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Ph.D. in the University of London, 1947.

THE SOCIO-ECONOMIC ORGANISATION  
of  
NORTHERN INDIA.

( C. 200 A.D. - C. 600. A.D. )

by

RATANLAL SARKAR, M.A.

School of Oriental and African Studies  
London, the 5th June, 1947.



PREFACE

The purpose of this work is to reconstruct the socio-economic history of northern India between the years C.200 A.D. - C.600 A.D. In the preparation of this thesis, I have received considerable help from Dr. L. D. Barnett, under whose guidance I have had the privilege of working for over two years. I am deeply indebted to him not only for the stimulating discussions over intricate terms and his invaluable suggestions, but also for the care and patience with which he has looked through the whole work, and the unfailing sympathy and kindness he has ever shown, for which no words can sufficiently express my appreciation. My thanks are also due to Mr. C. A. Rylands for many interesting Sanskrit lessons, and to Professor Phillips for guidance and suggestions.

R. L. S.

S.O.A.S.  
London.

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### ABBREVIATIONS

- Ādi. = Ādiparva, Mahābhārata.  
Agni = Agni-Purāṇa.  
Agr. Syst. of Anc. Ind. = Agrarian System of Ancient India - Ghoshal.  
Ait. Br. = Aitareya Brāhmaṇa.  
Amara. = Amarakośa.  
A. M. J. C. = Asutosh Mookherjee Silver Jubilee Commemoration Volumes. Vol. III. Pt. II.  
Anc. Ind. & Ind. Civ. = Ancient India and Indian Civilization. Masson - Oursel.  
Anu. = Anuśāsana parva, Mahābhārata.  
Ap. = Apastamba - Dharmasūtra.  
Apa. = Aparārka.  
Aranya = Aranya-kāṇḍa, Rāmāyaṇa.  
Arr. = Arrian.  
Arth. = Arthasāstra of Kautilya.  
A. S. I. R. = Archaeological Survey of India Report.  
Āsram = Āsrama-vāsika-parva, Mahābhārata.  
A. S. W. I. = Archaeological Survey of Western India.  
A. V. = Atharva-Veda.  
Bāla = Bāla-Kāṇḍa, Rāmāyaṇa.  
Bau. Dh. = Bauddhāyana Dharmasūtra.  
Beal = Buddhist Records of the Western World.  
B. G. = Bombay Gazetteer.  
Bhāga. = Bhāgavata-Purāṇa.  
B. P. = Baden-Powell: Land Revenue in British India.  
Br. = Brhaspati-Smṛiti.  
Br. S. = Brhatsamhitā.  
Br. Up. = Brhadāranyaka Upaniṣad.  
B. S. S. = Bombay Sanskrit Series.  
Bu. C. = Buddha-carita.  
C. H. I. = Cambridge History of India. Vol. I.  
C. I. C. = Catalogue of Indian Coins of the Gupta Dynasties - Allan.  
C. I. I. = Corpus Inscriptionum Indicarum.  
Comm. = Commentary or commentator.  
Devī = Devī-Purāṇa.  
Dic. = Dictionary.  
Diod. = Diodorus.  
DKC = Daśakumāracarita.  
DKK = Dānakriyākaumudī.  
Drona = Drona-parva, Mahābhārata.  
E. C. = Epigraphia Carnatica.  
E. H. I. = Early History of India.  
E. I. = Epigraphia Indica.







- Megh. = Meghadūta of Kālidāsa.  
M. Gr. = Mānava Grhyasūtra.  
Mil. = Milindapañho.  
Mit. = Mitākṣarā.  
M. N. A. D. = Manual of the North Arcot District.  
Mu. = Mudrārākṣasa of Viśākhadatta.  
Mv. = Mahāvagga.  
Nār. = Nārada-Smṛiti.  
N. V. = Nītivākyaṃrta.  
Pān. = Pāṇini.  
Par. = Paraśurāma-pratāpa.  
Parā. = Parāśara.  
Peri. = Periplus of the Erythrean Sea.  
P. L. = Prācīna Lekhamālā - Varendra Research Society.  
Pr. T. = Prāyaścittatattva.  
Ptol. = Ptolemy.  
Q. = Quoted.  
Raghu. = Raghuvamśa of Kālidāsa.  
Rām. = Rāmāyana.  
Rjnp. = Rājanīti-prakāśa.  
Rjt. = Rājatarāṅgīnī.  
R. P. E. = Report of the Progress of Epigraphy in South India.  
R. V. = Rg-Veda.  
Sabhā. = Sabhāparva, Mahābhārata.  
Śak. = Abhijñāna Śakuntalā of Kālidāsa.  
Sānti. = Sāntiparva, Mahābhārata.  
Śat. Br. = Śatapatha Brāhmaṇa.  
S. B. E. = Sacred Books of the East.  
S. I. I. = South Indian Inscriptions.  
Sil. R. = Śilparatna.  
Sm. C. = Smṛiti-Chandikā.  
Str. = Strabo.  
Sukra = Sukra-nīti-sāra.  
Sundara = Sundarakāṇḍa, Rāmāyana.  
Tai. S. = Taittirīya Saṃhitā.  
Takakusu = I-Tsing's Record of the Buddhist Religion.  
Tam. Eng. Dic. = Tamil English Dictionary.  
trans. = translated.  
Udyoga = Udyogaparva, Mahābhārata.  
Vāj. S. = Vājasaneyya - Saṃhitā.  
Vana. = Vanaparva, Mahābhārata.  
Vas. = Vasiṣṭha Dharmasūtra.  
Vāyu = Vāyu-Purāṇa.  
Ved. Ind. = Vedic Index - Macdonell and Keith.  
Vik. = Vikramorvaśīyam of Kālidāsa.  
Viṣ. or Viṣṇu = Viṣṇu Dharmasāstra.

Vīram. = Vīramitrodaya.  
V. V. M. = Vyavahāra<sup>ar</sup>mūkha.  
V. V. N. = Vyavahāra - nirṇaya.  
Watters = Yuan Chwāng.  
Wils. Sans. Dic. = Williams' Sanskrit Dictionary.  
Yāj. = Yājñavalkya-Smṛiti.  
Ykt. = Yukti-kalpataru.

(For books mentioned by their authors see Bibliography).

## INTRODUCTION

Indological studies have concentrated mainly on political history. The economic field has been rarely surveyed. The work of a few pioneers in this connection cannot be over-estimated. Scholars like Rhys Davids,<sup>1</sup> Fick,<sup>2</sup> Bose,<sup>3</sup> Prannath,<sup>4</sup> etc. have added immensely to our knowledge of ancient India. They have had the advantage of copious literary material in the Pali works which they have utilised to the full, but they have been handicapped by a paucity of epigraphic confirmation to provide a solid foundation to their findings. Coins have hardly been utilised, and the influence of economic facts and factors on the political and cultural history has rarely been studied so far. Their work has, however, thrown much light on the economic organisation of northern India from C. 600 B.C. to about 200 A.D. The next period, from 200 A.D. onwards, although rich in archaeological materials, has not yet called forth a comprehensive economic history. That monumental work, the Cambridge History of India, unfortunately does not cover this period. Volume I stops with the Śakas and Kuṣanas, and Volume II, which was to have dealt with the next period, has not yet been published. It is hoped that when this volume sees the

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1. Rhys Davids: Buddhist India.
  2. Fick: Die Sociale Gliederung im Nordöstlichen Indien zu Buddhas Zeit.
  3. Bose: Social and Rural Economy of Northern India (600 B.C. - 200 A.D.)
  4. Prannath: Economic Condition of Ancient India.

light of day, much will be added to our knowledge of the period after 200 A.D.

Since this work was started, two new books have appeared on the scene -- 'Life in the Gupta Age', by R.N. Salletore, and the sixth volume of the New History of the Indian People, edited by R.C. Majumdar and A.S. Altekar, covering the Vākātaka-Gupta age. The former has dealt mainly with politico-social life and in a work covering such a large field, the chapter touching on economic aspects has naturally not been very detailed or exhaustive. The latter work is mainly a political and social history, and the economic organisation has barely been touched on, being dismissed in about five pages (pp.355-360). Other writers have taken one or other aspect of ancient Indian history. Ghoshal's scholarly work on the Hindu Revenue System, Majumdar's 'Corporate Life in Ancient India', Mookherjee's 'Local Government in Ancient India' and 'History of Indian Shipping', have taken one particular theme and have traced its course in ancient times. While their work covers specific aspects of the economic life of different periods, seen in a broader setting, it is obvious that its scope is entirely different from that of an economic history dealing with a limited period. There is thus much need for work in this field, based on the authentic, objective facts of epigraphy and numismatics, supported and supplemented by contemporary and semi-contemporary literary sources. This work is in the nature of a small

contribution towards an understanding of the economic life of northern India in the period following A.D. 200.

The main object of this work is a reconstruction of the socio-economic history of the Gupta period, but as earlier studies have stopped at C. 200 A.D., the limits of the work have been extended to this date at one extreme, while continuing to about 600 A.D. at the other. The golden age of the Guptas represents the period of fulfilment in the political cycle that had its rise in the power of the Śakas and Kuṣanas, who founded a new socio-economy based on trade and commerce, and centred round urban and commercial centres. Hence this thesis attempts a study beginning approximately with the decline of the Śaka-Kuṣanas and ending about the time of Harṣavardhana. Although these are the general limits of the work, this has not been rigidly adhered to. The third century A.D. is regarded as the 'dark period' of ancient Indian history.<sup>1</sup> Hence in order to provide a background to this period we have to go back a little earlier. To see our period in its proper perspective, therefore, parts of both earlier and later periods have been drawn into the survey.

The sources that have been utilised are both epigraphic and literary. As far as has been possible, the main findings have been based on the evidence of inscriptions. The dates of inscriptions falling within our period have not been

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1. Vincent **Smith**: Early History of India, p. 292.

specifically mentioned, but where earlier and later inscriptions have been used in order to place our period in its historical setting, they have been designated as such wherever possible. Southern inscriptions have not been ignored, and archaeological finds have been taken into account.

But a historical reconstruction purely on the basis of the inscriptions, which are mainly copper-plate charters or stone inscriptions, is not possible. Literary sources have therefore been called to aid to fill in details, to confirm epigraphic evidence and sometimes to provide important clues. The literary materials may be divided into the law-books; the epic, dramatic and other literature of the period; and the accounts of foreign travellers. The law-books that have been largely used are the *Mānava-dharma-śāstra* or laws of Manu, the chief parts of which are not later than the second or third century A.D.; the *Viṣṇu-dharma-śāstra*, cast into its present form about the third century A.D.; the *Yājñavalkya-smṛti*, which was perhaps composed in the fourth century A.D.; the *Nārada-smṛti*, of about 500 A.D.; and the code of *Brhaspati* of about the sixth or seventh century A.D.<sup>1</sup> The works of *Kāmandaka* and *Kātyāyana* and earlier and later law-givers such as *Gautama*, *Baudhāyana* and *Śukra* have also been employed to confirm and provide comparison with contemporary writings. The theoretical work that has most

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1. Vide J. Jolly: 'Recht und Sitte', pp. 16, 7, 21, 23, 27.  
Also Barnett: 'Antiquities of India', p. 96.



largely been used is the Arthasāstra ascribed to Kauṭilya. Much controversy has been waged over the date of this work, but in its present form it seems to belong to the period under survey, for, while it contains some important recommendations that look like features of Mauryan administration, and may possibly have been derived from some manual of the Mauryan age, the work as we now have it must have been written in the post-Mauryan times, though some centuries before the age of Bāṇa. A. B. Keith in the B. C. Law Volume I<sup>1</sup> argues strongly for this later date of the work. We may therefore note some of its proposals. Of these, some may be quite theoretical and not corresponding to real practice at the time of composition; but others seem to have some foundation in fact, however slight it may be. The early Purāṇas have been used, as also the Epics. The mention of *dināras* in the Mahābhārata, and of foreign tribes like the Śakas, Cīnas, Hūnas or Pahlavas, many of whom came to India not earlier than the first to the fourth centuries A. D., in both the Epics, justifies our use of them to supplement our knowledge of the period. The Mahābhārata in its present form is placed by Macdonell at about 350 A. D.<sup>2</sup>, and by Bühler and Kriste between 300-500 A. D.<sup>3</sup> Drama holds up the mirror to Nature, and Kālidāsa, the great dramatist who flourished at this time, throws sidelights on

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1. B. C. Law. Vol. I, p. 477 ff.

2. Macdonell: A History of Sanskrit Literature, p. 309.

3. Bühler and Kriste: Contribution to the History of the Mahābhārata.

many details of our period, and his dramas have consequently been called into service. Vātsyāyana's Kāmasūtra helps us to visualise the city life of our period; and the works of Bāṇa and Daṇḍin have also been consulted. The accounts of Greek and Chinese travellers not only supplement the evidence of indigenous literature and epigraphy, but also help us to look at ancient India in an international setting by viewing her through the eyes of eminent foreign visitors. The accounts of Megasthenes as they survive in fragmentary form, though belonging to an earlier period, have been utilised to some extent to supply such a background, and the writings of Pliny, and the Periplus of the Erythrean Sea have been used in the description of the commerce with the West, as no better evidence has been available for this except for some of the observations of Kosmas Indikopleustes, writing about the middle of the sixth Christian century. The Chinese pilgrims Fa-Hien, Hiuen Tsiang and I-Tsing, who travelled extensively over India, visiting Buddhist centres, have left us full and valuable records of their visit, replete with observant details of almost every aspect of the life of the times.

Based on these materials, a picture of the socio-economy of the period under survey has been built up. Apart from a general reconstruction, special attention has been given to re-orienting existing knowledge on the subject, re-interpreting known facts, elucidating certain terms in the light of the



divergent opinions they have called forth, explaining terms hitherto unexplained, and placing so far unutilised items of information in their proper context.

The work has been divided into two parts to deal with the twin units of organised community-life, namely, the village and the city, with their respective accompaniments of rural and industrial economy. The first part deals with the village, its origin and evolution, topography, administration, and some features of its associate life; and also with the major rural occupations of agriculture and the rearing of animals. Irrigation, the natural concomitant of agriculture, calamities such as famine which occasionally threaten the stability of rural economy, agricultural and animal products useful to man, and parks and forests lying on the outer limits of the village and yielding valuable products, have further been discussed. Next, an analysis of the agrarian system has been attempted, some aspects of land-grants, land survey, the sources of land revenue, and the problem of ownership of land being dealt with. The second part of the work is built up round the city, and its antiquity, growth, general features and administration have first been described. Then the industry and trade that gave the city its importance, the natural resources yielding industrial products from which various crafts and callings were derived, commerce in these manufactured goods over diverse trade routes, coinage, banking and credit that followed as a

natural corollary to trade, have all been delineated. An account of the different kinds of labour that facilitated trade and industry, and the organisation of specialised labour into guilds, completes this survey of the socio-economic organisation of our period.

BOOK I

RURAL ECONOMY

## CHAPTER I

### THE VILLAGE

Definition.      Antiquity.      Origin and Evolution.      Physical  
Features.      Administration.      Associate Life.

