE LABOURING CLASSES

I. THE WAGES OF LABOUR

A S already stated, the lower or labouring classes included a vast diversity of peoples of different races and tribes who had either been subjugated in war or become impoverished, or constrained for other reasons to undertake military or police service, or perform agricultural or industrial labour or do menial work. The great Linguistic Survey carried out by Sir George Grierson assists us to differentiate between many of the groups following such avocations; but the origin of many is still obscure. All were looked down upon or regarded as degraded or impure by the upper classes.

According to the *Upāsaka-daśā-sūtra* the following fifteen professions should be considered impure, and unworthy of a Jain :—

(1) Trading in coal; (2) cutting wood; (3) earning a livelihood by driving a bullock cart, or (4) pack-horses or mules; (5) tilling the land; (6) selling things like butter, oil, $gh\bar{i}$, etc.; (7) trading in elephant tusks; (8) manufacturing shellac; (9) selling poisons; (10) trading in hair; (11) manufacturing sugar, etc.; (12) branding cattle; (13) clearing forest and jungle; (14) draining marshes and lowlands; and (15) keeping wild animals for sale.¹ Kautalya informs us that the professional classes denoted by the term $k\bar{a}ru$

¹ Ingäla-kamme, vaņa-kamme, sādī-kamme, bhādī-kamme phodī-kamme, danta-vāņijje, lakkhā-vāņijje, rasa-vāņijje, visa-vāņijje, kesa-vāņijje, janta-pīlaņa-kamme, nillaāchaņa-kamme, davāggi-dāvaņayā, saradahatalāva-sosaņayā, asaī jana-posaņayā. 51.

(Upāsaka-dašā-sūtra by Sudharma Svāmin.) Vrttayo'ngāra-vipināno bhāţī-sphoţa-karmabhih. Vāņijyā kā danta-lāksā rasa-keša-visāśritā. 52. Yantra-pīdanakam nirlāfichanam dānam davasya ca. Sarah šoso'satī posaš ceti pañca-daša tyajet. 53.

(Dharma-samgraha by Manavijaya, p. 109.)

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(' artificer ') should be considered impure ¹; and silver or gold should not be purchased from them.² It appears also that the women of these classes used to work in cotton, wool, timber and other factories in order to supplement the income of the family.³

According to Manu the men and women employed upon government work should be paid daily according to their work and position ; unskilled and skilled labourers should get one and six pana respectively, clothes after six months and a drong of rice once a month.⁴ From this statement it appears that the average pay of an unskilled day labourer was one pana a day. If we examine the list of fines imposed on labourers for the offence of neglecting their work after taking their wages, and those imposed on employers for the offence of not paying their wages after taking work from them we arrive at the same conclusion. "Disputes regarding wages," writes Kautalya, " shall be decided on the strength of evidence furnished by witnesses ; in the absence of witnesses the master who has provided his servants with work shall be examined. Failure to pay wages shall be punished with a fine of twelve panas, or ten times the amount of wages." 5 Six and twelve panas were, therefore, five and ten times the amount paid as wages to the labourers. If we divide the amount of fines by five and ten, we get the daily wages of an unskilled

¹ Asucayo hi kāravah. (Kau. Artha., p. 180.)

² Suvarņakārānām asuci-hastād rūpyam suvarņam anākhyāya sarūpam kriņatām dvādasa-paņo daņdah. (Ibid., p. 202.)

³ Kautalya's Artha-sästra, Prakarana, 40, pp. 113-15.

⁴ Rāja-karmasu yuktānām strīņām presya-janasya ca Pratyaham kalpayed vrttim sthānakarmānurūpatah. 125. Paņo deyo'vakrştasya sad utkrştasya vetanam Sāņmāsikas tathāchādo dhānya-droņas tu māsikah. 126.

(Manu-smrti, vii.)

⁶ Käru-śilpi-kuśilava-cikitsaka . . . yathä vä kuśaläh kalpayeyuh tathä vetanan labheta. Säksi-pratyayam eva syät. Säksinäm abhäve yatah karma tato'nuyuñjita. Vetanädäne pañca-bandho dandah. Satpano vä. Apavyayamäne daśa-bandho dandah. Dvädaśa pano vä. (Kau. Artha., p. 184.)

Grhitvā vetanam karma akurvato bhrtakasya dvādaša paņo daņdah. (Ibid.)

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labourer as 1.2 panas a day, or about a silver māsaka. The fine of twelve panas, which represented ten times the actual wage, is repeated again in the sixty-sixth section of the Arthasāstra of Kauțalya. For the same offence Manu assesses the fine as eight silver krsnalas.1 As the rate of exchange between silver and copper panas was in the time of Manu as 1:16, and some time after him as 1:20, the eight krsnalas may be regarded as ten times the wage. Thus, as far as the law-books are concerned, it appears that one pana a day was an established rate of wage. Possibly it had been fixed by authority as the minimum wage of a day labourer. This conclusion is corroborated by the Jātaka stories, which were compiled some time about the Gupta period, and give a good idea of the daily life of the people at the time. No doubt these stories cannot be taken as authorities for any scientific work ; but at the same time they cannot be neglected entirely, as they contain much useful material. Take, for instance, the Gangamāla-jātaka. Here we find the wages given to a water-carrier as half a silver māsaka, or say half a copper pana a day.² The same wage was paid to a female labourer. The Visahya-jātaka, by way of describing the virtue of charity, says that the earning of a grass-cutter was one silver māşaka a day, and adds that it was enough to provide two persons with food.³ The wages of skilled labourers were not definitely fixed. The lowest amount given to them was sixty panas a month, or about two panas a day. All servants

¹ Bhrtyo närto na kuryäd yo darpät karma yathoditam Sa dandyah krsnaläny astau na deyam tasya vetanam.

(Manu-smrti, viii, 215.)

² Tadā Vārāņasiyā uttaradvārāvāsī eko bhāţiko udakabhāţim katvā laddham addhamāsakam pākāriţthikāya antare thapetvā. (The Jātakas, ed. by Fausboll, vol. iii (1883), p. 446.)

^a Să tam äha. " Sămi nagare chano vattati sa ca te kiñci atthi mayampi ... äma atthîti ... ' kittakam sămîti ' ... addhamāsakoti ... āma atthîti, kittakan ti. Addha māsako-vā " ti. (Ibid., p. 446.)

Eko amhākam bhavissati, ekena dānam dassāmīti dve tiņakalāpe bandhitvā kāje laggetvā ādāya gantvā nagara-dvāre vikiņitvā māsake gahetvā ekam kotthāsam vācakānām ādāsi. (Ibid., p. 130.)

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connected with the king's cattle were paid at this rate.¹ From 250 copper panas to 1,000 copper panas were the wages fixed by Kautalya for the staff of clerks, accountants, writers, foretellers, readers of omens, astrologers, readers of Purāņas, story-tellers, bards, musicians, etc.² Coming down to the twelfth century A.D., we find that the amount paid monthly to the priest of the Somanātha temple in Gujarāt was from nine drammas to fifteen drammas.³ Multiplying by sixteen, the monthly wages of the Somanātha temple's staff comes to from 144 copper panas to 240 copper panas a month. As necessary details are not available it will be better not to draw any conclusion from these latter rates of wages.