India is a land of villages. About nine-tenths of her population live in rural areas. About seven-tenths live by agriculture. Thus the bulk of the population of the country pursues agriculture either as a principal or subsidiary source of income. Obviously the prosperity of the rural areas is intimately interwoven with the prosperity of agriculture. Therefore, the writing of a socio-economic history of such a country during the period under survey, as in any other period, entails at the outset a study of the rural communities and their main source of income - namely, agriculture. Before we go into the intricacies of rural economy, it is desirable that the word village should be understood.

The village or grāma is "an aggregate of cultivated holdings with or without some waste area belonging or attached to it; and usually it has a central site for the dwelling houses congregated together. In some cases, small homesteads

and farm buildings are found separately located  
Definition on the holdings. The village, moreover, often boasts a grove, or at least a single tree, under which the local assemblies will take place; there is also some kind of public office where the village patwārī keeps his books, and

where he sits for the disposal of his business."<sup>1</sup> Although this definition of the present-day village given by Baden Powell does not portray exactly the one we are attempting to visualise, yet there is a sufficiently close resemblance. The references to 'grāma' in our records are numerous. It has been mentioned in the Gayā grant of Samudragupta,<sup>2</sup> Bhitari pillar-inscription,<sup>3</sup> Bhumra stone pillar-inscription,<sup>4</sup> and so on. From our records we find that a village consisted of cultivable lands, inhabitable lands, pasture land, pits and wells, paths and roads both for men and animals, often with small local industrial farms, and most probably an office of the officers in charge of the village. All these will be observed when we deal in detail with the formation and composition of the village.

The village was an organisation of extreme antiquity in India. Villages are very frequently referred to in the Vedas. In the R̥g-Veda and Brāhmaṇas grāma may have the original meaning of 'collection, group'.<sup>5</sup> But sometimes it must have the derivative meaning of a village.<sup>6</sup>

#### Antiquity

Kings loved the epithet of grāmajit, which probably meant 'conqueror of hosts'.<sup>7</sup> Baden Powell says

- 
1. Baden Powell - Land Rev. in Br. India, p.66.
  2. G.I. 255.
  3. G.I. p.54.
  4. G.I. p.112.
  5. Cf. Indriyagrāma, later.
  6. R.V. 44, 10 & 11; 1, 94, 1; 11, 12, 7; X, 149. 4.
  7. R.V. V. 54. 8.

"the Aryans took the idea of villages from the Dravidians, or at least they found the village fully developed with the grain-share system".<sup>1</sup> The idea that the Aryans took the concept of the village from the Dravidians seems rather doubtful. The notion of the village as a home of a group of men is Indo-European; traces of the joint-village system are found in many parts of Europe. The references to it in the Rg-Veda seem to indicate that the village as a social unit was known by the Aryans from very early times. In the Bhāgavata-Purāṇa<sup>2</sup> it is narrated that Pr̥thu, son of Vena, first levelled the earth, established human habitations in villages, towns, capitals, forts, etc. and that before Pr̥thu people resided where they liked and there were no such groups as villages or towns.

There are various views regarding the origin and evolution of the village. According to Keith, "the little knot of houses of the several branches of the family would together form the nucleus of the grāma or village,"<sup>3</sup> though Origin and Evolution some have derived its name originally from the sense 'horde'<sup>4</sup> as describing the armed force of the tribe which in war fought in the natural divisions of family and family".<sup>5</sup> Maine, Baden Powell and others all have put forward their different points of view. As our

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1. Land System, I, p.120.

2. Bhāga. IV. 18. 30-32.

3. C. H. I. p. 90.

4. Zimmer, Altindisches Leben, pp.159,160; Feist, Kultur, Ausbreitung, und Herkunft der Indögermanen, p.143.

5. C. H. I. p. 91

scope is limited, we need not go into details over this, but shall conclude with the words of Dr. Barnett, which seem very apposite in this context. He says, the village "was based upon the bond of family or the clan consolidated by territorial ownership. The original tie of real or assumed kinship between the various households constituting the village gradually gave way to the idea of ownership in the same territory, and thus arose the conception of the village as a political unit in the social organism, composed of a limited number of full-blooded Aryan agricultural families with their native serfs and a considerable admixture of persons of various degrees of racial purity, whose social status or caste was regulated by their blood or occupation, or by both factors".<sup>1</sup>

#### Physical Features.

Most of the inscriptions of our period deal with the granting of villages; yet none of these gives us a complete picture of our village. But by linking up the fragments from here and there, and with the help of our literature, we shall endeavour to portray as much of our village as is possible.

The village might be constructed upon new sites or on old ruins (bhūta-pūrvam abhūta-pūrvam vā)<sup>2</sup>. Sometimes it was situated on the sea-shore or on the banks of rivers and

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1. Antiquities of India, p.105.

2. Arth. II. 1.



lakes.<sup>1</sup> The Uruvappalli grant<sup>2</sup> mentions a village  
Site on the bank of a river, Suprayāga. A site of this  
type was obviously of great importance in those days when  
water routes were the swiftest means of communication, and  
the village became a centre for the distribution of numerous  
commodities that were brought there through export and  
import. Such was the prosperity of these villages that  
Kaṭilya mentions a special tax called *kl̥ptam* imposed on  
them.<sup>3</sup> The Chammak plate of Pravarasena<sup>4</sup> has a reference  
to this tax imposed on the village of Carmāṅka, situated on  
the Madhunadī.

The size and population of a village varied consi-  
derably. Prannath states that a village contained only  
about five families and consisted of 15 or 20 acres of  
cropped area.<sup>5</sup> But this statement does not seem feasible.  
Kaṭilya says that 'villages consisting each of not less than  
a hundred families and not more than 500 families of agri-  
cultural people of Śūdra caste, with boundaries extending  
Size as far as a krośa or two and capable of protecting  
each other shall be formed.'<sup>6</sup> A family, it must be  
remembered, included not only father and mother, children  
and grandparents, but also the wives and children of the  
sons.<sup>7</sup> The number of inhabitants of the 'gāma' of the

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1. Arth. II. 28.

2. I. A. V. p. 53.

3. Arth. II. 28.

4. G. I. p. 235.

5. Economic Condition of Ancient India,  
p. 39-40.

6. Arth. II. 1.

7. Cf. Manu. IV. 180 - father, mother, wives,  
brothers, sisters, sons, daughters,  
sons' wives and others, including  
servants.



Jātaka tales varied from 30 to 1,000 families.<sup>1</sup> According to Śukra, "a grāma is that piece of land whose area is a krośa".<sup>2</sup> The area of a krośa according to Brahmā is 2,500 parivartanas<sup>3</sup> or nivartanas. The inscriptions do not support Prannath either. The grant of Pallava Yuvamahārāja Viṣṇugopavarman<sup>4</sup> mentions a village of 200 nivartanas. According to Fleet, a nivartana was equal to a square of twenty vaṁśas on each side, each vaṁśa being equal to ten cubits; so that a nivartana covered an area of 40,000 cubits.<sup>5</sup> Therefore, the village referred to in the above grant was over 400 acres in extent.

But there were smaller villages also. In one of the Gadval plates of Vikramāditya I<sup>6</sup> a village is said to measure 50 nivartanas, which comes to a little more than about 100 acres,<sup>7</sup> apparently denoting an area 1/4 of the size stated in the plate of Viṣṇugopavarman. Further, we can surmise the smallness of the villages by expressions such as grāmaka or padraka, pāṭaka or pallī. The copper-plate grant of Mahārāja Hastin<sup>8</sup> describes a village denoted by the term 'grāmaka'.<sup>9</sup> In the Māliyā copper-plate inscription we find 'Antaratrayām Śivaka-padraka'.<sup>10</sup>

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1. C.H.I., p. 201.

2. Śukra. I. 385.

3. Ibid. 389.

4. I.A. V. p. 50.

5. I.A. V. p. 53.n - 200 x 200, i.e. about 90,000 sq. ft., while an acre is equal to 43,560 sq. ft.

6. E.I. X. 22.

7. Wilson's Glossary. 1 niv. = 40,000 sq. cubits.

8. G.I. p. 180.

9. The taddhita 'ka' is added to imply smallness.

10. G.I. 170.

According to the lexicons the term padra means a village. Hence the expression padraka perhaps explains the smallness of the village. The Bhāvnagar plates<sup>1</sup> of Dhruvasena I mentions both Valā-padra and Chedāka-padraka. The Dāmodarpur copper-plate refers to Svachhanda-pāṭaka.<sup>2</sup> Similarly we have the mention of two villages, namely, Vyāghra-pallika and Kācara-pallika in the Khoh copper-plate inscription of Mahārāja Sarvanātha.<sup>3</sup> According to Śukra the half of a grāma is called pallī,<sup>4</sup> but from the above inscription the term pallika apparently indicates a village, perhaps very small in size.

The village was bounded by fences. Kauṭilya says that "around every village an enclosure with timber posts shall be constructed."<sup>5</sup> The Nirmand copper-plate Fences inscription of Samudrasena mentions a newly constructed wall as the boundary of the village Sūlisagrāma.<sup>6</sup> It was further enjoined by Kauṭilya that anyone breaking the fence was to be punished.<sup>7</sup>

In discussing the lay-out of the village, it is obvious that a large proportion of it was made up of habitable land. The Dāmodarpur copper-plate records an Lay-out application by one Rbhupāla for the purchase of

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1. E. I. XV. p. 255.
  2. Ibid, p. 144.
  3. G. I. p. 130.
  4. Śukra I. 386.
  5. Arth. III. 10.
  6. G. I. p. 290.
  7. Arth. IV. 13.

some vāstu land in a village called Dongā-grāma in Himavacchikāra.<sup>1</sup> This habitable or vāstu land was usually situated in the centre of the village, but some of it was also located along the border. Kaṭilya specifies that "if the Habitable land loss of merchandise occurs in such part of the country as is not provided even with such security (a corarajjuka) the people living along the boundaries of the place shall contribute to make up the loss."<sup>2</sup> The houses were arranged in an orderly manner. They were separated by the king's road or the highroad.<sup>3</sup> According to Śukra, in each grāma there should be roads of 10 cubits. The road should be provided with drains on both sides for the passage of water. All houses must have their faces (i.e. doors) on the rājamārga; the houses should be arranged in two rows.<sup>4</sup> Between any two houses or between the extended portions of any two houses, the intervening space was 4 padas.<sup>5</sup> Many houses were storied buildings with small high windows,<sup>6</sup> and there was one water-well for every ten houses.<sup>7</sup>

The village also included cultivable lands within or attached to its boundary. Thus in the above plate<sup>8</sup> we find that the vāstu land was given to the applicant in the Cultivable land neighbourhood of those cultivated lands of which he had previously made a gift to some religious

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1. E. I. XV. p.140.  
2. Arth. IV. 13.  
3. Ibid. II. 8.  
4. Śukra I. 530-535.

5. Arth. II. 8. Kātyāyana.  
6. Ibid. II. 7.  
7. Ibid. II. 4.  
8. Dāmodarpur - E. I. XV. p.134.

establishment. In general, cultivable fields were fenced in or at least well-demarcated. The description of the boundaries and the settlement of disputes regarding boundaries shall be dealt with later on. The village was composed of many other elements. It had lowlands and highlands,<sup>1</sup> fruit gardens and flower gardens,<sup>2</sup> prepared and usara land<sup>3</sup>, tanks and wells<sup>4</sup>, temples<sup>5</sup> and shrines and market-places.<sup>6</sup>

Around every village lay a belt of common and undivided pasture-ground, on which grazed the villagers' cattle. According to Manu the width of this belt of pasture land should be 400 cubits or 600 ft. for a smaller village.<sup>7</sup>

Kautilya also gives similar injunctions.<sup>8</sup> This system was in existence from very ancient times. The Rg-Veda mentions Pasture gavya or the gavyūti to denote pasture land.<sup>9</sup>

land Perhaps in most cases this pasture land consisted of the intervening place between the villages, for Kautilya states that, if any merchandise was stolen or lost in the intervening places between any two villages, the superintendent of pasture ground should make it good.<sup>10</sup> In the inscriptions also we find mention of gocara denoting pasture ground.<sup>11</sup>

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1. E. I. XX. p. 63.

2. A. S. I. R. 1902-3, p. 249; Arth. II. 24.

3. E. I. XV. p. 144.

4. G. I. pp. 170. 200.

5. G. I. p. 78.

6. Watters I. p. 147.

7. Manu. VIII. 237; cf. Yaj. II. 167.

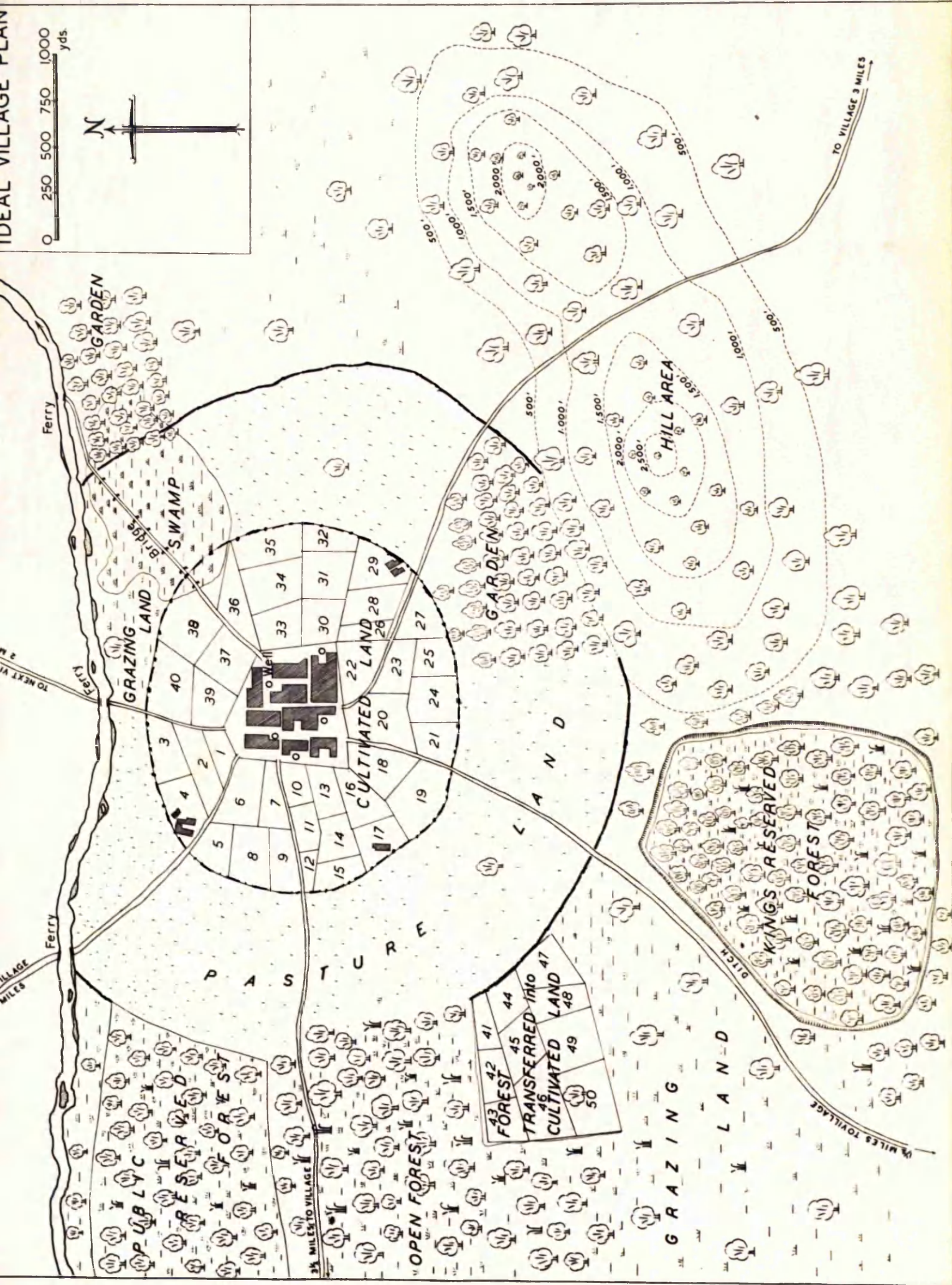
8. Arth. III. 10.