From the available evidence it thus appears that the wages of an unskilled labourer varied approximately between half and one *pana* a day. The wage of government menial servants, as given by Kautalya, was two *panas* a day. How far do these figures represent the actual facts? We gather information that will assist us to answer this question from the inscriptions dated circa A.D. 625 published by Professor Sylvain Lévi in his book entitled *Le Népal*. According to these inscriptions, the wages of door-keepers, street watchmen and sweepers were approximately two-thirds of a copper *pana* a day. The menial staff attached to the palace, royal elephants and horse, and personal servants were paid from one and a half to two *panas* a day.⁴ Soldiers and cowherds

¹ Catuşpada - dvipada - paricāraka - pārikarmikopasthāyika - pālaka - visti bandhakās sasti-vetanāh. (Kau. Artha., p. 248.)

² Kārtāntika-naimittika-mauhūrtika-paurāņika-sūta-māgadhāh purohitapuruşās sarvādhyakşāś ca sāhasrāh. Šilpavantah pādātāh samkhyāyakalekhakādi-vargah pañca-śatāh. Kuśīla-vāstvardha-trtīya-śatāh. Dviguņavetanāś caisām tūryakarāh. (Ibid., pp. 247-8.)

³ Püjäm apratimäm karttum pratimäsam upeyusah. Deyäh paňcadaśa drammäh paśupälasya dharmmatah. 62.

Cäturjätaka-pädänäm yah sammilita-pottake. tatah pamcadaśa drammän pratimäsam vyadhatta yah. 63. (EI., vol. i, No. xxxii, pp. 285-6.)

⁴ According to Sankha and Likhita "Vähana-yodhänäm satatam anviksanam, pratimäsam dvisauvarnikī vrttib, sänmäsyam smaranam, cäturmäsyam vä" i.e. the wages of soldiers or servants connected with the king's cattle shall be 2 suvarnas for two months. It has already been explained





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received a similar wage. The complete table of wages is as follows :--

TABLE NO. XXII

NEPAL TABLE

TABULATED STATEMENT OF THE WAGES OF DAY LABOURERS AND GOVERNMENT SERVANTS (circa A.D. 625)

	*	P	Vages	per	Wag	es in co	pper .	Author	ity:
		m	ensem	in		paņas		Le Nép	pal,
Manual workers and servants.	Pur	rāz	as-P	anas.	Annual	Monthl	y Daily.	vol.	iii.
Elephant-man (abhiseka-hastin)	:	3 I	Pu1	Pa.	588	49	· 11	pp. 8	85-9
Horse-groom (abhisekāśva)			,,	,,	>>	77	,,		
Messenger (dhavaka-gecchi)			,,	,,	,,	.,	. 37	39	
Officiating priest			,,	,,	,,	22	22	59	
Treasurer ? (bhānda) .	. :	2 ,	., 2		408	34	1	57	
Personal attendant (camara-									
dhara)			,,	,,	35	>?	,,,	52	
Personal attendant (pijhadhyak	sa)		,,	3.0	,,	23	**	77	
Flag-carrier (dhvaja-manusya)			,,	>>			,,		
Water-carrier (paniya-karmanta	ika)	2	,,	,,		27	,,,	32	
Flag-carrier (puspapatākāvāha)		3	**	23	22	27	29	33	
Palace servants (raja-kula-vastu	ınā								
niyukta-mänusya) .		-	>2	,,			>>	29	
Door-keeper		1	,, 4		240	20	3	5.5	
Street-watchman			27	27				22	
Sweeper			,,	32	**	1 22	25	22	
Soldier (bhata)	. !	2	,, 2	77	408	34	1	,,	
Cowherd (gausthika) .				.,	79	3.9		77	
General of the army (nāyaka)	. 20	0,	., 0	.,	3800	320	10	27	
Allowance for the grass of a hor	se l	0	,, 2	2.2	24	2	It	22	

Coming down to the eleventh and twelfth century A.D. we obtain some information about the scale of wages from the Southern Indian inscriptions. These are full of useful material, though at first sight they seem quite unintelligible. Before they can be properly utilized it is necessary to overcome three difficulties, namely, one connected with weights, the second connected with the coins, and the third regarding the necessary details of each particular kind of work. A solution of the difficulties in respect of weights and coins has been suggested in the chapter dealing specially with those subjects. The

in the 3rd section of Chapter III that the rate of exchange between the gold māşaka and the copper pana was 1:36. Taking the swarna referred to above to be equivalent to the gold māşaka the wage of a soldier comes to 36 copper panas per month, or 1½ copper panas per day, i.e. much the same as mentioned in the Nepäl inscriptions. (For the Samskrth passage quoted above, see the Vira mitrodaya (rāja-niti-prakarana), vol. vi, p. 262.)



wages of the workers and the labourers attached to the temple in Tanjore are given in the Southern Indian inscriptions in paddy. As the price of two *kalams* of paddy was one $k\bar{a}\dot{s}u$, the wages of the temple workers and the labourers in paddy and coin may be arranged in tabular form in the following manner:—

TABLE NO. XXIII

SOUTHERN INDIAN TABLE

TABULATED STATEMENT OF THE WAGES OF DAY LABOURERS AND SERVANTS. (IN THE COLA COUNTRY AT THE BEGINNING OF THE ELEVENTH CENTURY A.D.)

			Wages	in kind	Wages in	r cash.	
			per	· year.	Annual	Daily	
			K	alams of	in	in	
Manual workers and s	ervants.		Share.	paddy.	kāśus.	akkas.	Authority.
Deummana			1	100	50	12	SIL. vol.
Handman of moons		•	ĩ	100	50	12	ii In-
neadman or peons .	•	•	g	40	20	13	trodue.
Ordinary peon		•	20	40	20	35	tion n
Lampingnter			12	100	50	12	19 table
Washerman	•	•	1	50	95	13	R R
Barber	10 Mar	•	2	100	50	12	.D.
Tailor		•	1,	100	75	13	25
Jewel-threader			12	150	10	10	22
Brazier			1	100	50	15	
Master-carpenter .			11	150	75	22	2.5
Ordinary carpenter .			24	75	371	14	**
Goldsmith superintende	ent.		1	100	50	13	7.8
Tiruppadriyam reciter			(3 ka	rūņi of		1	
			pade	dy per day)	45	12	
Water-drawer and wat	er-carrie	r.	(2 k	arūni of			S11., vol.
			padd	y per day)	30	1	iii, p. 8.
Annual allowance of	an act	tor.	*				
together with his	troop	for					
acting a drama once	a vear			120	60	2	SII., vol.
astring a straining strain	di gran						n-iii, p.
							307.
Deddy measurer			1	100	50	18	Ibid., p.
raddy-measurer .			111	100			312.
Tomala convente				64-94	32-47	1-11	p. 320.
A completent	in the state	•		200	100	31	1) Freeze
Accountant .	1	1		75	371	11	Constanting of the
Under-accountant .		•		100	50	12	p. 333.
Temple-watchman			1	100	50	12	vol. ii.
Dancing girl .			1	100	00	~ 3	Intro-
							duction
							n 18
Destruction			6	900	100	91	p. 10.
Dancing-master			1.3	175	871	2	**
Lute-player			14	110	OI B	91	7.6
Samskrta musician			14	150	10	01	25
Tamila musician		•	>>	87	22	23	59
Garland-maker .			10.00		00	28	Thid" rol
Potter's allowance	100 . tak	1	(2 tuņ	n or paddy			ili p 9
			Der	month			may p. o.