9. R. V. i. 25. 16; III. 62. 16; V. 66. 3.

10. Arth. IV. 13.

11. A. S. I. R. 1902-3, p. 252; G. I. p. 125.





The pasture land was separately fenced off, to protect the cattle grazing on it, and also to prevent their getting at the corn in the fields.<sup>1</sup>

Beyond this pasture-ground was the forest.<sup>2</sup> This was sometimes used as a grazing ground or as a plantation.<sup>3</sup>

Forest People in need of more cultivable land often used to clear the forest and make the land cultivable for the first time.<sup>4</sup> Some forests were kept reserved as the king's game forests, while on the extreme boundary of the country there was a common forest for public use, while the elephant forests being situated on the outermost limits of the country.<sup>5</sup>

This was the general pattern of a village of our period. The utility of its various types of land and forests will be discussed in detail later on.

#### Village Administration.

The State or the government is connected with the people in two ways: (i) it receives taxes from the people and (ii) maintains peace and order among them. To discharge this two-fold function is devised the whole machinery of administration. The village has been taken to be the smallest administrative unit, but its importance cannot be overrated, for it has been the main source of revenue of the State. We find innumerable officers mentioned in our inscriptions,

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1. Arth. III. 10.  
2. Ibid. II. 2.  
3. Ibid. III. 10.

4. Tripperah plate.  
E. I. XV. p. 305.  
5. Arth. II. 2.



who are connected with the village administration, but we need not deal with every one of them and shall discuss only those who are of major importance.

The immediate representative of the government in a village was the grāmika or headman. Various authorities in different times have mentioned this headman by diverse names.

The Headman As early as the R̥g-Veda we have mention of the grāmika having authority over the village.<sup>1</sup>

Manu refers to him as both grāmādhīpati and grāmika.<sup>2</sup> According to Kauṭilya the head of the village was the grāmika.<sup>3</sup> This has been supported by the Bhumrā stone pillar-inscription of Mahārāja Hastin and Sarvanātha,<sup>4</sup> the Dāmodarpur copper-plates<sup>5</sup> and the grants of Dharmāditya and Gopacandra.<sup>6</sup> We have references to similar terms such as grāmanī in the Taittirīya Saṃhitā,<sup>7</sup> grāmabhojaka in the Buddhist literature,<sup>8</sup> grāmapati and grāmabhartr̥ in the Yājñavalkya-Smṛti,<sup>9</sup> grāmādhīpati in the Kāmasūtra,<sup>10</sup> grāmanetr̥ in the Śukranīti<sup>11</sup> and grāmakūṭa in the Sanjān plate<sup>12</sup> and the Karhād plates of Kṛṣṇa III<sup>13</sup> - all

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1. Vedic Index, pp. 96, 204, 207.
  2. Manu. VII. 115-6.
  3. Arth. III. 10.
  4. G. I. p. 112.
  5. E. I. XV. pp. 113 ff.
  6. I. A. XXXIX. p. 193 ff.
  7. Tai. S. II. 5. 4. 4. Cf. Śat. Br. V. 4. 4. 19.
  8. C. H. I. p. 199.
  9. Yāj. II. 271.
  10. K. S. V. 5. 5.
  11. Śukra II. 120-121.
  12. E. I. XIV. p. 150.
  13. E. I. IV. p. 285.

denoting the headman of the village.

The whole village was under him, and he claimed obedience from the villagers. Kautilya says: "When the headman of a village has to travel on account of any business of the whole village, the villagers shall by turns accompany him. Those who cannot do this shall pay  $1\frac{1}{2}$  panas for every yojana".<sup>1</sup> Similarly, if a villager did not cooperate in the getting up of a show (prekṣā) in the village, he or his people should not be allowed to see the show and he was to be fined if he clandestinely saw it.<sup>2</sup> These statements make it clear that

he had authority to inflict fines. We ~~also~~ have references

from which it seems that he was vested with his duties magisterial authority and was empowered to expel thieves, criminals, adulterers and other undesirable persons.<sup>3</sup>

'He had the right to use for himself the king's dues received from the villagers, also to refer cases of criminal offences to the head of ten villages'.<sup>4</sup> He had other functions also.

In the Faridpur plates<sup>5</sup> we find that the grāmika along with others was associated with the transference and gift of land within his village. The grāmika also used to donate lands to the Brāhmaṇas for the performance of religious rites. This has been shown in the Dāmodarpur copper-plate,<sup>6</sup> where a grāmika of the name of Nābhaka seeks permission to grant land for the settlement of certain Brāhmaṇas.

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1. Arth. III. 10.

2. Ibid.

3. Cf. Śukra II. 170-5.

4. E. I. XV. 137, n. 3.

5. I. A. XXXIX. p. 193 ff

6. E. I. XV. p. 140.



It has been questioned whether the headman was appointed by the king or elected by the people. Saletore thinks that "this grāmika was an elected official of the village, as he does not appear among the state servants of the State."<sup>1</sup> We cannot accept this conclusion, Appointed or elected because it is clearly stated that "the grāmika appointed by the king shall take charge of the village affairs and report all cases to the lord above him."<sup>2</sup> As regards his remuneration, it has been indicated that those articles which the village ought to furnish daily to the king, such as food, drink and fuel, the lord of one village shall obtain.<sup>3</sup> Hence Remuneration there is no doubt that the grāmika was the appointed representative of the king. Now another question arises - whether the post was hereditary or not. We are not quite sure about this question. The Mathurā inscription<sup>4</sup> mentions a lady who was both the wife and the daughter-in-law of village headmen. From this inscription it appears that the post was probably a hereditary one. But, on the other hand, in the Bhumrā stone pillar-inscription<sup>5</sup> it is simply said that a 'boundary pillar has been set up by Śivadāsa, the grandson of Indana, and the son of the grāmika Vāsu'. Here, although the father was Hereditary or not apparently a grāmika, neither Śivadāsa, nor his grandfather Indana are described as such. On

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1. Saletore, p. 221.  
2. S.B.E. Vol. XXV, p. 234.  
3. Ibid.

4. E. I. I. p. 388. No. 11.  
5. G. I. 110.

the basis of these inadequate records it is difficult to say anything definite, but we may surmise thus far, that the post was usually taken by the son or his nearest kinsman by convention, although in some cases there might be a deviation from this tradition. Even at the present time this convention exists regarding some government posts.

Now we shall deal with the village accountant, whose position was of extreme importance in the economic life of the village. In the Arthaśāstra of Kauṭilya there is a separate chapter,<sup>1</sup> known as 'Akṣapaṭale gāṇanikyādhikāra',  
The Accountant dealing with the business of keeping accounts

in the office of the accountant.<sup>2</sup> In Bāṇa's Harṣacarita we are told that during the king's stay in a village the grāṇākṣapaṭalika appeared with his other clerks saying 'let His Majesty, whose edicts are never void, even now bestow upon us his commands for the day'.<sup>3</sup> From this it appears

References to that the village accountant was also appointed  
Akṣapaṭalika by the king. 'Akṣapaṭalika' occurs also in the Kaṭī grant of Bhīmadeva II.<sup>4</sup> In the Alīnā copper-plate inscription of Śīlāditya we have a reference to a mahākṣapaṭalika.<sup>5</sup> It is there said that the dūtaka in this matter is 'the mahāpratihāra .... mahākṣapaṭalika ..... the illustrious Siddhasena.' In the Gayā copper-plate inscription of

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1. Arth. II. 7.

2. 'Akṣa-gaṇana-yogyānirūpyakādīni; teṣāṃ paṭalam = sthānam; = akṣapaṭalam'

3. H. C. VII. para. 2, p. 198.

4. I. A. VI. p. 200.

5. G. I. p. 190.

Samudragupta we find that the deed was written by order of 'Dyūta-Gopasvāmin, the akṣapaṭalādhikṛta of another village'.<sup>1</sup> The Chicacole grant of Indravarman refers to an akṣaśālīka.<sup>2</sup>

It seems that mahākṣapaṭalīka, which literally means the great akṣapaṭalīka, was the chief officer in charge of the records and revenue, and akṣapaṭalīka or akṣaśālīka or akṣapaṭalādhikṛta, probably all synonymous terms, was a local officer in charge of the local revenue and records. The officers are described as of highly respectable family and position. Thus the Alīnā plate says that the mahākṣapaṭalīka was a member of the king's household.<sup>3</sup> In the Banskhera plate of Harṣa<sup>4</sup> the officer is described as 'Mahāsāmanta Mahārāja', which shows that he occupied a very important place among state officials.

It also appears that the mahākṣapaṭalīka was the same as Kauṭilya's akṣapaṭalādhyaṁsa.<sup>5</sup> The Arthaśāstra gives a detailed description of the duties of the different officers attached to the akṣapaṭala. It is said that among other duties attention should be given specially to "the Duties description of the work carried on, and of the results realised, in several manufactories (karmānta); the amount of profit, loss, expenditure, delayed earnings, the amount of vyājī (premia in kind or cash) realised, the status of government agency employed, the amount of wages paid, the

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1. G. I. p. 257

2. I. A. XIII. p. 423.

3. G. I. 190.

4. E. I. IV. p. 208.

5. Arth. II. 7.

number of free labourers (viṣṭi) engaged; likewise in the case of gems and commodities of superior or inferior value, the rate of their price, the rate of their barter, the counter-weights (pratimāna) used in weighing them, their number, their weight and their cubic measure; the history of customs, professions, and transactions of countries, villages, families and corporations; the gains in the form of gifts to the king's courtiers, their title to possess and enjoy lands, remission of taxes allowed to them, and payment of provisions and salaries to them; the gains to the wives and sons of the king in gems, lands, prerogatives, and provisions made to remedy evil portents; the treaties with, issues of, ultimatum to, and payments of tribute from or to, friendly or inimical kings - all these should be regularly entered in prescribed registers".<sup>1</sup>

Sometimes this officer acted in other capacities. The Gayā copper-plate reveals that he, as dyūta, was also to give orders for recording grants of land.<sup>2</sup> As he was in charge of the records and accounts of receipts and payments, it was only natural that he was to be informed of gifts of land and of other transactions.

It is ~~also~~ interesting to note that Yüan Chwāng also refers to this department. He says: 'as to their archives and records there are separate custodians of these. The official annals and state-papers are called collectively ni-lo-pi-tu (or cha); in these good and bad are recorded, and instances

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1. Arth. II. 7.

2. G.I. p. 257.

of public calamity and good fortune are set forth in detail'.<sup>1</sup>  
Associate Life in the Village.

The running of affairs within the village did not begin and end with these state officials. Each village had its associate life in the form of various non-official boards or councils which functioned in every field of village life, social, economic, administrative, religious. Associate life in the economic sphere, issuing in the form of guilds and other corporate bodies, is too important to be included in this brief sketch. It will be dealt with in greater detail later on. The purpose of the present section is to review the activities of these popular bodies in the other aspects of village life.

Associate life found greater scope to develop and flourish in South India, in a later period. In Northern India the rise of the imperial régime tended to choke the development of these corporate organisations. But their influence, though limited in scope, was still considerable within the confines of the village. Judicial and magisterial power was often vested in them, and they functioned actively in every conceivable sphere of village life.

We shall now proceed to examine the implications of certain terms to be met with in our epigraphic sources, as they seem to indicate such popular bodies.

The term 'Pañcamāṇḍalī' is to be found in the Sāñci inscription.<sup>2</sup> Fleet suggests that it is the same as the

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1. Watters I, p.154

2. G.I. p.32.

modern Pañcāit, Pañcāyat or Pañc, or the village jury of five (or more) persons, convened to settle disputes by arbitration, to witness and sanction any act of importance, and so on. In the Nepāl inscription,<sup>1</sup> we find the term Pañcāli, which Fleet takes to be an engraver's error for Pañcāli. This word and also Pañc-ālika,<sup>2</sup> seem to mean members of certain Pañcāyats. In a later period another term, Pañcakula, is used<sup>3</sup> in the sense of an assembly which administered a customs-house. This assembly is also mentioned in the Mahābhārata. In the Sabhā-parva,<sup>4</sup> Nārada enquires of Yudhiṣṭhira whether the Pañca were actively administering the village or not. The names of the five members who formed the Pañca are given by Nīlakaṇṭha in his commentary as Samāharttā, Samvidhātā, Prasāstā, Lekhaka and Sākṣī. There is a reference to one lekhaka in the Mandasore copper-plate inscription,<sup>5</sup> and also in the Nirmaṇḍ copper-plate.<sup>6</sup> Whether these refer to the same lekhaka as mentioned in the Mahābhārata or to some other, it is difficult to ascertain. According to Śukra,<sup>7</sup> lekhaka was the village accountant. The Sāñci inscription<sup>8</sup> indicates the respect accorded to this pañcamandālī or village assembly

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1. Bhagwanlal Indraji - I. A. Vol. IX, p. 173
  2. Ibid, pp. 168, 170, 177.
  3. Siyadonī inscription - E. I. I. p. 167.
  4. Sabhā. 5. 80.
  5. G. I. p. 84.
  6. G. I. p. 291.
  7. Śukra. II. 293-94.
  8. G. I. p. 32.



by telling us that Amrakārdava prostrated himself in front of the assembly of five persons. The pañcakula was evidently concerned with the administration of lands Its functions alienated by the State, as will be seen from an inscription<sup>1</sup> which mentions that a charter for a land grant was written with the assent of the pañcakula. The pañcakula was further charged with the task of transferring the property of sonless persons at their death into the royal treasury.<sup>2</sup>

From the Basārḥ seals we obtain another term - 'Udānakūpe-pariṣadaḥ', which obviously refers to a village pariṣad or assembly, but from the seal alone it is difficult to adduce any further details as to its composition Pariṣad or functions.<sup>3</sup>