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It has already been mentioned that according to the Manusm_ti and other law-books the wages of an unskilled day labourer were one copper pana a day. It varied from time to time, possibly between half and one pana. The minimum amount mentioned in the Jātakas and in the Nepāl table is half and two-thirds of a pana respectively; in the Southern Indian table it varies from two-thirds to one akka. According to Mr. Moreland the average wages of unskilled and skilled labourers in the early Mughal period (circa A.D. 1550) were as shown in the following table :---

TABLE NO. XXIV

Mughal Period (circa a.d. 1550) Tabulated Statement of the Wages of Day Labourers and Servants

				Authority :			
Monthly workers and servants.	Month Rs.	ly wages in däms.	Daily wages in dāms.	Morel at the dec	and : India ath of Akbar		
Ordinary labourer			2	pp.	191-2		
Superior labourer			3-4	,,	,,		
Carpenter			3-7	, ,,	.,		
Slave		30	1	,,	23		
Sweeper		65	2 Appro	Χ. ,,			
Camel-driver .		60	2 ,,				
Servant	2	80	23	.,	**		
Servant	3	120	4	,,	57 mm		
Messenger	3-4	120-164	4-51		**		
Household servant	2	80	23	2.5			
Peon	11	60	2				
Ordinary artisans	1	44	11		**		

It appears from the above table that the wages paid to a day labourer in the time of Akbar were about two $d\bar{a}ms$ per day. As far as prices of food-stuffs were concerned it has already been explained that they rose from the fifth century A.D. up to the eleventh century A.D. about seven times and from the eleventh century A.D. up to the sixteenth century A.D. about two-thirds times. Taking the rise of prices on the whole as about seven times, we can get some idea of the economic condition of the working classes in ancient India. From evidence quoted above it is clear that in the fifth century A.D. a day labourer was paid from half to one copper *pana* per day, or say on the average two-thirds of a copper
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pana. According to Mr. Moreland and others in the time of Akbar a sweeper was paid two dāms per day. As a dām was equal to two and a quarter copper panas as far as the metallic content was concerned, two dams would be equal to four and a half copper panas. Dividing four and a half copper panas by two-thirds, we find the rise in wages to have been six and three-quarters times or, say, in round numbers seven times. It is clear from this that the wages rose according to the general rise of prices. According to De Laet a messenger in the time of Akbar was paid from four to five and a half dams or, say, on the average five dams. According to the Tanjore inscriptions a head peon was paid one and two-thirds akkas per day. If five dāms be taken as equivalent to 12 akkas, we do not find any rise in the wages of the peon. The wages of a carpenter in the sixteenth century A.D. were from three to seven dāms or on the average about five dāms. The wages of a carpenter in the eleventh century A.D. were from one and a half to two and a half akkas, or on the average two akkas (= six $d\bar{a}ms$) per day.

Thus it is clear from the tables of wages and prices that wages rose according to the rise in prices. Whatever opinion may be formed about the economic condition of the labouring classes in the sixteenth century A.D., the same will apply to their condition during the Hindu period. Mr. Moreland has already shown that the economic condition of the poor classes in the time of Akbar was not satisfactory. Their standard of living was very low. There was no furniture or other articles of comfort in their poor cottages. They were no better off in the Hindu period. The social organization prevailing in the Hindu period suited the upper classes very well; but its effect on the poor was very bad.

(Take, for instance, the wages paid to a day labourer in the early Hindu period. All authorities agree that it was about two-thirds *pana* a day. After full consideration of the prices of food-stuffs and of the allowances made to a day labourer, it appears to me that this was little more than GOVERNMENT OF INDIA



sufficient to furnish food, clothes, and other necessities to an average family containing, say, four or five members. Perhaps the other adult members of the family had also to labour for their living.

There is no doubt that in the time of the Jātakas the purchasing power of a copper pana was very high. Onefourth of a copper pana was quite sufficient at that time to furnish a good meal to a day labourer. The daily wage paid to an unskilled labourer varied between half and one pana. According to an inscription connected with the Kākanādavota-śrī-mahāvihāra Amarakārdava, the son of Udāna, gave twenty-five dināras in order to provide daily meals for ten monks and oil for two perpetual lamps.¹ As in those days the interest on one dināra sufficed to supply enough oil for a perpetual lamp, two dināras may be deducted from the above amount as representing the cost of the two oil lamps, and the remaining twenty-three dināras may be regarded as the sum required for feeding ten monks. Taking the rate of interest as fifteen per cent, and the dināra of the inscription as equal to sixteen silver panas, the daily interest on twentythree dināras would come to approximately 2.5 silver māsakas, or copper panas. Dividing 2.5 by ten, the allowance would come to a quarter of a silver māsaka per monk.² The amount granted for the monthly stipend of a monk registered in the Pandu-lena caves of Nasik is one padika.3 In inscription No. 12 of the same place the amount recorded is a little less.⁴ If we take the padika as equivalent to a silver pana, the daily allowance per monk comes approximately to half a silver māsaka or half a copper pana, or just double the former amount (quarter of a silver māsaka). If the padika of the inscriptions

¹ Chapter IV, p. 102, Note 3.

⁸ By accepting the *dinara* as equal to 32 silver *panas* the allowance per monk comes to $\frac{1}{2}$ silver *masaka* or $\frac{1}{2}$ copper *pana* per day.

³ Chapter III, p. 94, Note 1.

⁴ Civarika solasaka paliko ca māse utukāle (No. 15); Civarika vārasaka gimhāsu padiko māse (No. 18); Civarika solasaka padiko māse ca utukāle (No. 21), (Arch. Surv., vol. v.) (Quoted in the *EI*., vol. viii. No. 8. p. 83.) Bomb. Gaz., vol. xvi, p. 574.



be held to be the same as the $p\bar{a}dika$, or four copper panas, the daily allowance per head comes approximately to one-eighth silver $m\bar{a}saka$ or one-eighth copper pana, exactly half of the said amount. According to Kautalya the allowance (bhakta) given to watchmen, slaves and labourers shall be in proportion to the amount of work done by them. "One prastha of rice, pure and unsplit, one-fourth part of $s\bar{u}pa$, and clarified butter or oil equal to one-fourth part of $s\bar{u}pa$ will suffice to form one meal of an Ārya. One-sixth prastha of $s\bar{u}pa$ for a man and half the above quantity of oil will form one meal for a man of low caste (avara). The same rations less by one-fourth the above rations for children."¹ These allowances may be tabulated as follows :—

TABLE NO. XXV

For an Ārya.			Prastha.		For an Avara.				Prastha.
Rice				1	Rice				1
Sūpa				1	Sūpa				1
Salt			. 1	1	Salt				rta.
Butter	or o	il.		1	Butter	or	oil		1

It has already been stated that the wages of unskilled labourers do not show any remarkable variation. They moved between half and one *pana* a day. We shall probably not be far wrong if we accept the prices as found from the Tanjore inscriptions as being seven times higher than those which prevailed in the early Hindu period. The price of the best husked rice according to the Table No. XIV was five copper *panas* per maund. As the *prastha* weight used for distributing allowances to servants was equal to one and seven-eighths avoirdupois pounds, the price of one *prastha* of rice comes to two *māşakas* approximately. As the price of $s\bar{u}pa$ and rice was not very different, '5 *māşaka* may be taken as the price

¹ Sanda-väta-gopāla-dāsa-karmakarebhyo yathāpuruşa-parivāpam bhaktam kuryāt. (Kau. Artha., p. 118.)