Another term 'aṣṭakulādhikaraṇa' occurs particularly in the inscriptions of Eastern India. It is found together with mention of mahattaras and others in the Dhanāidaha and Dāmodarpur copper-plates.<sup>4</sup> There are differing opinions as to the application of the term. Aṣṭakulādhikaraṇa has been

'Aṣṭakulādhikaraṇa interpreted by Basak as "an officer in the village having supervising authority over 8 kulas".<sup>5</sup> R.D. Banerjee thinks that the term refers to "a local officer who exercised authority over eight villages".<sup>6</sup> N.N. Das Gupta suggests that it means "the adhikaraṇa or

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1. I.A. XVIII. p.113.
  2. See also Ghosal H.R.S. pp.238, 255, 58.
  3. A.S.I.R. 1903-4, p.109.
  4. E.I. XVII. p.348; E.I. XV. p.137.
  5. E.I. XV. p.137.
  6. J.A.S.B. (N.S.) V. p.460.

judicial court in the village composed of (more or less) eight judges",<sup>1</sup> observing that it is analogous to the phrase "jyeṣṭhādhi-karaṇaka-Damuka-pramukham adhikaraṇam", which occurs in the Gūgrahāṭi grant of Samācāraḍeva,<sup>2</sup> and equating it with the aṭṭhakulaka (or judicial institution of judges from eight castes) mentioned in the Aṭṭhakathā of Buddhaghoṣa.<sup>3</sup> Saletore disagrees with Das Gupta and thinks that aṣṭakul-ādhikaraṇa might have been "a type of supervisor over, or a representative of, eight families which probably constituted the village".<sup>4</sup> We cannot accept this clause, as from our discussion of the size and population of the typical village, we have seen that it must have consisted of a larger number of families. We may arrive at a satisfactory interpretation of this term if we compare it with Pañcakula mentioned above. The word kula has been mentioned by Nārada,<sup>5</sup> and his commentator (J. Jolly) explains it as an assemblage consisting of a few persons, comparable with the modern Pañcāyat. Quite possibly the aṣṭakula was a committee or assembly of eight or more members, just as the pañcakula was a council of five or more members. Adhikaraṇa is an office or a judicial or administrative court. Hence it is conceivable that this council of eight members perhaps had judicial functions attached to it. Perhaps originally the eight members may have been drawn from the eight chief families of the neighbourhood, or even the eight castes of

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1. I.C. V. p.111  
2. E.I. XVIII, p.78.  
3. Quoted by Das Gupta.

4. Saletore, p.300.  
5. Nār. I. 7.

Turnour,<sup>1</sup> as suggested by N.N. Das Gupta, but most probably they were ultimately made up of the eight most prominent and active men of the village, whose prominence may have been due to age, or wealth, or ability. The inscriptions referred to above also make it clear that this village council was recognised by the State as being so important that it was associated with land-grants, and it is often Its functions mentioned in the copper-plate charters that the transference of land should be referred to this assembly, amongst others, for advice and guidance. Their local knowledge and influence were thus given due weight. Thus in the Dāmodarpur plates of Budhagupta, we are told that the "Mahattaras, the aṣṭakulādhikarāṇas, the village heads (grāṃikas) and the householders, being in confidence" informed the chief Brāhmaṇas about certain particulars of a plot of land.<sup>2</sup> Again, the Dhanāidaha grant of Kumāragupta I relates how the ryots, Brāhmaṇas, mahattaras and others, including the aṣṭakulādhikarāṇa in the village, were informed by an officer named Viṣṇu about some details of a plot of land.<sup>3</sup>

"Mahattaras" is another expression to be found in our inscriptions, obviously denoting some such popular body. In the Māliyā copper-plate of Dharasena<sup>4</sup> this word occurs in a list of those to whom the command regarding the

- 
1. Tournour. J.A.S.B. VII. pp. 993-94.
  2. E.I. XV. p. 137.
  3. E.I. XVII. p. 348.
  4. G.I. p. 169.

grant was issued. The Faridpur and Dāmodarpur plates also mention mahattaras.<sup>1</sup> Mahattara is derived from the term 'mahā' meaning great. Monier Williams thinks 'Mahattaras' that it means the head or the oldest man of a village.<sup>2</sup> Pargiter suggests that these mahattaras were the men "of position in the village, the leading men". According to him, some of them were prominent because of ability and age, while others were so by inheriting wealth. He further suggests that mātabhar or mātabar, a common title in Eastern Bengal, though generally derived from the Arabic mu'tabar, i.e. trustworthy or reputable, may be a corruption of mātar-bar, that is mahattara-vara, the chief of the leading men.<sup>3</sup> The literary records also refer to mahattaras. Kālidāsa in his Śakuntalā mentions them and says "Mahattaro tumam piavaassao dānim me samvutto".<sup>4</sup> Bāṇa also refers to mahattaras as heads of the villages who saw Harṣa during the course of his journey.<sup>5</sup> The account of Hiuen Tsang of his travels in India also informs us that the official guides bore the title of Mo-ho-ta-lo, i.e. mahattara.<sup>6</sup>

Apparently the mahattara was a leading man of the village, or village elder. The term, when used in the plural, obviously denoted some form of corporate body consisting of the leading lights of the village who acted collectively in

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1. E. I. XV. p.113 ff and I. A. XXXIX, p.193 ff.

2. G. I. p.169.

3. I. A. XXXIX. p.213.

4. Śak. Act. V.

5. Harṣacarita, p.208.

6. Beal, p.189.

dealing with public matters, as we see in our inscriptions. Brhaspati mentions mahattamas as "honest persons, acquainted with the Vedas and with duty, able, self-controlled, sprung from noble families, and skilled in every business", who shall be appointed as heads of an association."<sup>1</sup> He goes on to say that "two, three, or five persons shall be appointed as advisers of the association, their advice shall be taken by the villagers, companies (of artisans), corporations (of cohabitants) and other (fellowships)."<sup>2</sup>

The mahattamas of Brhaspati and our mahattaras are probably the same. They were prominent members of the village community, and together with the grāmika, probably formed the nucleus of village administration. They obviously functioned as an advisory body in all the affairs of the Their work village, as described by Brhaspati. From the inscriptions of the Rāṣṭrakūṭas of Southern India, we find that the mahattaras constituted village assemblies.<sup>3</sup> From Brhaspati we learn that they were highly influential, and the king only interfered when disputes arose among them.<sup>4</sup> They were very influential in the day-to-day affairs of the village, they are seen to be associated with other bodies in all local land transactions, which were enacted in their presence, as we shall see in discussing the granting of land. Kautilya

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1. Br. XVII. 9.

2. Ibid, 10.

3. Sanjān plate, E.I. XIV. p.150.

4. Br. XVII. 18. 20.

tells us that they were responsible for the settling of boundary disputes.<sup>1</sup>

Thus we see that there were definite corporate organizations functioning in various spheres of village life. Apart from these bodies that guided the affairs of the village, the villagers as a whole apparently participated in a number of associate activities. We may imagine what these activities were from a passage in the Arthasāstra that deals with the penalties that were to be imposed if some unsociable villagers failed to play the rôle expected of them in the corporate life of the village. Ceremonial functions and sacrificial performances were obviously occasions for the whole village to act Associate together, and apparently public shows and popular activities dramas were held quite often, and it was regarded as socially obligatory for the villagers to do their best to make the show a success. Anyone who did not cooperate in the work of preparation for a public show was to be punished by his exclusion, together with his whole family, from watching the show (prekṣā). If he viewed it clandestinely, or if anyone refused to give his aid in a work beneficial to all, he would be compelled to pay double the value of the aid due from him.<sup>2</sup> Brāhmanas were not exempt from participation in the combined performances of any sacrifice in their village.<sup>3</sup> Nārada,<sup>4</sup> Manu,<sup>5</sup> Yājñavalkya<sup>6</sup> and Viṣṇu<sup>7</sup> all stipulate that

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1. Arth. III. 9.

2. Ibid. 10.

3. Ibid.

4. Nār. III. 8 ff.

5. Manu VIII. 206, 389.

6. Yāj. II. 237.

7. Viṣṇu V. 113



in sacrificial matters priests were to be collectively responsible, and if the officiating priest, through illness or some such cause, was unable to take his part in the ceremony, they were to provide for the successful conclusion of the rites by replacing him with another priest. And those who worked together for <sup>the</sup> public good by constructing buildings of any kind (setubandha) beneficial to the whole country, adorning the village, and keeping watch on the village, were to receive favourable concessions <sup>from</sup> ~~by~~ the king.<sup>1</sup>

Associate life then not only existed in the form of popular assemblies and communal activities, but active participation in the life of the village was regarded as compulsory. Failure to comply with the demands of the community was punished appropriately by exclusion from the common pleasure and no doubt by social opprobrium also.

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1. Arth. III. 10.

## CHAPTER II

### AGRICULTURE

#### 1. AGRICULTURE AND AGRICULTURAL PRODUCTS

Antiquity and Importance -- Vārttā. Encouragement -- Protection and Safeguards -- Indebtedness -- Methods of Cultivation -- Sowing and Harvesting -- Agricultural Products.

In a country where the close and living contact with the soil has not yet been lost, and where agriculture is still the main resource of the people, we can well conceive that in the early times with which we are dealing, our ancestors were very much children of the earth and drew from her bounty all their sustenance. These men were engaged actively in wresting from Nature a home to dwell in and soil that would yield to their labour and reward them with the means whereby to live. Our inscriptions unfold a tale of forests cleared, of waste land gradually made habitable, of the slow and arduous triumph of man over his physical environment. Under these conditions, the chief means of livelihood was naturally agriculture. Although we find officers and merchants and artisans in our period, the land, and those who made a living out of the land, predominated.

Of the extreme antiquity of agriculture as an occupation there can be no doubt.<sup>1</sup> It has been in existence since man gave up his nomadic mode of life and settled in

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1. Vide C.H.I., p.99 ff - Agriculture in the Rg. V.

rural communities. With increasing civilization and increased cultivation of the soil to produce food, there has been a greater organisation of agriculture and agricultural methods, and it is no matter for wonder that even in these remote times a science should develop, with agriculture as one of its branches. The ancient science of "vārttā" systematized the knowledge of the times relating to agriculture, cattle-breeding and trade. "Agriculture, cattle-breeding and trade constitute vārttā. It is most useful in that it brings in grains, cattle, gold, forest-produce (kūpya) and free labour

Importance: (viṣṭi). It is by means of the treasury and the Vārttā army, obtained solely through vārttā, that the

king can hold under his control both his and his enemies' party".<sup>1</sup> Śukra says: "In vārttā are treated interest, agriculture, commerce and preservation of cows. The man who is well up in vārttā need not be anxious for earnings".<sup>2</sup> The importance of agriculture as one of the main sources of the wealth of the land was recognised in that the science of vārttā was regarded as an essential part of the king's knowledge in order to prepare him for the responsibilities of kingship. We may also imagine the extreme importance given to agriculture when we see, in discussing the systems of land-measure current in our period, that many of the names given to different land-measures were suggested by the every-day agricultural occupations of the people. Terms such as dṛoṇavāpa, kūlyavāpa, āḍhavāpa and khārī were derived from the

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1. Arth. I. 4.

2. Śukra. I. 311-12.

sowing of certain measures of seed,<sup>1</sup> and hala or hali from that indispensable agricultural implement, the plough.<sup>2</sup>

Encouragement.

The kings did their utmost to encourage cultivation, so that it was continually extended and improved. They gave an impetus to agriculture in various ways. It was enjoined<sup>3</sup> that unprepared land in process of being prepared for cultivation was not to be taken away. Lands not being cultivated should be confiscated and given away. In any case land was not allowed to remain unutilized. If the owner did not cultivate it, he might be penalized, or the king might give it to those willing

Cultivable land to work it. In some cases the State not allowed to remain untilled interested itself directly in the cultivation and had the land tilled by labour brought in from outside. The cultivators, according to necessity, might be given concrete assistance in the form of grain, cattle or money, which they might return at their convenience. The system of agricultural loans seems to have been known quite extensively. In the Sabhāparva the king is advised to advance loans to cultivators.<sup>4</sup> In Rāma's administrative discourse to Bharata it is one of the basic principles of statesmanship to subsidise cultivators for their prosperity.<sup>5</sup> We also find in the Arthaśāstra injunctions that "he shall employ slaves, labourers

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1. Pāhāpur Ins. E.I. XX, p. 63.

3. Arth. II. 1.

5. Rām. II. 100. 48 -

teṣāṃ guptipānāhārāih  
kaccit te bharaṇam kṛtaṃ.

2. Narasiṃhapallī plate,  
E.I. A. XXIII, p. 62.

4. Sabhā. 5. 78.

and prisoners (dandapratikartr) to sow the seeds on crown lands which have been often and satisfactorily ploughed".<sup>1</sup>

"If a person cultivates an inalienable land of another person who does not cultivate it, such a person shall restore the same after five years enjoyment on taking a certain amount of compensation equivalent to the improvement he made on the lands".<sup>2</sup> Land was not allowed to remain fallow over an indefinite period. Others were induced to make the land productive as in the above case, where the cultivator gains substantially by improving someone else's land. Then again, further encouragement was extended to agriculture and to the making of waste land cultivable by allowing cultivators to till lands at a nominal rent, by means of exemption from taxation and royal dues, and by the king's donation of waste land, tax free, to people willing to try to work it. "... Or they may pay (to the king) as much as they can without entailing any hardship upon themselves (anavasitam bhāgam), with the exception of their own private lands that are difficult to cultivate", says Kauṭilya.<sup>3</sup> And again: "Either on the occasion of opening new settlements or on any other emergent occasion, remission of taxes shall be made".<sup>4</sup> According to Śukra,<sup>5</sup> if people undertake new industries or cultivate new lands and dig tanks, canals, wells, etc. for their good, the king should

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1. Arth. II. 24.  
2. Ibid. III. 10.  
3. Ibid. II. 24.

4. Arth. II. 1.  
5. Śukra. 242-244.

not demand anything of them until they realise profit twice the expenditure.

The king had a twofold objective in encouraging the conversion of waste land into cultivated areas: (a) to increase cultivation, so that (b) his income from the land increased. Thus the prosperity and well-being of the people merged with the material interest of the king. Our inscriptions provide us with ample evidence of the formation of new settlements, and of the donation by the king of waste land. Thus, we are told of the settlement of a community of Brāhmaṇas who are given lands for cultivation within a forest region where "deer, buffaloes, boars, tigers, serpents, etc. enjoy according to their will all pleasures of home life".<sup>1</sup> The Guṇāigarh grant of Vainyagupta<sup>2</sup> describes the five plots of land donated to a Buddhist monastery as "śūnya-pratikara-hajjika<sup>3</sup> khila-bhūmi", i.e. water-logged waste land paying no tax. In innumerable cases the king used to donate waste land in case the donee might be able to make it productive. And many enterprising individuals took advantage of the remission Donation of of taxes granted by the State in the case of the waste land purchase of waste land, and applied for khila-tax-free ksetra in order to convert it into cultivable land, benefiting themselves thereby, while being exempt from royal dues. In

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1. E. I. XV, p. 311 - Tripperah plate.