Akhaņda-parišuddbānām vā taņdulānām prastham, caturbhāgas sūpab, sūpa-sodašo lavaņasyāņišah, caturbhāgas sarpisah tailasya vā ekam āryabhaktam. Pumeah sadbhāgas sūpah, ardhasneham avarāņām. Pādonam striņām. Ardham bālānām. (Ibid., p. 96; see also Kau. Artha., English translation, p. 112.) OVERVISENT OF INDIA

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of supa. Butter was twelve times dearer than rice; so 1.3 copper māşakas would not be an unreasonable price for one-sixteenth prastha of butter. Thus the total cost would come to 3.8 māşakas (2 + 1.3 + 5). We may add half a māsaka to cover the cost of miscellaneous articles such as wood, spices, vegetables, etc. We cannot be very far wrong if we calculate the allowances mentioned by Kautalya for an Arya and an Avara as equivalent in coin to four and a half and four māşakas respectively. This conclusion is corroborated by a very important sentence in the Artha-sāstra of Kautalya, namely, sasthi-vetanasyādhakam krtvā hiranyānurūpam bhaktam kuryāt,1 which means that those servants who are paid sixty copper panas a month should be paid in kind in time of financial difficulty at the fixed rate of one ādhaka of food to a copper pana. As one adhaka was equal to four prasthas, the price of one prastha, according to the above sentence of the Artha-śāstra of Kautalya, comes to onefourth of a copper pana or, say, four copper māsakas.

It has already been concluded that the kalañju of the Southern Indian inscriptions is the same as the niska of Bhāskara, and the purchasing power of seven of them was equal to that of one $d\bar{i}n\bar{d}ra$ of the Gupta inscriptions. It is rather interesting to notice that inscription No. 1 of Rājakesari Varman, dated A.D. 1000, records the grant of 200 kalañjus of gold, and says that from the interest of the amount twelve Brāhmaņas should be fed before the god for an unlimited time. They were to be provided with one $\bar{a}l\bar{a}kku$ of clarified butter, five dishes of curry, five ulakku of curds, two areca-nuts and betel-leaves. The amount was understood to be sufficient to provide something also for the cooks and those who fetched firewood.² As the rate of interest

¹ Alpa-kośah kupya-paśu-kseträni dadyāt; alpam ca hiranyam.... Etena bhrtānām ca vidyā-karmabhyām bhakta-vetena-višesam ca kuryāt. Saşthi-vetanasyādhakam krtvā hiranyānurūpam bhaktam kuryāt. (Kau. Artha., p. 249.) This sentence has been incorrectly interpreted in the English translation.

² SII., vol. iii, No. 1, p. 3.



m the Tanjore district was twelve and a half per cent, the annual interest on 200 kalañjus would come to twenty-five kalañjus. Dividing this by twelve, we get $\frac{25}{12}$ kalañjus as the amount per head. If we multiply by 256 and divide the resultant by 360, we get one and a half copper panas as the daily food allowance. Multiplying again by sixteen, we get twenty-four copper māşakas per day. Similarly inscription No. 55 of Rajamahendra registers twenty kalanjus for the provision of food and other things for one Brahmana.¹ In this case the amount per day comes to nearly twenty-eight copper māşakas. Inscription No. 45 of Mahāvali Vānarāya records the same amount of twenty kalanjus for one daily offering to a god, which means in other words one good daily meal to a Brahmana.² Inscription No. 8 of Kampavarman records a grant of 400 kādi of paddy to provide daily food for two Brāhmaņas; and the annual interest on those 400 kādis is given in the inscription as 100 kādis.³ As six kādis were equal to one kalam, and the value of two kalams was one kāšu or twelve akkas, the 100 kādi of paddy would be equal in money value to 100 akkas. Dividing 100 akkas by 360, and multiplying by seven, the daily amount allotted for two Brahmanas comes to 1.9 copper panas per day. Inscription No. 8 of Ravivarman of Kerala records that the king gave 100 panas (silver ?) per annum as wages to each of his soldiers.4 On dividing this by 360 and multiplying by sixteen, the wage per day comes to four and four-ninths copper panas. From all these records it is clear that four to five copper masakas sufficed to provide for one day in the early Hindu period, and one and a half copper panas in the eleventh century A.D. A day labourer earning two-thirds of a copper pana, or, say, twelve māsakas in

¹ Ibid., No. 55, p. 113.

² Ibid., No. 45, p. 97.

³ Ibid., No. 8, p. 13.

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4 EI., vol. iv, p. 150.

Bhattebhyah purato'tra ramga nrpateh pamcāšate sāksiņāh pratyekam pratihāyanam paņa-šatān dātum pratisthām vyadhāt. (Line 7.) NERABERT OF INDIA



The fifth century A.D., or two-thirds of an akka in the eleventh century A.D. could feed himself without any difficulty. If the family (in the fifth century A.D.) consisted of four to five members, and each ate two meals a day, it would have cost them about two *panas* a day. As the wage of a day labourer was at most about one *pana* a day, it seems likely that the other adult members of his family also worked in order to earn something. At all events it must be clear that the standard of comfort among the labouring classes was very low.

II. THE STANDARD OF LIVING OF LABOUR

According to the Mahābhārata the people belonging to the $s\bar{u}dra$ class should not be allowed to make money and become rich. They should only wear worn-out clothes thrown away by the upper classes. They should not leave the service of their master, even when they were not paid their wages. In time of financial trouble they should support their employer, because everything possessed by them in reality belonged to their master.¹ It appears from what Kautalya writes that serfs, slaves and landless labourers working for the king were provided with food and clothes in lieu of wages, and were given the petty sum of one and a quarter copper panas a month for pocket expenses.² House servants had to follow their master, carrying their umbrellas, shoes and other things,³ just as at the present day. These poor landless labouring classes, according to Manu, were born only to

¹ Südra etän paricaret trin varņān anusūyakah | Samcayāmś ca na kurvīta jātu śūdrah kathamcana. (*Mahābhārata*, Šāntiparvan, adhyāya 59, śloka 32.)

Adhāryāņi visimāni vasanāni dvijātibhih | Šūdrāyaiva pradeyāni tasya dharma-dhanam hi tat. (Ibid., šloka 36.)

Südrena tu na hätavyo bhartā kasyāmeid āpadi. (Ibid., śloka 38.)

Atirekena bhartavyo bhartā dravya-parikṣaye | Na hi svam asti śūdrasya bhartr-hārya-dhano hi sah. (Ibid., śloka 39.)

² Sanda-väta-gopäla-däsa-karmakarebhyo yathäpurusa-pariväpan bhaktam kuryät. Sapäda-panikam mäsam dadyät. (Kau. Artha., p. 118.)

³ Auśiram upānad vyajanāni ca | Yātamāyāni deyāni śūdrāya paricāriņe. (Mahābhārata, Šāntiparvan, adhyāya 59, śloka 35.)

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work for the upper classes, and could not be made free even with the sanction of their own master.1 According to the Nārada-smrti there were three kinds of labourers, namely those serving in the army, those performing agricultural work, and those carrying loads from one place to another place.) The first class were considered the highest, and the last the lowest.² Skilled soldiers were placed by Kautalva in the grade of writers and accountants 3; and their position in society was equal to that of village headmen or village servants (grāma-bhrtakas). Soldiers coming from Kuru-ksetra, Matsya, Pañcala, Suraștra, etc., were considered to be superior,⁴ and were perhaps more highly paid. In time of war the crops were destroyed, cattle driven away, houses burned, and the villagers captured by an enemy were sold as slaves. The number of slaves was increased from time to time by the addition of persons who sold themselves to meet their obligations to creditors or the fines imposed by government officials. The law-book of Nārada enumerated fifteen different varieties of slaves.5

The standard of living of these poor labouring classes can

¹ Vänijyam kärayed vaisyam . . . däsyam südram dvijanmanäm. 410. Südram tu kärayed däsyam kritam akritam eva vä | Däsyäyaiva hisrsto'sau brähmanasya svayambhuvä. 413.

Na sväminä nisrsto'pi südro däsyäd vimuoyate | Nisargajam hi tat tasya kas tasmät tad apohati. 414. (*Manu-smrti*, viii.)

² Bhrtakäs trividho jňeyo uttamo madhyamo'dhamah | Šakti-bhaktyanurůpä syäd esäm karmäśrayä bhrtih. 22.

Uttamas tv äyudhīyo'tra madhyamas tu krşībalah | Adhamo bhāravāhah syād ity esa trividhah matah. 23. (Nārada-smīti, p. 145.)

³ Silpavantah pädätah sankhyäyaka-lekhakädi-vargah pañca-śatäh. (Kau. Artha., p. 248.)

⁴ Kurukşeträmé ca matsyámé ca pañcäläň éűrasenakān | Dirghān laghümé caiva narān agrānīkeşu yojayet. (Manu-smrti, vi, 193.)

⁵ Jaghanya-karma-bhājas tu šesā dāsās tripañcakāh. 25.

Grhe jātas tathā krīto labdho dāvād upāgatah

Anäkälabhrto loke ähitah sväminä ca yah. 26.

Moksito mahataś carnāt prāpto yuddhāt paņe jitah

Tavāham ity upagatah pravrajyāvasitah krtah. 27.

Bhaktadāsaš ca vijneyas tathaiva vadavāhrtah |

Vikretä cätmanah śästre däsäh pañcadaśa smrtäh. 28.

(Narada-smrti, ed. Jolly, pp. 146-7.)

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be judged from the *Harşa-carita* of Bāṇa, wherein he writes that at the time of Harṣa's march against the enemy "a cloud of dust was raised by bands of running foragers with loins a mass of fodder bundles and grey with chaff, sickles swinging from one part of their ancient saddles, loose dirty blankets made of bits of old wool and dangling in tatters, torn jerkins presented by their master."¹

Forced labour was one of those cruel and immoral customs that injuriously affected the position of the poor. Kautalya gives it his sanction, and seems to have regarded it as the lawful privilege of government servants and the land-owning classes. His *Artha-śāstra* is full of passages which show that forced labour (*visți*) was considered a rightful custom.² Even important religious sects like the Buddhists and Jains did not raise their voice against it.

From land grants it would appear that forced labour was considered to be one of the privileges which a king could bestow. A large number of land grants mention clearly that the land was given "with the right to occasional forced labour (*sotpadyamāna-visți*)".³ Sometimes families of potters and other industrial classes were assigned to the grantees.

When a king visited a village, poor people had to work hard to supply the provisions demanded by him. Even the nobles and rich inhabitants were not exempt. It is recorded in an inscription that the Mahāsāmantādhipati Sāntivarman sent a messenger with the order that "a supply of grass is wanted for our troops and elephants"; and they supplied it.⁴ It appears from the *Harşa-carita* of Bāņa that the

¹ Anyatra samghaso ghäsikair busa-dhüli-dhüsarita-ghäsa-jäla-jälakitajaghanaiś ca purāņa-paryāņaika-deša-dolāyamāna-dātraiśca śirņorņā-śakalaśithila-malina-mala-kuthaiś ca prabhu-prasādīkrta-pāţita-paţaccaracalaccolaka-dhāribhiś ca dhāvamānair uddhūyamāna-dhūli-paţalam. (Harga-carita, p. 238.)

² Danda-viştî-karāvādhaih (p. 48); Kośa-vişti-dravya-dhānya-rasavrddhir bhavatīti. (Ibid.), etc. (Kau. Artha.)

- ³ Sotpadyamā (T*) na-vestikam (EI., vol. xi, p. 81);
 - Sotpadyamāna-vistih (ibid., p. 177);

Sotpadyamāna-vistika (ibid., vol. iv, p. 80, lines 61-2).

4 Ibid., vol. xi, p. 6.

inhabitants, whether rich or poor, were very badly off when the king marched through a village against a rival king. He thrillingly describes the feelings and troubles of the villagers by saying that "there poor unattended nobles, overwhelmed with the toil and worry of conveying their provisions upon fainting oxen provided by wretched village householders and obtained with difficulty, themselves grasping their domestic appurtenances, were grumbling as follows: 'Only let this one expedition be gone and done with.' 'Let it go to the bottom of hell.' 'An end to this world of thirst.' 'Good luck to this servitude of ours.' 'Good-bye to this camp, the pinnacle of all unpleasantness.".... Here, with cries of 'The labour is ours, but when pay-time comes some other rascals will appear', village servants, set to scare on the feeble oxen tripping at every step, were indiscriminately badgering the whole body of nobles." 1

Besides the landless labourers, there were other classes connected immediately with the land. The *upavāsas* (i.e. temporary inhabitants) in villages were obliged to accompany the village headman (grāmika) on his rounds; if they failed to do so, they were fined one and a half *panas* for each *yojana*.² They cultivated lands granted them for short periods. They could not be dispossessed at the sowing season.³ The position of *ksetrikas* and *karşakas* is not clear. Both words are used

¹ Kvacid asahāyaih klešārjita-kugrāma-kutumbi-sampādita-sīdat-saurabheya-šambala-samvāhanāyāsā vegāgata-samyogaih svayam grhīta-grhopaskaraņaih ' iyam ekā kathamcid daņdayātrā yātu. Yātu pātāla-talam trşņā-bhūter abhavanih. Bhavatu šivam. Svasti sarva-duhkha-kūtāya katakāya' iti durvidha-kula-putrakair nindyamānam. (*Harşa-carita*, p. 236; see English translation, p. 207.)

Kvacit 'kleśo'smäkam' phala-käle'nya eva viţāh samupa-sthäsyanta' iti mukharaih pade pade patatām durbala-balīvardānām niyuktaih khetane kheta-cetakaih khedyamānā-samvibhakta-kulaputra-lokam. (Ibid., p. 237, English translation, p. 208.)

² Grämärthena grämikam vrajantam upaväsäh paryäyenänugaccheyur ananugacchantah panärdhapanikam yojanam dadeyuh. (Kau. Ariha., p. 171.)

^a Kşetrikasyāksipatah kşetram upavāsasya vā tyajato bijakāle dvādaśapaņo daņdah, anyatra dosopanipātāvişahyebhyah. (Ibid.)



in the Artha-śāstra of Kautalya for cultivators.1 It appears that many persons of the trading class purchased small areas of land in the villages and rented them to ardha-sitikas on condition that they would give them half the produce,2 system which has continued down to modern times.³ a Kutumbins seem to have been people belonging to the professional classes, who cultivated land as a subsidiary means of livelihood. Kielhorn understood them to be only serfs.4 In reality their main professions were oil-pressing, the manufacture of various articles, washing, etc. At the same time, as a subsidiary profession, they grew vegetables, flowers, fruits, etc. The position of these people in society can be judged from the Kharapatan plates of Rattarāja, wherein he assigned the families of oilmen, gardeners, washermen, etc., to his teacher as retinue.5 Narada defines a kutumbika as a servant, enjoying the position of housekeeper in a wealthy family.6 Some of these professional classes were considered to be impure, as in modern times. As to the sīra-vāhakas of the Brhaspati-smrti, they were perhaps people who cultivated

¹ Karşakasya grāmam abhyupetyākurvato grāma evātyayam haret. Karmākaraņe karma-vetana-dviguņam hiraņyādānam pratyamša-dviguņam bhakşya-peya-dāne ca pravahaņeşu dviguņam amšam dadyāt. (Ibid., p. 173.)