2. I. H. Q. VI, pp. 56, 59.

3. Cf. the phrase 'sukhā hājā' of popular dialects.



most of the copper-plates of eastern India, the Dhanāidaha copper-plate,<sup>1</sup> the Dāmodarpur copper-plates,<sup>2</sup> the Gūgrahāṭi grant,<sup>3</sup> etc. we find applications made for khila-bhūmi.

The establishing and maintaining of irrigational works throughout the country by the State, which will later be discussed under Irrigation, and the maintenance of a separate department, with its own officials, for agriculture gave a further impetus to cultivation.

From these inscriptions our imagination may call up a vivid picture of our forefathers battling with the wilderness, and the slow but steady extension of cultivation and rural Extension of rural Settlements settlements. In the period under survey, the steady growth of population and hence the increasing demand for habitable and cultivable lands, the ambition of the priests to consolidate their power by the acquisition of lands, and the king's thought for the welfare of the people, as also his need to increase his own revenue, and his desire for religious merit by making donations to Brāhmanas, were all factors combining together to provide the powerful drive behind the organised attacks we see unfolded, made on lands left for so long uncultivated, and on parts which had hitherto been avoided as places unfit for human habitation. In order to recover these waste lands and to turn them into settled and agricultural areas, the king granted them either to

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1. J.A.S.B. (N.S.) V, pp.459-461; E.I. XVII, p.345 ff.  
2. E.I. XV, p.113 ff.  
3. E.I. XVIII, p.76.

Brāhmaṇas or to the people in general. As the importance of agriculture grew, people also started purchasing lands from the State, in order to convert them into agricultural land. With their need for the land as a source of livelihood, there was also the spirit of adventure and enterprise in the zest with which these people cleared forests and turned their skill and ingenuity upon unproductive land.

#### Protection and Safeguards.

Agriculture was safeguarded and protected in various ways. The wages of agricultural labourers were regulated. Kautilya specified that: "Provisions shall be supplied to ... labourers in proportion to the amount of work done by them. They shall be paid a pana and a quarter per mensem".<sup>1</sup> And again: "Neighbours shall know the nature of agreement between a master and his servant. The servant shall get the promised wages. As to wages not previously settled, the amount shall be fixed in proportion to the work done and the time spent in doing it (karmakālānūrūpam - at the rate prevailing at the time). Wages being previously unsettled, a cultivator shall obtain 1/10th of the crops grown ... Wages previously settled shall be paid and received as agreed upon".<sup>2</sup> Fines and punishments were imposed adequately to protect seeds, cornlands and cultivation. Fines were imposed for non-performance of agreement to work. "The fine levied on a cultivator who, arriving at a village for work, does not

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1. Arth. II. 24.

2. Arth. III. 13.

work, shall be taken by the village itself.. He shall refund not only double the amount of the wages he received on promising to work, but also double the value of food and drink with which he has been provided".<sup>1</sup>

The stealing of grains and other products, and implements of agriculture, was severely discountenanced and heavily fined. Brhaspati gives injunctions that "stealers of grain shall be compelled to give ten times as much (to the owner) and the double amount as a fine".<sup>2</sup> Also: "On him who steals more than ten kumbhas of grain corporal punishment (or execution) shall be inflicted; for stealing less than that a man shall be fined eleven times the quantity stolen and shall restore his property to the owner".<sup>3</sup> He further lays down that: "He who destroys or takes implements of husbandry .... flowers, roots or fruit, shall be fined a hundred panas or more, according to the nature of his offence".<sup>4</sup> The selling

Fines and of seed and corn under false pretences and the  
Punishments destruction of sprouting seeds were regarded as grave offences. Manu says: "He who sells (for seed-corn that which is) not seed-corn, he who takes up seeds (already sown), he who destroys a boundary mark, shall be punished with mutilation".<sup>5</sup> Fines were also imposed for the destruction of crops, and this was regarded as an even more culpable offence than the stealing or destruction of grain, as here the labour

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1. Arth. III. 10.  
2. Br. XXII. 19.  
3. Ibid. XXII. 21.

4. Br. XXII. 25.  
5. S.B.E. XXV, p. 394.

also is destroyed. As Kautilya says: "The destruction of crops is worse than the destruction of handfuls of grain, since it is the labour that is destroyed thereby".<sup>1</sup> Again: "Any person causing ... damage to the seeds sown in the fields of others shall pay as much compensation to the sufferers as is equivalent to the damage". Cultivators were fined for negligently allowing their crops to be destroyed. Manu tells us that "a cultivator who negligently allows his crops to be destroyed is liable to a fine of five or ten times the value of the king's revenue".<sup>2</sup> Any interference with irrigation was penalized. Kautilya instructs that "persons who obstruct, or make any kind of mischief with the flow of water intended for cultivation shall be punished with the first amercement".<sup>3</sup> The cultivator was protected against undue oppression and hardship, as is obvious in Kautilya's injunctions that "he (the king) shall protect agriculture from the molestation of oppressive fines, free labour and taxes, herds of cattle and thieves, tigers, poisonous creatures and cattle-disease".<sup>4</sup> He was also safeguarded against the encroachment on his land of wandering actors and minstrels and others regarded as disturbing elements. "Actors, dancers, singers, drummers and bands may not make any disturbance to the work of the villagers; for helpless villagers are always dependent and bent upon their fields".<sup>5</sup>

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1. Arth. VIII. 2.  
2. Manu. VIII. 243.  
3. Arth. III. 10.

4. Arth. II. 1.  
5. Ibid.

Besides, we have numerous injunctions given by the king for the protection of cultivation while granting lands. Thus, the Māliyā copper-plate inscription of Dharasena II says:

"Wherefrom no one should behave so as to cause obstruction to this person in enjoying (it) in accordance with the proper condition of a grant to a Brāhmaṇa (and) cultivating (it), (or) causing (it) to be cultivated or assigning (it to another)".<sup>1</sup>

The Alīnā copper-plate gives similar instructions.<sup>2</sup>

### Indebtedness

In spite of these elaborate measures for the protection of the cultivator, poverty and indebtedness were not lacking. The Rāmāyaṇa and Mahābhārata tell us of the cultivator struggling against poverty and toiling to ward off starvation, tilling the land single-handed, or with the help of only his sons.<sup>3</sup> They suffered under the oppression of money-lenders, and there are numerous examples in the Jātakas of money-lenders enforcing the advantage they had gained over the unfortunate peasantry. In the Jātakas<sup>4</sup> a kuṭumbika is said often to make a journey by cart to distant villages to collect debts. In one case he is said to attach a bullock-cart in payment of a debt.<sup>5</sup> It was usually the big farmers who carried on a lucrative money-lending business in villages, while it was the small farmer who ran into debt in times of scarcity, and sometimes

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1. G. I. p. 171.

2. Ibid. p. 190.

3. Rām. II, 32, 30;  
Mbh. XII, 177, 5 ff.

4. Jāt. II. 341; III. 107; IV. 45.

5. Jāt. III. 66.

losing all, either through extortion or from want, became destitute and hired out his services to a wealthy farmer and worked on his estates.

### Methods of Cultivation.

But with all this poverty and indebtedness, the general prosperity of the country in our period seems to have been considerable. The plough used was a large one and pulled by oxen. Keith in describing the plough used in the post-Vedic age says: "The plough was large and heavy. We hear of as many

as twenty-four oxen being harnessed to one; it  
The Plough had a sharp point and a smoothed handle".<sup>1</sup> Four, six, eight and even twelve oxen were used, according to Manu.<sup>2</sup> The minimum number of bullocks used seems to have been four, as Manu regards as a grave religious offence the harnessing of  
Number of oxen only two bullocks. Śukra<sup>3</sup> has it that the Brāhmaṇas should have sixteen oxen to their ploughs, the Kṣatriyas twelve, the Vaiśyas eight, and the Śūdras four. A farmer's wealth is assessed by his land, his cattle and livestock, and the produce of his fields. Nowadays, two bulls are almost as much as a farmer can maintain, and if one of them is incapacitated from some cause or other, the farmer is considerably embarrassed.

Corporate agriculture seems also to have been carried out to some extent. Bṛhaspati suggests that "tillage should

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1. C.H.I., p.135.

2. Manu. VII. 119. Cf. Tai.S.V. 2.5.2., A.V. VI. 91.1.

3. Śukra. IV. III. 38-39.



be undertaken by a sensible man jointly with those who are his equals in point of cattle, workmen, seeds and the like, as well as implements of husbandry".<sup>1</sup> 'When by the Corporate Agriculture deficiency of one (partner) as to cattle or seeds, a loss happens in (the produce of) the field, it must be made good by him to all the husbandmen'.<sup>2</sup>

Intensive use of manure was also known to the agricultural workers of those days, and was at a high level of development. Special rules are given in the Arthaśāstra about the use of various kinds of manure. Thus: "The water-pits at the roots of trees are to be burnt and manured with the Manure bones and dung of cows on proper occasions".<sup>3</sup> The fertilising property of bone was a matter of common knowledge even in those distant times, and the bone was no doubt crushed before use. The practice of manuring sprouts was prevalent. "The sprouts of seeds, when grown, are to be manured with a fresh haul of minute fishes and irrigated with the milk of snuhi" (Euphorbia antiquorum).<sup>4</sup>

#### Sowing and Harvesting.

Greek writers affirmed that India had a double rainfall and that the Indians generally gathered two harvests;<sup>5</sup> but in the Arthaśāstra a third harvest is also implied.<sup>6</sup> A king is advised to attack his enemies in three particular seasons so as

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1. Br. XIV. 21.  
2. Ibid. XIV. 25.  
3. Arth. II. 24.

4. Arth. II. 24.  
5. Diod. II. 36.  
6. Arth. II. 24.

to gain the most advantage over them. He should march in Mārgaśīrṣa (December), so as to destroy the rainy crops and autumnal handfuls of his foes (vārṣikam cāśya sasyaṃ haimanaṃ ca muṣṭim upahantum).<sup>1</sup> Or he should attack in Caitra (March) to destroy the autumnal crops and vernal handfuls, or else in Jyestha-mūla (June) to kill the vernal crops and rainy season handfuls.<sup>2</sup> From this it appears that there were three sowings Three sowings and harvests and harvestings - one crop sown in the rainy season and reaped in the month of Māgha, another planted in autumn and gathered in by Caitra, and a third sown in spring and garnered before Jyāiṣṭha. Elsewhere Kauṭilya gives the crops suitable for sowing in the different seasons.

The crops were grouped according to the season, the wet crops being called kedāra, the winter crops haimana, and the summer crops graiṣmika, which are to be grown according to the supply of workmen and water.<sup>3</sup> In a descriptive passage of the Seasonal crops Rāmāyaṇa<sup>4</sup> śāli, godhūma and yava are seen waiting for harvest with the advent of winter. But wheat and barley are winter or rabi crops sown in October and gathered at the end of May. As crops depend upon rainfall and some seeds need more water, while others less, Kauṭilya enjoins that "according as the rainfall is more or less, the superintendent shall sow the seeds which require either more or less water".<sup>5</sup>

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1. 'Muṣṭi' means probably the handful of seed-grains just sown and sprouting in the field. Sasya must be the crops reaped and garnered.

2. Arth. IX. 1.

3. Arth. II. 24.

4. Rām. III. 16. 16 f.

5. Arth. II. 24.

He then divides the rainy season into three parts and catalogues the crops that should be sown in each part. For instance, rice, koḍrava, sesamum, panic seeds, dāraka and varaka are to be sown at the commencement (pūrvāvāpa) of the rainy season;

Crops sown according to rainfall mudga, māṣa and śaibya in the middle of the season (madyavāpa); kusumbha, wheat, barley, mustard, linseed and lentils at the end of the season (pascādvāpa).<sup>1</sup> It was extremely important that the seeds be sown in the right season and in the right time of the season. Brhaspati<sup>2</sup> says: "That man will enjoy produce who sows fertile land, which has many holes and is wet, capable of irrigation, surrounded by fields on all sides, and cultivated in due season".

#### Agricultural Products.

A large variety of crops were grown. It is stated in the Śāntiparva that during the idealised reign of Prthu, seventeen kinds of crops were grown for the yakṣas, rākṣasas and nāgas.<sup>3</sup> The Matsya-Purāṇa speaks of eighteen dhānyas.<sup>4</sup> Different kinds of cereals were cultivated. According to Kautilya cereal crops and the like are best to grow, vegetables are of an intermediate nature, and the sugar-cane crops are the

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1. Arth. II. 24.

2. Br. XIV. 23.

3. Mbh. Śānti. 59. 124.

The Vāj. S. 18. 12 contains a list of twelve different kinds of crops, such as rice, yava, wheat, māṣa, sesame, mudga, masūra, etc. The Br. Up. VI. E. 13 enumerates ten kinds of grain (grāmyāni dhānyāni).

4. Matsya, 276-7; also Apa., p. 323.

Variety of crops worst to grow for they are subject to various evils and require much care and expenditure to reap.<sup>1</sup>

Sugar-cane was grown even in the times of the Atharva Veda.<sup>2</sup>

Sugar-cane is also mentioned in the Rāmāyaṇa.<sup>3</sup> Jute and silk

of different varieties were also cultivated with care. From

the beginning of the Christian era, Indian silk had a powerful

competitor in Chinese fabrics. The growth of flax (khoma)

and hemp (sāna) was also widely known.<sup>4</sup> Various vegetables and

pulses are mentioned: koḍrava and pulaka, which like garlic and

onion cannot be offered in Śrāddhas,<sup>5</sup> syāma<sup>6</sup> and pulses of the

bean or phaseolus group were widely grown, e.g. mudga, māṣa,

varaka, kalāya.<sup>7</sup> Hiuen Tsīang, travelling from place to place

in northern India, observed the products grown. These were

"upland rice and spring wheat", "good crops of grain", "good crops of spring wheat and other grain, including a peculiar kind of rice which in sixty days was ready for cutting".<sup>8</sup>

Kauṭilya also gives the most favourable places for growing different plants and vegetables. Sea-beaches and river banks (phena-ghāta) are suitable for growing creeper-yields (vallīphala, i.e. gourd, pumpkin, etc.); moist lands are best for long pepper, grapes and sugar-cane (pippali-mṛdvīka-ikṣu);

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1. Arth. II. 24.

2. A.V. I. 34.15.

3. Rām. I. 70. 3.

4. Mbh. XII. 86. 14.

5. Mbh. XIII. 91. 38.

6. Ibid. XII. 271. 4.

7. Arth. II. 24; Mbh. XIII. 111. 71.

8. Watters. I. pp.165, 176, 179.

favourable places the vicinity of wells for vegetables and  
for growing  
different plants roots (kūpa-paryyantāḥ śākamūlānām); low  
grounds for green crops (haraṇī paryantāḥ); and marginal  
furrows between rows of crops are to be utilized for the  
plantation of fragrant plants, medicinal herbs, cascus roots  
and the like.<sup>1</sup>

Not much help is to be derived from our inscriptions  
as to agricultural products. It seems that paddy, which had  
been the staple food of the people from very ancient times, was  
largely cultivated. An early inscription refers to a rice  
granary at Funḍranagara in Bengal.<sup>2</sup> In the later inscriptions  
we have numerous references to "smooth fields growing excellent  
paddy and myriads of villages consisting of lands growing paddy  
in excessive quantities".<sup>3</sup> The Vappaghoṣavāṭa grant of  
Jayanāga refers to the existence of a sarsapa-yānaka (mustard  
channel) in the Audambarika-viṣaya of Karnaśuvārṇa.<sup>4</sup>

The foreign travellers who visited India from the fourth  
century B.C. onwards always speak highly of the abundance of  
crops and the fertility of the soil. Megasthenes says: "The  
soil bears on its surface all kinds of fruits known to culti-  
vation". He adds that "in addition to cereals there grows  
throughout India much millet ... and much pulse of different  
sorts, and rice also, and what is called bosporum, as well as  
many other plants useful for food, of which most grow

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1. Arth. II. 24.