Tasyākaraņe vā samāhartr-purusā grīsme karsakāņām udvāpam kāravevuh. (Ibid., p. 242.)

Karma-kālānurūpam asambhāşita-vetanam. Karşakas sasyānām, gopālakas sarpisām . . . labheta. (Ibid., p. 183.)

² Åhitasya nagnas tāpanam daņda-presaņam atikramaņam ca strīņām mülya-nāśa-karam. (Ibid., p. 182.)

² " The people also who engage in this cultivation for a share have in general two or three bigahs, for which they pay rent, and employ their leisure time in cultivating land for their neighbours for one-half of the produce, on which account they are called *adhiyars* (= ardha-hara), or half people." (Buchanan's Account of Dinajpur (1832), pp. 234-5.)

4 EI., vol. iii, No. 44.

³ Därikä kuţu(mbā)ni ca. Tailika kuţumvam(mbam) 1, mäläkära kuţumvam(mbam) 1, Kumbhakära kuţumvam(mbam) 1, rajaka-kuţumvam (mbam) 1... (E1., vol. iii, No. 40.)

⁶ Arthesv adhikrto yah syät kutumbasya tathopari | So'pi kärmakaro jäeyah sa ca kautumbikah smrtah. (Närada-smrti, p. 146.)

Karmänta-ksetra-vašena vä kutumbinäm simänam sthäpayet. (Kau. Artha., p. 56.)

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sīra lands. According to Wilson's Glossary, sīra is " a name applied to the lands in a village which are cultivated by the hereditary proprietors or village zamindars themselves as their own especial share, either by their own labourers and at their own cost, or by tenants at will, not being let in lease or farm" (p. 485, s.v. Sir, Seer). Thus, perhaps the siravahakas of the Brhaspati-smrti were tenants-at-will, who cultivated the landholder's own land for a share of the produce. They were entitled to one-third of the produce, if they cultivated the fields at their own expense; otherwise, being furnished with food, clothes and other necessaries by the estate-owner, they were allowed to take only one-fifth share of the produce.1 These sīra lands in the time of Kautalya were perhaps called sītā. When these lands were very extensive a supervisor was appointed called sītādhyaksa. Unfortunately the status and duties of this person have been wholly misinterpreted by some writers. He had to employ slaves, labourers, and prisoners (danda-pratikartr) to sow the seed, and to see that "the work of the above men shall not suffer on account of any want of ploughs (karsana-yantra) and other necessary instruments or of bullocks. Nor shall there be any delay in procuring to them the assistance of blacksmiths, carpenters, borers (medaka), rope-makers, as well as those who catch snakes, and similar persons".2 When the crops were ripe he had to arrange for the reaping and removal.³ Income derived from sitä (sira) lands was

¹ Tribhägam pañca-bhägam vä grhnivät sira-vähakah | Bhaktäechädabhrtah siräd bhägam grhnita pañcamam. Jäta-sasyät tri-bhägam tu grhniväd athäbhrtah | Bhaktäechäda-bhrto hy anna-vastra-dänena positah. (Brhaspati-smrti.) (Yäjäavalkya-smrti, Vyavahära, prakarana 16, p. 253.)

⁹ Bahu-hala-parikrştāyām sva-bhūmau dāsa-karmakara-danda-pratikartiphir vāpayet. Karsana-yantropakarana-balīvardais caisām asangam kārayet. Kārubhié ca karmāra-kuttāka-medaka-rajjuvartaka-sarpagrāhādibhis ca. Tesām karma-phala-vinipāte tat-phala-hānam dandah. (Kau. Artha., p. 115, English translation, p. 138.)

³ Yathäkälam ca sasyädi jätam jätam pravešayet | Na ksetre sthäpayet kiñoit palälam api panditah.... Khalasya prakarän kuryän mandalänte samäśritän | Anagnikäs sodakäś ca khale syuh parikarminah. (Kau. Artha., p. 118.)

also called $\bar{st}\bar{t}a$.¹ The overseer ($\bar{st}\bar{t}adhyaksa$) was allowed 1,000 paṇas a month to defray all expenses, as well as to maintain himself.² The saṇḍas (watchmen), vāṭas (connected with the gardens or the growing of vegetables), go-pālas (cowherds), dāsas (slaves), and karma-karas (labourers), when employed for the cultivation of \bar{sira} lands were provided with food and clothes, and were paid a nominal sum of one and a quarter paṇas a month.³ According to Manu labourers, carpenters and artisans had to work free once a month for the estate-owner ($r\bar{ajan}$).⁴ Owing to this the cultivation of $s\bar{sira}$ lands was done very economically.

Even in those days landowners were tenacious of their rights. Kautalya says :—" No ascetic other than a vānaprastha (forest-hermit), no company other than the one of local birth (sajātādanyas sanghah), and no guilds of any kind other than local co-operative guilds (samutthāyikād anyas samayānubandhah) shall find entrance into the villages of the kingdom. Nor shall there be in villages buildings (sālāh) intended for sports and plays. Nor, in view of procuring money, free labour, commodities, grains and liquids in plenty, shall actors, dancers, singers, drummers, buffoons (vāg-jīvana) and bards (kušīlava) make any disturbance to the work of the villagers ; for helpless villagers are always dependant and bent upon their fields ".⁵ He adds, further, that

¹ Sītādhyaksopanītah sasya-varņakas sītā. (Ibid., p. 93.)

* Kärtäntika-naimittika-mauhürtika-pauräņika-süta-mägadhäh purohita-puruşās sarvādhyaksāś ca sāhasrāh. (Ibid., 247.)

^a Şanda-väţa-gopāla-dāsa-karmakarebhyo yathāpuruşa-parivāpam bhaktam kuryāt. Sapāda-paņikam māsam dadyāt. Karmānurūpam kārubhyo bhakta-vetanam. (Ibid., p. 118.)

⁴ Kārukān šilpinaš caiva šūdrāmš cātmopajīvinah |

Ekaikam kärayet karma mäsi mäsi mahipatih. 138. (Manu, vii.)

⁶ Vänaprasthäd anyah pravrajita-bhävah sajätäd anyah saňghas sämutthäyakäd anyas samayänubandho vä näsya janapadam upanivešeta. Na taträräma-vihärärthäh šäläs syuh.

Nața-nartana-gäyana-vädaka-vägjivana-kuśilavā vā na karma vighnam kuryuh ; nirāśrayatvād grāmāņām ksetrābhiratatvāc ca purusānām, kośavisti-dravya-dhānya-rasa-vyddhir bhavatīti.

(Kau. Artha., p. 48; English translation, pp. 51-2.)