2. Mahāsthān Brāhmī Inscription. E. I. XXI, p. 83;  
I. H. Q. X, p. 57.

3. Ins. of Beng., p. 129, 89-90.

4. E. I. XVIII, p. 63.

spontaneously. The soil yields, moreover, not a few other edible products fit for the subsistence of animals, about which it will be tedious to write...<sup>1</sup> Hiuen Tsang, writing in the seventh century A.D., says that in all parts of the province the countryside was regularly and assiduously cultivated and produced grains, flowers and fruits in abundance.<sup>2</sup>

## 2. IRRIGATION

Natural Irrigation. Artificial Irrigation -- Its Importance -- Methods -- Construction and Repair -- Drinking Water -- Water-rates -- Protection -- Endowments for Maintenance.

Agriculture and irrigation are inseparably bound to each other and the one implies the other. Hence, a discussion of irrigation in northern India in our period must logically follow on our analysis of the conditions under which agriculture was carried on. It is superfluous for us to stress the importance of irrigation in a land where the majority of the people support themselves by agriculture, and we can readily conceive what position irrigation occupies in India. Those places which are blessed with a liberal supply of water are fertile and flourishing, and those lacking this precious element are dry and arid, where little vegetation grows and few human habitations are seen.

### Natural Irrigation

The natural sources of water-supply are rivers, lakes,

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1. Diod. II. 36 - McGrindle. Meg., p. 31-32.

2. Beal. II. 191, 194, 200-201.



springs and rainfall. Let us see how fortunate India is in these respects. Two chief factors govern the hydrography of India - the inexhaustible supply of ice and snow stored in the lofty Himālayas, "the abode of snow", which bounds India on the north in a magnificent snow-capped crescent, tilted from north-west to south-east; and the monsoon wind which in summer and again in autumn blows from south to north across the Bay of Bengal, striking the impregnable wall of the Himālayas and coming down in torrents of rain on the plains beneath.

The river-system depends on the orographic structure of the country. Northern India is watered by two mighty rivers, the Indus on the west and the Ganges on the east. Each of these is fed by a host of tributaries in mid-course, the Ganges by seventeen,<sup>1</sup> the Indus by almost an equal number.<sup>2</sup> The Indus

and Brahmaputra have their sources fairly close  
Rivers together on the northern slope of the Himālayas, then flow in opposite directions, burst through the great mountain wall in parallel gorges and sweep suddenly down on the plains. The Jumnā, the twin sister of the upper Ganges, receives the water of the Vindhya by the Chambal and contributes them to the main stream. Altogether, the number of Indian rivers is computed at fifty-eight, all of which are navigable.<sup>3</sup> In spite of the existence of all these rivers, great stretches of India are arid desert, with no rivers or

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1. Arr. IV, according to Pliny, nineteen.

2. Arr. IV has thirteen, Strabo fifteen, Pliny nineteen.

3. Diod. II. 37.

other sources of water-supply. Again, some parts are blessed with a superabundance of rainfall, while in other regions

there may be no rainfall at all. Kautilya also  
Rainfall notes the variation in rainfall in different regions:

"The quantity of rain that falls on the country of Jaṅgala (desert countries) is 16 droṇas; half as much more in moist countries (anūpānām); as to the countries which are fit for agriculture (deśa-vāpānām), 13½ droṇas in the country of Āśmakas (Mahārāṣṭra); 23 droṇas in Avanti; and an immense quantity in western countries (aparāntānām), the borders of the Himālayas and the countries where water channels are made use of in agriculture (kulyāvāpānām).<sup>1</sup>

Thus with this unequal distribution of rivers and rainfall the fertile and arable land in the country is also unevenly distributed. "The valleys of the Punjab are productive, but the lower Indus basin is only saved from sterility by artificial irrigation. Beyond the Thar, or great desert of Rajputana, the alluvial soil of the Baroda district, between

Uneven Ahmadabad and Surat, is remarkably fertile. The  
distribution volcanic sub-soil of the valley of the Narmada  
of fertile and the plateau of Kathiawar is favourable to  
land cultivation. But the grey dust of the western half of the Gangetic basin is in marked contrast to the exuberant richness of the eastern half. The Carnatic plain, from Madras to Tuticorin, contains some of the best land".<sup>2</sup>

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1. Arth. II. 24. 7.

2. Ancient Ind. & Ind. Civ., p.5.

### Importance of Irrigation.

Because of this uneven distribution of water supply and hence of fertile and sterile land, irrigation by human efforts becomes indispensable to India. Its importance was recognised in early times. Our records provide many instances where this is stressed. Irrigation has been used Recognised from early times from Vedic times. The Rg-Veda<sup>1</sup> refers to rivers and springs naturally flowing and to channels that were dug. In the Sabhāparva<sup>2</sup> the king is advised to build large tanks, full of water, in different parts of the country and to see that agriculture does not depend on the rains alone. From the Rāmāyaṇa also we find that reliance on rainfall and other natural water-sources was looked upon as injudicious, and a capital city where agriculture was carried on by irrigation was highly eulogized. Thus Rāma praises the land of Kośala as adevamātrka.<sup>3</sup> This literally means "not having the goddess of rain or clouds as foster-mother"; hence, an adevamātrka land is that which does not depend entirely on rain-water, but has other sources of water-supply, namely, irrigation, for agricultural purposes.<sup>4</sup> Kauṭilya, when describing the qualities of a good country, says that the country not depending upon rain for water,

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1. R.V. VII. 49. 2.

2. Mbh. II. 5. 77 - kaccid rāṣṭre tatāgāni pūrṇāni ca  
brhanti ca: bhāgaśo viniviṣṭāni na kṛṣir  
adevamātrkā.

3. Rām. II. 100. 45.

4. Cf. nadīmātrka - having a river as foster-mother.

possessed of land and waterways ..... inhabited by agriculturists of good and active character, was one of the ideal elements of sovereignty.<sup>1</sup> Kāmandaka<sup>2</sup> defines as a prosperous land "a land adorned with crops ..... copiously watered ..... and not depending upon showers of rain for agricultural purposes - such a land is specially favourable to the welfare and prosperity of kings". Śukra<sup>3</sup> remarks that the king should see to it that there is plenty of water in his kingdom by digging wells, wells with steps, tanks, lakes, etc.

That irrigation was one of the elements of a good country and that kings should give importance to it was not a mere theoretic principle, but a matter of great practical consideration. It was impossible for the country to prosper if no adequate arrangements were made for irrigation. The extreme dependence of the agricultural population on methods of artificial irrigation is seen from the description given in the Junāgaḍh inscription of Skandagupta<sup>4</sup> of the acute distress and helpless despair of the people when the lake Sudarśana burst its embankments. In the Mahābhārata<sup>5</sup> there is a touching tale of a burst ridge, and of the disciple Āruṇi, who was told to go and stop it. Finding no other means of stopping the flow of water, the boy lay prostrate across the breach and thus checked the damage. The importance of irrigation has further been emphasized by Brhaspati.<sup>6</sup>

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1. Arth. VI. 1.  
2. Kām. IV. 51-52.  
3. Śukra. IV. 4. 60.

4. G. I. p. 64.  
5. Mbh. I. 3.  
6. Br. XIV. 23.

The fertility of a region is considerably increased by artificial irrigation and there is a marked contrast in the quantity of grain produced by the same land before and after the establishment of irrigational works. The great engineer Suyya, under Avantivarman of Kashmir, successfully dammed the river Vitastā, with the result that a khāri of rice which could formerly be purchased for 200 dināras could be had after the great irrigation work for 36 dināras.<sup>1</sup>

#### Methods of Artificial Irrigation.

The necessity for a good system of irrigational works is thus obvious. We have seen earlier how natural irrigation was effected by rivers and rainfall. Let us now proceed to a general description of the system of artificial irrigation and the various means used to bring the life-giving water to arable lands where the natural water-supply was insufficient for the needs of cultivation.

There were canals of various kinds. In some cases large channels took the water straight from rivers to irrigate adjacent fields. We have an example of such a channel in the Kaśākudī plates.<sup>2</sup>

#### Canals

Then again, there were canals that did not directly supply water to the fields, but were used to feed large tanks which formed the main source of water-supply. The Kūram plates<sup>3</sup> mention a channel of this sort. From the tank, branch channels took the water to all

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1. Rjt. V. 84-117.

2. S.I.I. Vol.II, part II, p.352, l. 116.

3. S.I.I. Vol.I, p.150. l. 67.

parts of the fields round about. The Bāhūr plates<sup>1</sup> refer to these branch channels.

Then there were tanks. The Aphsād inscription of Ādityasena tells us that "in the performance of an excellent penance ... caused to be excavated a wonderful tank".<sup>2</sup>

Similarly in the Mandār inscription another such tank is described.<sup>3</sup> The Mahendravādi inscription<sup>4</sup> mentions a taṭāka or tank, and the Manual of the North Arcot District,<sup>5</sup> in

Tanks reporting on it, says that the tank must originally have been larger, and served lands some seven or eight miles distant. The bund was enormously high, and might be restored to its original height, in which case a great extent of land could be brought under irrigation. From a reading of this report, we can form some idea of its massive structure, of the vast quantity of water it could contain, and the wide extent of land irrigated by it. There were also reservoirs.

Reservoirs In the Tuśām rock-inscription<sup>6</sup> we have a reference to two reservoirs - one intended for the feet of the deity, and the second the work of Ācārya Somatrāta.

Lakes were also excavated. An example is furnished by the Junāgaḍh rock-inscription of Rudradāman<sup>7</sup>, which states that the lake Sudarśana, excavated in earlier times, was restored. The dimensions of the dam (420 cubits x 420 cubits x 75 cubits) give an idea of the vastness of the lake.

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1. E. I. XVIII, p. 5 ff.

2. G. I. p. 208.

3. G. I. p. 212.

4. E. I. IV, p. 152.

5. 2nd. Ed. Vol. II, p. 438.

6. G. I. p. 270.

7. E. I. VIII. 6.



Lakes Skandagupta had this lake repaired in his reign by building an embankment "a hundred cubits in all in length, and sixty and eight in breadth and seven men's height in elevation....of two hundred cubits".<sup>1</sup>

Innumerable references are to be found as to the digging of irrigation wells. Thus the Rāypur copper-plate of Śaṣavarāja tells us of an irrigation well called Śrīvāpikā, constructed with the mound on the land that skirts the eastern bank.<sup>2</sup> In the Valabhī plates we have

Wells reference to irrigation wells,<sup>3</sup> one with an area of 12 pādāvartas, the well Amṛtikā also about 12 pādāvartas, and land together with an irrigation well with an area of 16 pādāvartas. In the Mandasore stone inscription of the king Yaśodharman is given the season in which a large well was caused to be constructed.<sup>4</sup>

Our inscriptions give us the above general picture of the irrigational system. Raghunandana, on the authority of the Matsya-Purāṇa, states that reservoirs of water that are dug by man are of four kinds: kūpa, vāpī, puṣkarinī and taḍāga.<sup>5</sup> Some works define kūpa as a well that is from five to fifty cubits in length (if rectangular) or in diameter (if it is circular). It has generally no flight of steps to reach the water. Vāpī is a well with a flight of steps

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1. G. I. p. 64.

2. G. I. p. 200.

3. E. I. XI, pp. 108, 111, 114.

4. G. I. p. 152.

5. Atha jalāśayāḥ-te ca khaṇanasādyās catvāraḥ kūpa-vāpī-puṣkarinī-taḍāga-rūpāḥ-tathā ca Matsya-Purāṇam (Jalāśayotsarga-tattva). Vide also Dkk., p. 126.

on all sides or on three or two sides or one side only, and its mouth may be from 50 to 100 cubits; a puṣkarinī is from 100 to 200 cubits in length or diameter, and a tadāga (a tank) is from 200 to 800 cubits. The Matsya-Purāṇa<sup>1</sup> states that a vāpī is equal to ten kūpas (in merit) and a hrada (deep reservoir) is equal to ten vāpīs. According to Vasīṣṭha-saṃhitā, quoted by Raghunandana, a puṣkarinī is up to 400 cubits and a tadāga is five times as much.<sup>2</sup>

There were also mechanical contrivances aiding in the work of irrigation by controlling the flow of water in the sources of water-supply, or by raising water from rivers, lakes, tanks and wells. Kauṭilya mentions irrigation by means of damming rivers and by wind-power (vāta-prāvartima-nadī-nibandhāyatana),<sup>3</sup> or by water-lifts worked by bullocks (sroto-yantra-prāvartima).<sup>4</sup> Irrigation on a small scale was carried out by the primitive method of carrying water on the shoulders (skandhaprāvartima) or by hand (hastaprāvartima) (i.e. by hand-pumps).<sup>5</sup> That these various mechanical contrivances were used is further confirmed by a later Pallava inscription<sup>6</sup> and also in the Śukranītisāra.<sup>7</sup> Amongst these, an important device

Mechanical  
Contrivances

for controlling the flow of water was the sluice. An inscription registers in two

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1. Matsya. 154. 512.
  2. Jalāśayotsargatattva of Raghunandana. Vide also Dkk, p.126.
  3. Arth. III. 9.
  4. Ibid. II. 24.
  5. Ibid.
  6. E.I. V. No.8, p.52 - Rāyakōṭa plate of Skandaśiṣya.
  7. Śukra. II. 320-24.

verses the building of a sluice.<sup>1</sup> Sluices are generally mechanical contrivances by which water is released from one main canal into other branches, so that each one may have an equal supply of it. Sluices are also used for surplus vents. They are usually constructed on the tank bund to permit the flow of surplus water and keep the tank intact from bursting owing to overfulness of water. Kautilya also mentions sluice-gates (apāre).<sup>2</sup>

#### Construction and Repair.

Due to the extreme importance of irrigation, much was done to encourage the construction of irrigation works. The Law Books hold out the incentive of divine reward to kings and people for this.<sup>3</sup> Not only did the king himself order such works, but he also readily gave permission to anyone wanting to do something in this direction and sometimes even provided him with implements to dig and other facilities, as in the Kaśākudī plates, where the Brāhmanas were provided

Encouragement to construct new works with necessary implements, in addition to being granted permission to construct irrigation works.<sup>4</sup> "He may provide with sites, roads, timber and other necessary things those who construct reservoirs of their own accord".<sup>5</sup> The king frequently granted remission of taxes when people of their own accord wished to construct

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1. E. I. VII, p. 25.

2. Arth. III. 9.

3. Visnu. X. C. I., p. 9.

4. S. I. I. II, part IV. 352.

5. Arth. II. 1.

new works. "In the case of construction of new works, such as tanks, lakes, etc., taxes (on the lands below such tanks) shall be remitted for five years (Pāñca-varṣikāḥ parihārah)".<sup>1</sup>

Moreover, the king himself very often took the initiative in building such works. "He shall construct construction reservoirs (setu) filled with water either initiated by king perennial or drawn from some other source".<sup>2</sup>

Many of these works were named after the king himself. For instance, the actual construction of the tank Parameśvara-taṭāka, named after Parameśvaravarman I, is recorded in the Kūram plates<sup>3</sup> of the same king. It was intended to irrigate all the lands in the newly constituted village, Parameśvara-maṅgalam. Sometimes a tank is called rājataṭāka, having been constructed by the king, as in the British Museum plates.<sup>4</sup>

It is not unusual to find queens giving orders for the excavation of tanks and wells. In the Aphaṣaḍ by Queens inscription of Ādityasena the illustrious queen Konadevī caused a wonderful tank to be built.<sup>5</sup> The Mandār inscription records how this same queen had another tank constructed.<sup>6</sup> A Prākṛt record of the queen Cārudevī mentions a well.<sup>7</sup> Sometimes high state officials took an by State interest in this important aspect of the Officials country's welfare and were responsible for the

1. Arth. III. 9.  
2. Arth. II. 1.  
3. S. I. I., part I, p. 150.  
4. E. I. VIII, p. 145.

5. G. I. p. 208.  
6. G. I. p. 212.  
7. E. I. VIII, p. 145.

construction of various works. A Sāñci inscription of the third century A.D.<sup>1</sup> records the excavation by a Śaka general (Mahādaṇḍanāyaka) of a well of perennial water-supply for all (salilah sarvādhigamyah sadā). An inscription of the second century A.D. in Kāthiāwār says that a general (Senāpati) of the time of the Kṣatrapa Rudrasimha caused a well to be dug and embanked in the village of Rasopadra for the welfare and comfort of all living beings (sarvasatvānām hitasukhārtham).<sup>2</sup> The construction of a well by a subordinate of Dantivarman is recorded in one of his inscriptions.<sup>3</sup> Works were also by private individuals constructed by gahapatīs, Brāhmanas, and ordinary individuals. An Andhra inscription of Pulumāyi II speaks of a well sunk by a gahapatika.<sup>4</sup> The Ārā inscription of Kanīṣka II alludes to "a well dug by Daṣavhara ... for the welfare of all beings".<sup>5</sup>

Sometimes with the granting of lands or villages we find mention of irrigation wells and tanks which are bestowed Irrigation works bestowed with lands along with the village or land. Thus in the Rāypur copper-plate of Sudevarāja an irrigation well called Śrīvāpikā is given to Nāgavatsa-(svāmin in excess of his exact half of the village, because he is the elder).<sup>6</sup>

Rewards were offered for keeping these works in good order and repairing them when necessary, whereas fines were

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1. E. I. XVI, p. 233.  
2. E. I. XVI, 16 f.  
3. E. I. XI, p. 145.

4. E. I. XIV, 7. 9.  
5. C. I. I. II, Pt. I, p. 165.  
6. G. I. p. 200.

imposed for letting them fall into neglect. "For repairing neglected or ruined works of similar nature, taxes shall be remitted for four years ..... persons who are permitted to enjoy such lands free of rent of any kind, shall keep the tanks, etc. in good repair; otherwise they shall be punished with a fine of double the loss".<sup>1</sup>

Repairs

Kings incurred heavy expenditure for the repair of irrigational works, as the welfare of the people depended so much on them. Rudradāman, at great expense from his own treasury, without any additional taxation or demand for free labour, restored the famous Sudarśana lake near Junāgaḍh<sup>2</sup> that had been built by the Governors of Candragupta and Aśoka, and had been breached by floods. Skandagupta made an immeasurable expenditure of wealth in building an embankment to repair the same lake.<sup>3</sup>

Besides new constructions and repairs, extensive extensions of irrigational works sponsored by the kings are also known. In the Hāthigumphā inscription of Khāravela, king of Kalinga,<sup>4</sup> it is stated that a canal which had already been opened in the 103rd. year of the Nanda kings was extended.

Kauṭilya, in order to encourage the extension and improvement of such works, says: "For improving or extending or restoring water-works overgrown with weeds, taxes shall be remitted for three years".

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1. Arth. III. 9.  
2. E. I. VIII, p. 36.

3. G. I. p. 64.  
4. E. I. XX. p. 71.



Apart from irrigation purposes, we see that this stored water was sometimes available for drinking. The tanks built at the charge of queen Koṇadevī, mentioned in the Aṃśad Drinking and Mandār inscriptions already referred to, were purposes also used for drinking purposes.<sup>1</sup> The Prākṛt record of queen Cārudevī mentions a drinking well, "pānīya-kūpa", near the king's tank.<sup>2</sup>

It may be mentioned here that the water-rate imposed was proportionate to the irrigation carried out on the land. Thus "out of crops grown by irrigation by means of wind-power or damming the river .... so much of the produce as would not entail hardship on the cultivators may be given to the

government".<sup>3</sup> And "those who cultivate Water-rates irrigating by manual labour shall pay 1/5th of the produce as water-rate; by carrying water on shoulders 1/4th of the produce; by water-lifts 1/3rd of the produce; and by raising water from rivers, lakes, tanks and wells, 1/3rd or 1/4th of the produce".<sup>4</sup>

#### Protection.

The irrigation works were protected, and the State was always vigilant to see that severe damage was not caused by anti-social elements of the people interfering with them. Fines and stringent and humiliating punishments were imposed in such cases. Manu decrees that a person causing damage to a tank or reservoir, and thus interfering with the public

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1. G.I. pp. 208, 212.

2. E.I. VIII, p. 145.

3. Arth. III. 9.

4. Arth. II. 24.

good, should be drowned in the water of that tank. If he makes good the damage, he was still to be punished with the first amercement.<sup>1</sup> Kautilya gives strict instructions that "the water of a lower tank shall not submerge the field irrigated by a higher tank". "The natural overflow of water from a higher to a lower tank shall not be stopped unless the lower tank has ceased to be useful for three consecutive years. Violation of this rule shall be punished with the first amercement. The same punishment shall be meted out for emptying a tank of its water (tatāka-vāmanam ca)". He further lays down that "persons letting out the water of tanks, etc. at any other place than their sluice-gate, shall pay a fine of six panas; and persons who recklessly obstruct the flow of water from the sluice-gate of tanks shall also pay the same fine".<sup>2</sup> In another place he adds that "persons who obstruct or make any kind of mischief with the flow of water intended for cultivation, shall be punished with the first amercement".<sup>3</sup> Brhaspati enforces the same consideration for irrigational works. According to him: "He who destroys an embankment shall be fined 100 panas or more according to the nature of his offence".<sup>4</sup> In the Mahābhārata we find that the State takes adequate measures to protect vital points of these water-works to ensure that breaches did not cause heavy floods and damage. Guards were stationed at these points to prevent interference with the water supply.

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1. Manu IX. 279.  
2. Arth. III. 9.

3. Arth. III. 10.  
4. Br. XXII. 25.

"The king should be vigilant at danger gates, as at the dam of a large water-works" (āpadvāreṣu yuktāḥ syāj-jala-prasravanēṣviva).<sup>1</sup>

The endowments for the maintenance of irrigation works consisted of cultivable lands, gold and paddy. The inscription from Guḍimallem<sup>2</sup> records the gift of land to a Endowments for main-tenance tank.<sup>3</sup> There was a special tank committee that was appointed to look after the interests of these tanks and other water-works.<sup>4</sup>

### 3. FAMINE

National Calamities -- Causes of Famine -- Precautions against Famine -- View of Greek Writers -- References to Famine -- Control Measures -- Relief.

There are many grave national calamities that from time to time befall a country and cause its prosperity to receive a severe setback. And in an agricultural country, where the people as a whole depend upon the produce of the soil, those calamities most far-reaching in their effects and causing the most distress are the troubles that threaten the food supply. A State that concerns itself with the welfare of the people will naturally take precautions to ward off these events as far as possible, and initiate effective measures for relief if their prevention is beyond their control.

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1. Mbh. XII. 120-8.

2. E. I. XI. p. 225.

3. Cf. Another record of the same kind - S. I. I. VI, p. 166  
14 of 1898.

4. The Uttiramerūr ins., 65 of 1898, S. I. I. Vol. VI.

Kauṭilya, in speaking of national calamities, says that they are of two broad types, those that are the inflictions of Providence and arise from one's misfortune, and those that are man-made and a result of bad policy. Amongst the various kinds of distress he mentions, such as those befalling king or minister, or people, or due to bad fortifications, or a financial crisis, the most important is the distress that affects the whole people.<sup>1</sup> This distress may arise from various causes. The Mahābhārata<sup>2</sup> calls these calamities "īti", which are six in number, namely, excessive National Calamities rainfall, drought, rats, locusts, parrots, and too close presence of foreign kings<sup>3</sup>. Kauṭilya, however, lists eight kinds of providential visitations - fire, floods, pestilence, famine, rats, tigers (vyālāḥ) serpents and demons, and he says "from these shall the king protect his kingdom"<sup>4</sup>. Elsewhere he mentions five providential calamities - fire, floods, disease, famine and epidemics.<sup>5</sup> Kāmandaka also states that the calamities are either divine or human, and the first are of five kinds.<sup>6</sup> In another place he gives a longer list of calamities.

#### Causes of Famine.

Of all these calamities, famine occupies a central

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1. Arth. VIII. 1.

2. Mbh. III. 279. 35.

3. Ativr̥ṣṭir anāvr̥ṣṭir mūṣakāḥ śalabhāḥ śukāḥ atyāsannās ca rājānaḥ ṣaḍ etā itāyaḥ smṛtāḥ - Kṣīrasvāmī on Amara and Rājanītiprakāśa, p.447.

4. Arth. IV. 3.

5. Ibid. VIII. 4.

6. Kām. V. p.82-83.

position, as most of the other visitations tend to imperil the crops and so cause it. Crops may be destroyed because of excessive rainfall. For example, the famous lake Sudarsana, excavated in former times, burst because of excessive rainfall, as we see from the Junāgaḍh rock inscription,<sup>1</sup> and the people a) Excessive Rainfall were in a state of great distress, expecting the flood to cause famine. Candragupta had the lake restored at enormous expenditure, and he says: "And may the city become prosperous; full of inhabitants; cleansed from sin by prayers sung by many hundreds of Brāhmanas; and free from drought and famine for a hundred years". We see from this how great was the dread of famine and how kings fulfilled their responsibility in taking prompt and effective measures. In the Rājataranginī we are given a description of the devastation caused by flood and famine in Kashmir.<sup>2</sup>

Drought was another important cause of famine.<sup>3</sup> In an inscription from Alangadi (Tanjore district), dated 1054 A.D., the pitiful condition of the people after a famine caused by the scarcity of rains is depicted. The b) Drought people had nothing with which to purchase paddy, seeds and other necessities and had to migrate to another region.<sup>4</sup> Varāhamihira, the great astronomer, who lived at

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1. G. I. p. 63.

2. Rjt. V. 271-77; Mil.p. 277, and Mv. III. 9. 4. also mention floods.

3. The Nirukta II. 10 refers to a drought for twelve years in the kingdom of Sāntanu.

4. M.E.A.R. 1899-1900, p. 20, par. 53.

this time, mentions in his writings the theory of the connection between sunspots and droughts.<sup>1</sup> Chinese travellers have testified to the occurrence of droughts and the deterioration in prosperity resulting therefrom. Fa-Hien, while recording the general prosperity of the kingdom, also testifies that several districts had retrograded in population and wealth. The causes of this decay were probably droughts and famines.<sup>2</sup> Corn might also be destroyed by hailstorms (aśma-vṛṣṭi).<sup>3</sup> Then again, swarms of locusts apparently swooped down on fields and

c) Hailstorms caused immense destruction, as they are alluded to in the Epics in the form of similes.<sup>4</sup>

d) Locusts

Warring kings often brought famine to their enemies' territory, as it was regarded as a maxim of rājadharmā (viruddha-cchedana, sasya-ghāta) repeatedly enjoined in the Śāntiparva, to destroy the enemy's crops.<sup>5</sup> Kauṭilya also advises the king

e) Wars to march against his enemies so as to destroy their crops. This wanton destruction was regarded as part of the necessary strategy of war.<sup>6</sup> Famine may also be due to insufficient irrigation, growth of population out of proportion to the food supply, and various other factors.

#### Precautions against Famine.

It was continually stressed that a wise and far-sighted king and his people were never to depend completely upon

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1. I.A. 51, p.147.

2. I.A. 52, p.146.

3. Rām. III. 34. 39.

4. Rām. VII. 7. 3; Mbh. VIII. 24. 22.

5. Mbh. 59. 49; 69. 38; 103. 40; 120. 10.

6. Arth. IX. 1.



rainfall but to eke it out by constructing water-works of various kinds. Adequate and successful irrigation was thus one of the major precautions against famine. It was the responsibility of kings to avert famines and such calamities, and they were fully conscious of their duty to the people, so that in some inscriptions we find the king described as one "who averts calamities that would afflict (his) subjects". So is the king Dharasena described in the Māliyā copper-plate.<sup>1</sup> The Arthasāstra directs the king to guard against national calamities as follows: "Of the store thus collected, half shall be kept in reserve to ward off the calamities of the people, and only the other half shall be used".<sup>2</sup> A passage in the Nīti-vākyāmrta of Somadeva enjoins that the king should accumulate grain as a safeguard against famine.<sup>3</sup>

#### View of Greek Writers.

Greek writers like Megasthenes, visiting India and seeing the general fertility of the land and the abundance of crops, formed the impression that the country was never visited by famine.<sup>4</sup> As a visitor to India for a short period, he could not be aware of what did not perhaps occur during his stay. And in contrast to contemporary conditions in Greece, India probably seemed to him prosperous and flourishing. But we need not take his eulogistic statements absolutely literally, in the light of the evidence at our disposal with regard to the

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1. G.I. p.169. See also p.181.

2. Arth. II. 15.

3. N.V. VIII. 6.

4. Diod. II. 36. McCrindle. Meg. p.32.

mention of famine. Besides, Megasthenes does not dogmatically state that famines do not occur in India, but he tries to account for his assertion by suggesting that the fertility of the soil, the elaborate system of irrigation, the existence of big rivers, the growth of two harvests every year, the immunity of the cultivators from the ravages of the military and the freedom from oppressive taxes, account for the paucity of famines there. But it will be absurd to deny that at some time in certain regions there occurred shortages of food leading to famine.