"commodities shall never be sold where they are grown or manufactured. When minerals and other commodities are purchased from mines, a fine of 600 panas shall be imposed. When flowers or fruits are purchased from flower or fruit gardens, a fine of fifty-four panas shall be imposed. When vegetables, roots, bulbous roots are purchased from vegetable gardens, a fine (of) fifty-one and three-quarter panas shall be imposed. When any kind of grass or grain is purchased from a field, a fine of fifty-three panas shall be imposed." ¹

The share of produce, taxes, fines and other dues were actually collected by sāmantas (estate-owners) and not by the 'king' or ruler of the country (desa), as generally understood hitherto. According to Manu vegetables, fruit, etc., should be supplied to them by the cultivators every day; and artisans, labourers, etc., were to work for them once a month entirely free.² It appears that the number of dues levied gradually increased. According to a Prakrta grant of the Pallava king Sivaskandavarman these dues were not less than eighteen in number. The economic condition of the village people can be realized from the tradition that milk, grass, firewood, vegetables and so forth had to be furnished gratis by the villagers to royal officers and their servants. With a view to saving a donee from these troublesome dues Sivaskandavarman ordered that "this garden in Chillerkakodumka, which belongs to the Brahmanas, (is to be) free from taxes . . . free from the taking of sweet and sour milk . . . free from troubles about salt and sugar,

¹ Jäti-bhūmişu ca paŋyānām avikrayah. Khanibhyo dhātu-paŋyā dāneşu satchatam atyayah. Puspa-phala-väţebhyah puspa-phalādāne catuspañcāśat-paņo dandah. Sandebhyah śāka-mūla-kandādāne pādonam dvipañcāśat-paņo dandah. Ksctrebhyas sarva-sasyādāne tripañcāśatpaņah. (Kau. Artha., p. 113; English translation, pp. 135-6.)

² Yat kiñcid api varsasya dāpayet kara-samjñitam |

Vyavahäreņa jīvantam rājā rāstre prthag janam. 136.

Kārukān śilpinaś caiva śūdrāmś cātmopajivinah |

Ekaikam kārayot karma māsi māsi mahīpatih. 139. (*Manu-smrti*, vii.) Kukkuta-sūkaram ardham dadyāt. Ksudra-pašavas sad-bhāgam.

Go-mahişäśvatara-kharosträś ca daśa-bhägam. (Kau. Artha., p. 243.)



free from taxes, forced labour . . ., free from the taking of the oxen in succession, free from the taking of grass and wood, free from the taking of the vegetables and flowers; with these and other immunities of the eighteen kinds it must be exempted and caused to be exempted by the inhabitants of the province, by the inhabitants of Apitti and by the inhabitants of Chillerkakodumka ".¹

Owing to these impositions the tenants and cultivators must have been nearly as miserable as the landless labourers. There is no doubt, however, that the economic condition of the upper and privileged classes (sāmantas) was quite different. They were the real owners of their estates, and enjoyed many sovereign powers over them. It appears probable that the right of ownership over forests, fisheries and mines also originally belonged to them. The development of such rights may be illustrated by the dues and taxes collected at the present day by estate owners in Oudh from their tenants.²

The abundance of natural products, the scarcity of the

¹ Akara-yollaka-vinesi-khattäväsam adudha-dadhi-gahanam aratthasamvinayikam alonagulaeehobham akaravetthikomjallam apäram parabalivaddagahanam atanakatthagahanam abaritaka-säka-puphagahanam evamädī kehi atthärasa jäti parihärehi. (EI., vol. i, p. 6.)

² The following dues and taxes realized by landowners from their tenants and sub-tenants in Oudh may be cited :--1, Najara daśaharā, 2, Najara holī; 3, Najara rānī-sāhibā; 4, Sara khatiyāvana; 5, Hathiyāvana; 6, Ghudāvana; 7, Muțarāvana; 8, Lativāvana; 9, Najara darvāra; 10, Candā numāiša; 11, Rakūma sarakāri; 12, Sagūna; 13, Nuksāna rasānī; 14, Harajānā; 15, Bhemta; 16, Takā bīrā; 17, Nacāvana; 18, Carāī; 19, Cirai ; 20, Lonā ; 21, Pāmsa ; 22, Khasī kamarī ; 23, Carasā ; 24, Cadhā mandira ; 25, Ugahanî cărā ; 26, Ugahanî rasa ; 27, Küta mahuā ; 28, Phasila āma ; 29, Kațahala ; 30, Vera ; 31, Ugahani tarakāri ; 32, Kāli mirca, dhaniā, lahasuna, pyāja, etc.; 33, Tamākhu; 34, Khaira supārī; 35, Lakadī; 36, Ladhiā; 37, Tattū; 38, Ganjāvana; 39, Sāla-māla vevākī; 40, Candā; 41, Phasaī; 42, Maraī; 43, Salābī; 44, Āva pāsī; 45, Tinî ; 46, Jhâu ; 47, Simka ; 48, Bakavata ; 40, Bada ; 50, Hakamālakānā; 51, Vyāha; 52, Mumha-dikhāi; 53, Simhādā; 54, Kikaviti; 55, Cūnā; 56, Pāna; 57, Kumhadā (Bamhanî or Pothā); 58, Rātiva; 59, Kolhū; 60, Valahari; 61, Caukidāri; 62, Matti; 63, Remhū; 64, Šorā; 65, Lāha; 66, Caharruma; 67, Cithadā; 68, Tāmīracāha; 69, Donāpatarī; 70,

metals and the causes aforesaid made it impossible for the village people to build stone and brick houses. Thatching grass seems to have been obtainable free by the villagers, and wood was very cheap. The cost of building a cottage in a village may be realized from the fines assessed for damaging a wall. According to Kautalya, "causing damage to a wall of another man's house by knocking shall be fined three *paṇas*; breaking open or demolishing the same shall be fined six *panas*, besides the restoration of the wall." ¹

Villagers and townspeople were in constant danger of fire.³ All kinds of preventive measures were in force. There was a strong government order that "kindling of fire shall be prohibited during the two middle-most parts of day time, divided into four equal parts during the summer. . . . Masters of houses may carry on cooking operations outside their houses. . . Those who work by fire (blacksmiths) shall all live together in a single locality. Each house-owner shall

Tāmīna; 71, Hamdiyā gagarī; 72, Cumgī; 73, Utarāi; 74, Dūdha; 75, Dahī; 76, Ghī; 77, Ūmta; 78, Dharavānā; 79, Kilika syāhî; 80, Davāi (Šarāba); 81, Camdā aspatāla; 82, Camdā madarasā; 83, Dalaīyā; 84, Jhauā; 85, Tukanī; 86, Vyānā; 87, Jūtā; 88, Muciyāvana; 89, Citthī; 90, Guluī; 91, Nimakarī; Kharī binavala; 92, Simgarī; 93, Ramgāi; 94, Sūta; 95, Palanga; 96, Loharai; 97, Badā dina; 98, Camdā kavi; 99, Harī; 100, Khela tamāšā; 101, Dhunakāī; 102, Bhīta : 103, Haka uparahatī ; 104, Tumandārī ; 105, Mūmja patāvaja ; .106, Gāmdara; 107, Imalī; 108, Khinnī; 109, Kaserū; 110, Jalapāna; 111, Mithāi batāsā ; 112, Vayāi (Damdīdārī) ; 113, Bajāi ; 114, Mumdana, chedana, etc.; 115, Ghatavāhī; 116, Bamsavāhī; 117, Amarūda, Nimbuetc.; 118, Bhasīda; 119, Mamākhī or Gomda; 120, Sāmāna tāllukedārī; 121, Thäthaväta; 122, Ghātā; 123, Kathā; 124, Punnī; 125, Mahatī; 126, Mukhiyā gīrī; 127, Patavāragīrī; 128, Bhūsā ugahanī; 129, Caukī, dārī; 130, Bhujāī; 131, Karabī; 132, Payāla; 133, Najaradastī; 134, Lakathā Bājarā; 135, Kāmdī; 136, Machalī; 137, Haka mālikānā; 138, Gudaitī; 139, Sahanagī; 140, Aphara; 141, Taulāi; 142, Begāri; 143, Begara hukkama ; etc.

¹ Para-kudyam abhighātena ksobhayatas tripaņo daņdah. Chedana-bhedane satpaņah pratīkāraš os.

(Kau. Artha., p. 196; English translation, p. 240.) ² Daivāny astau mahābhayāni—agnir udakam . . . rakṣāmsīti. Tebhyo janapadam rakṣet. (Kau. Artha., p. 207.)

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ever be present (at night) at the door of his own house ".1 (Kau. Artha., Eng. trans., pp. 176-7). Besides these measures everyone was obliged to give help when a fire broke out, and the man who set a house or a village on fire was thrown into the same fire.² Villagers were to sleep outside their houses in summer, and to observe all kinds of preventive measures.3 Natural and economic forces were so powerful against the making of stone or brick houses in villages that the idea had seldom struck anyone at that period. Even in modern times in the Bijnor district economic causes, combined with the cheapness of thatch and bamboos, deter the villagers from changing their thatched huts into brick houses. Babur also observed that " in Hindustan hamlets and villages, towns indeed, are depopulated and set up in a moment! If the people of a large town, one inhabited for years even, flee from it, they do it in such a way that not a sign or trace of them remains in a day or a day and a half. On the other hand, if they fix their eyes on a place in which to settle, they need not dig water-courses or construct dams because their crops are all rain-grown, and as the population of Hindüstan is unlimited, it swarms in. They make a tank or dig a well ; they need not build houses or set up walls-khas-grass abounds, wood is unlimited, huts are made, and straightway there is a village or a town !" 4

Further, it appears that the system of drainage in towns and villages was primitive. The sullage water from the houses

¹ Agni-pratikāram ca grişme. Madhyamayor ahnaś caturbhägayoh.

Aştabhago'gni-dandah. Bahir adhisrayanam va kuryuh . . .

Agni-jīvina ekasthān vāsayet. Sva-grha-pradvāresu grha-svāmino vaseyub. . . . (Kau. Artha., p. 145.)

² Pradíptam anabhidhävato grhasvāmino dvādaša--paņo daņdah. . . . Pramādād dīpteşu catuşpañcāšat--paņo daņdah. (Kau. Artha., p. 145.) Prādīpiko'gninā badhyah. (Ibid.)

³ Grīşme bahir adhiśrayanam vä kuryuh. Daśa-mūlī-samgrahenādhişthitā vä. Nāgarika-pranidhāv agni-pratisedho vyākhyātah....(Ibid., p. 207.)

⁴ The Babur-nama in English (Memoirs of Babur) by A. S. Boveridge vol. ii, p. 488.

often flowed into the lanes.¹ Bulls were set free to roam about, as in modern days.² There were no arrangements for lighting the town at night. We have an interesting description of the difficulty and danger of going about to visit friends at night.³ Although watchmen were on guard to protect the inhabitants from thieves,⁴ life seems to have been unsafe for those who had enemies. The popular amusements were gambling, dancing, drinking and resort to brothels. The royal quarter was regarded as particularly dangerous, especially in the early hours of the morning, when courtiers, attendants and prostitutes, often quite drunk, were wont to return to their homes.⁵ Dogs appear to have been employed to guard the shops at night.⁶

"The towns and villages have inner gates; the walls are wide and high; the streets and lanes are tortuous, and the roads winding. The thoroughfares are dirty and the stalls arranged on both sides of the road with appropriate signs. Butchers, fishers, dancers, executioners and scavengers, and so on, have their abodes without the city. In coming and going these persons are bound to keep on the left side of the road till they arrive at their homes. Their houses are

¹ Äyämi tandulodaka-pravähä rathyä. Loha-kaţäha-parivartana-krşnaśärä-krta-viśeşakeva yuvaty adhikataram śobhate bhūmih. (*Mrcchakaţika*, p. 12.)

² Nagara-catvara-vrşabha iva romanthāyamānas tisthāmi. (Ibid., p. 19.)

⁸ Bhava bhava baliyasi khalv andhakare mäşa-räśi-pravistova masigutikā dréyamānaiva pranaştā vasantasenā. (Ibid., p. 36.)

Vitah. Aho balavān andhakārah. Tathā hi: Āloka-višālā me sahasā timira-praveša-vicchinnā | Unmīlitāpi drstir nimīlitevāndhakāreņa. (Ibid., p. 36.)

⁴ Aye pada śabda iva mä näma raksinah. (Ibid., p. 105.)

⁶ Bho na gamişyāmy anyah ko'pi prayujyatām. . . . Anyac caivāsyām pradosa-velāyām iha rājamārge gaņikā-vitās cetās ca rāja-vallabhāh purusāh samcaranti. Tasmān maņdūka-lubdhasyeva kāla-sarpasya mūşika ivābhimukhāpatito vadhya idānīm bhavişyāmi. . . . (Ibid., p. 25.)

 Bho vayaşya âpanântara-rathyā-vibhāgeşu sukham kukkurā api suptāh. (Ibid., p. 95.)



surrounded by low walls, and form the suburbs. The earth being soft and muddy, the walls of the towns are mostly built of brick or tiles. The towers on the walls are constructed of wood or bamboo; the houses have balconies and belvederes, which are made of wood, with a coating of lime and mortar, and covered with tiles. The different buildings have the same form as those in China: bushes or dry branches, or tiles, or boards are used for covering them. The walls are covered with lime and mud, mixed with cow's dung for purity." (Beal, Si-yu-ki, vol. i, pp. 73–4.)



APPENDIX A

The Mulyadhyaya-parisista (MS.)

Atha mülyädhyäya-parisistam. Dvätrimsat-panikä gävas catuhkärsäpano varah. Vrse sat kärsäpanakä astäv anaduhi smrtäh. Dasa kärsäpano dhenor asve pamca-dasaiva tu. Hiranye kärsäpanakäh panä nava tathädhikäh. Vastre kärsäpanas chäge'stau pana dvädasävike. Vrsalyäm atha pañcäsan mülyam kärsäpanäh smrtäh. Niskeyam pañcäsad eva syäd gaje pañca-satäni tu. Pañca kärsäpanä proktä doläyäm sad rathe tathä. Grhe'stau kärsäpanakäs tämre kärsäpanä proktä doläyäm sad rathe tathä. Grhe'stau kärsäpanakäs tämre kärsäpanä smrtäh. (tämre karse panäh smrtäh). Tämre karse'pi ca pana iti mülya prakalpanä. Adhikam kalpayen mülyam no nyūnam vittänusäratah iti mülyädhyäyah iti daksinä.

Commentary No. 1 begins :---

GOVERNA

Vişayaka avasyadane mukhya sambhave ya . . . pañca-paksah. Commentary No. 2 begins :---

Śri-gopālam gopa-gopī-parītam, natvā samyak śrī-gurūn jīva-devān. Mūlyādhyāye bhāşyam etad vidhatte gopāla śrī-yājñikānām hitārtham.

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