#### References to Famine.

There are many references to the incidence of famine in the records at our disposal. An inscription from Mahāsthān (ancient Fuṇḍranagara) shows that the gandaka coins and also corn (were distributed) to famine-stricken people.<sup>1</sup> The Bālakāṇḍa<sup>2</sup> refers to a famine in the country of Aṅga under Romapada, and a famine is described in the Mahābhārata, an account being given in the Śāntiparva of the piteous spectacle of the suffering people.<sup>3</sup> The Varāha-Purāṇa also mentions famine.<sup>4</sup> The Maṇimekhalai<sup>5</sup> speaks of a famine that lasted for twelve years at Kāñci (Conjeveram), and the Rājatarāṅgiṇī records several times the occurrence of famines in Kashmir at different periods.<sup>6</sup> Several instances of the sufferings caused by famine can also be cited from the Coḷa inscriptions.<sup>7</sup>

1. J. A. S. B. 1932, p. 123.

2. Bāla. Ch. 9.

3. Śānti. Ch. 141.

4. Rudra Gītā. 70. 71.

5. Maṇi. Ch. 28.

6. e. g. vide Rjt. II. 17. 54;  
V. 270-278; VII. 149 ff.

7. Śāstrī, Coḷas. II. part I,  
p. 377.

### Control Measures.

When in spite of preventive measures famine became unavoidable, the kings did their best to meet the situation, on the one hand, by regulating prices and the export and Regulation of prices, and export and import of cereals import of grains and cereals and national wealth, and, on the other, by active and practical relief. E. B. Havell<sup>1</sup> remarks: "It should be observed that the regulation of prices and famine preventive measures had been a recognised branch of Hindu policy". Manu categorically enjoins that in times of famine all export of cereals and national wealth was to be stopped, and anyone violating this regulation was guilty of a grave national crime and should be punished by having all his property confiscated.<sup>2</sup>

Kauṭilya deals at length with relief measures in the case of famine, and his far-sighted and humane proposals show both his sagacity and the solicitude for the people incumbent on the king. Every possible measure is suggested, and all our Relief measures centuries of historical experience since Kauṭilya's time will still suggest to us little to add to his list. There was first the principle of Dole dole. Seeds and provisions were to be distributed amongst the hungry and needy, and the king was to open to them his own

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1. History of Aryan Rule in British India, p.305.

2. Manu VIII. 399:

Rājñah prakhyāta-bhāṇḍāni pratiśiddhāni yāni ca  
Tāni nirkarato lobhāt sarvahāraṃ haren nṛpāḥ.

storehouses. The inscription from Mahāsthān<sup>1</sup>, already quoted above in another connection, shows how money and corn were distributed during famine.<sup>2</sup> The Sohgaura copper-plate inscription contains an order of the Mahāmātras of Śrāvastī that dravya storehouses were to be spent only in case of drought.<sup>3</sup> From the Nāsik inscription we see that Uṣavadāta distributed stems of cocoanut trees in villages for cultivation, 1,000 in one and 32,000 in another.<sup>4</sup> The king was also to distribute the hoarded income of the rich, to thin their ranks by exacting excessive revenue or causing them to disgorge their accumulated wealth (karśanam vamanam vā kuryāt).<sup>5</sup> Kautīlya Remission of taxes prescribes remission (parihāra) of cultivators' taxes in cases of emergency.<sup>6</sup> In cases of extreme necessity, the king could appeal for help to friendly kings. Campaigns were conducted to encourage the people to put forth their utmost efforts to increase cultivation by urging the people to grow grains, vegetables, roots and fruits wherever water was available. The king was to carry out large-scale hunting and fishing expeditions to provide the people with food in the flesh of wild beasts, birds, elephants, tigers and fish. The king was entitled to do all that was resorted to in times of great calamity.<sup>7</sup> The above are the duties devolving upon

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1. Arth. IV. 3.

2. J.A.S.B. 1932, p.123.

3. A.B.O.R. XI. 32; E.I. XXII, p.1.

4. E.I. VIII, 8-10, No.12. V.

5. Arth. IV. 3.

6. Ibid. II. 1.

7. Ibid, IV. 3.

the king in times of famine. Brhaspati, in detailing the function of the committees of village elders, says that they are to give relief to helpless and poor people, perform Relief from public funds sacrificial acts, and so on. These bodies not only undertook sacrifices and building and irrigation works, but also communal charities out of public funds to relieve the needy and the afflicted in times of famine and other national calamities.<sup>1</sup>

Kauṭilya, Yājñavalkya and Kātyāyana all allow the husband to make use of strīdhana in the case of great exigency. "In calamities, disease and famine, in warding off dangers and in charitable acts, the husband, too, may make use of this property".<sup>2</sup> And even Manu was compelled to slacken caste-Slackening of rules rules during famine, permitting the higher castes to pursue lower occupations,<sup>3</sup> and in cases of dire necessity allowing Brāhmaṇas to take up the despised profession of a butcher (māṃsavikrayin).<sup>4</sup>

Sometimes we find warring parties making a mutual contract to leave the villagers and their crops unharmed. A Pāṇḍya inscription of the ninth century preserves an agreement entered upon by local chieftains with the headman of a village, by which the former solemnly undertook to avoid inflicting any injury upon villages or their property when they and their

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1. Br. XVII. 11. 12. 23; kulāyananīrodha' is explained in the Vīramitrodaya as kulāyanā-durbhikṣādi; nirodha = apagama-paryantasya dhāraṇam.

2. Arth. III. 2; also Yāj. II. 143.

3. S.B.E. XXV. X. p.423.

4. Manu. III. 151.

retainers were fighting, and promised to pay compensation of 100 panas for any injury to a cultivator and 500 Compensation panas for the destruction of every village.<sup>1</sup> If all other measures failed, the king was to remove himself with his subjects to the sea-shore, or the banks of rivers or lakes, where cultivation was possible, and in the last resort to leave his kingdom and emigrate to another where there was an abundance of harvest.<sup>2</sup>

Thus we see that in times of a grave agricultural crisis like a famine, the whole national resources were put forth to provide relief. Food and other commodities were not allowed to leave the country, and the violation of such regulations for the public good was regarded as a crime against the nation. There was also the moral obligation to help the destitute and hungry by every means, and no one was exempt from this social compulsion. The Kūrma-Purāṇa<sup>3</sup> says: "The man who does not give food, etc. to the starving people in times of famine is a hateful murderer of Brahmins. Nothing should be accepted from him, nor should anything be given to him. The king should brand such a man and drive him out of his territory".

The other calamities, such as fire, flood, pestilence, rats and locusts, are dealt with in detail by Kauṭilya and need not concern us here.<sup>4</sup>

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1. R.P.E. in S. India, 1914-15 - quoted in Havell's Aryan Rule in India, p. 221.

2. Arth. IV. 3.

3. Kūrma II. 26, 60-61.

4. Arth. IV. 3.



#### 4. CATTLE-REARING AND ANIMAL HUSBANDRY

Importance. Classification of Animals. Rearing of Cattle -- of Elephants -- of Horses -- other Animals. Protection of Animals. Ahimsā -- Meat-eating. Fish. Deification of Animals.

Cattle and livestock form an extremely important aspect of rural economy. Agriculture depends for its very existence on cattle-breeding and the condition of the livestock. When agriculture was in its infancy, cattle-rearing was already highly developed, and indeed it has been one of the earliest occupations of civilized man. The prosperity of an agricultural country may be assessed by the condition of its cattle. All ancient authorities have stressed the point that cattle constituted a major source of the nation's wealth and so the people were to apply themselves with great care to rearing it. Even a grammatical work such as the Mahābhāṣya incidentally points out that a country's wealth consists in its food crops and in an abundance of cattle.<sup>1</sup> Kautilya includes under the larger science of vārttā agriculture, cattle-rearing and trade, and treats cattle-rearing as a separate occupation.<sup>2</sup> In the Epics also it is as important and as universal an occupation as farming.<sup>3</sup> It is said that when the Lord of Creatures created cattle, he relegated the task of tending them to the Vaiśya, who must

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1. Arthavān ayam deśa ucyate yasmin gāvaḥ sasyāni ca vartante - Mahābh. II, p.401.

2. Arth. I. 4.

3. Rām. II. 67.12; 100.45; Mbh. II. 5.79; 13.2; XII. 88.28.

never even think of resigning this responsibility;<sup>1</sup> and in Vaiśya's special charge to tend cattle the Śāntiparva it is decreed that when a Vaiśya had agreed to take charge of cattle, no one else was to undertake that task.<sup>2</sup> But in practice livestock and animal-farming were the business of no particular section or group of the agricultural population. From the king down to the ordinary individual cattle were quite commonly kept and were assiduously tended.

The kings, who were of the Kṣatriya class, set an example in cattle-rearing, and the number of cattle a king possessed was one of the main criteria of his opulence, even though he be the emperor of Kośala himself.<sup>3</sup> The kings, Kings as pastoral lords like Virāṭa of Matsya, belonged to this class, and the Arthasāstra ascribes to them the economic position of the foremost pastoral lords, maintaining a host of employees in charge of herds, classified according to their productivity. From the Mahābhārata we learn that even princes went to supervise and enumerate the herds of cattle belonging to the State.<sup>4</sup>

#### Classification of Animals

Animals were classified into two broad groups - wild animals and domestic animals. The Mahābhārata<sup>5</sup> gives a list of beasts under this classification. The lion, tiger, boar,

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1. Manu. IX. 327.

2. Śānti. 60. 22. 25.

3. Rām. II. 100. 50.

4. Vana. 239.4 and 240.4-6 -- smārane samayah prāpto vatsānām-  
api cāṅkanam, on which Nīlakaṇṭha explains smarāṇa-  
hetau karmanī gavām saṁkhyāpūrvam vayo-varṇajātīnāmnām  
lekhane.

5. Mbh. VI. 4. 13 f - Bengal text.

buffalo, elephant, bear and ape are the seven kinds of wild animals (āranyāh), and the cow, goat, sheep, man, horse, mule and ass are the seven varieties of domestic animals. Some wild animals, such as the boar, buffalo and elephant, were domesticated and reared. Kaṭīlya does not classify animals in this way, but in his book we find a list of many animals and birds. These animals were bred in separate stables according to their genus, and those that were particularly important were cared for under the expert guidance of a special superintendent. Not only were the inhabitants of a village put on the register of the gopa or village accountant, but bipeds and quadrupeds were also registered.<sup>1</sup> We shall now deal briefly with the rearing of the most important of these animals, and see what was the function and how much the responsibility of those attendants and officials who had the care of them, so that we may have some insight into the methods of animal husbandry current in our period.

#### Cattle-Rearing.

The intimate connection between cattle and agriculture is obvious from our earlier discussion of the latter. We have seen that oxen were the only animals yoked to the plough. Draught oxen and cows also provided the people with another reason for applying themselves to cattle-rearing.<sup>2</sup> Milk obtained from the living animal, the dairy produce that

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1. Arth. II. 35

2. Arth. II. 29.

was derived from milk, and the skin, hoofs, horns and bones of the dead animal were products that made the cow Utility of supreme importance to the owners. The fresh meat or dried flesh of cows was eaten.<sup>1</sup> Cow-dung made into cakes was used as fuel and as manure.<sup>2</sup> The bile, dung and powdered teeth and horns of cattle were used in the chemical treatment of metals.<sup>3</sup> To the king, the sale of cows meant a source of revenue, as he obtained 1/4 of the sale price of the cow.<sup>4</sup> Buffaloes were also used for similar purposes, except that we find no reference to the use of buffaloes in ploughing.<sup>5</sup>

Because of the immense economic importance of the cow, there was a separate official appointed by the State to superintend the care of cows. He was in charge of the department of cattle. Under his care were different types Superintendent of cattle of herds, such as (a) herds tended by paid employees like the cowherd, buffalo herdsman, milker, churner and hunter, who were given wages to ensure that the calves were not starved by undue drawing upon the cows for milk and ghee (vetanāpagrāhika). (b) Herds of a hundred heads each, made up of equal numbers of aged cows, milch-cows, pregnant cows, heifers and calves, which were tended by a single herdsman paid by a fixed share of the dairy-produce (karapratikara). (c) Herds of afflicted or

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1. Arth. II. 15. 17. 29.  
2. Ibid. II. 24.  
3. Ibid. 12.

4. Ibid. 29.  
5. Ibid. 29

crippled cattle, cattle that could not be milked by anyone but the accustomed person, cattle not easily milked, and cattle that kill their own calves. Such a useless and abandoned herd might be looked after by one person, who was paid by a share in the dairy produce. (d) Private herds committed to the care of the state department for fear of cattle-lifters, on the basis of a fee of one-tenth of the dairy produce. He looked after cattle that strayed and cattle that were irrecoverably lost, classified and branded the various types of cattle, kept a register of the branded marks, natural marks, colour and distance between the horns of each animal, and was also in charge of the amassed quantity of milk and ghee.<sup>1</sup>

But the main responsibility for the care of the cattle was in the hands of the cowherd, as it was he who handled them directly. Yājñavalkya<sup>2</sup> and Nārada<sup>3</sup> enjoin that the cowherd has to bring back to the owner in the evening the cows handed over to him in the morning after grazing them on the pastures and making them drink water. Manu<sup>4</sup> says that

Cowherd

during the day the responsibility for the safety of the cattle rests on the herdsman and during the night on the owner if they are in the latter's house. It was the duty of the cowherd to do his best to protect the cattle in his charge from accidents, and if unable to do so, he must quickly inform the owner.<sup>5</sup> Bṛhaspati<sup>6</sup> states that the cowherd

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1. Arth. II. 29.  
2. Yāj. II. 164.  
3. Nār. IX. 11.

4. Manu. VIII. 230.  
5. Nār. IX. 12.  
6. Br. XVI. 20.

should save his cattle from the danger of worms (or reptiles), robbers, tigers, caverns and pits, that he should protect them to the best of his ability, and that he should call for help or inform his master when unable to render effective assistance. If the herdsman was unable adequately to protect his charges or inform his employer in time, he should make good the value of the lost cow and also pay a fine to the king.<sup>1</sup> As to the wages of the herdsman, Nārada<sup>2</sup> and Br̥haspati<sup>3</sup> prescribe that the cowherd should receive as wage all the milk of the cows tended by him on every eighth day, plus a heifer every year out of every hundred cows (or a milch-cow and her calf every year out of every 200) under his charge. Manu<sup>4</sup> gives another system of payment, whereby the herdsman could choose and milk the best cow out of ten and take the milk as his wage.

Great care was taken to ensure that cattle had the proper kind and right amount of food. Cows were to be milked twice a day during the rainy, autumnal and hemanta seasons, and only once a day in the spring, summer and winter months.

Care of cattle Cowherds violating these regulations should be punished by having their thumbs cut off. Bull-fighting was strictly forbidden and heavily punished. In the breeding of cattle, a herd of ten heads of either cows or buffaloes were to contain four male animals.

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1. Nār. IX. 13. Cf. Manu. VIII. 232 & 235. Yāj. II. 164-165  
Viṣṇu. V. 137-138. Nār. IX. 14-15.

2. Nār. IX. 10.

3. Br. XVI. 19.

4. Manu. VIII. 231.



We have seen in the composition of the village that a belt of pasture land was left uncultivated around the village for the common herds to graze. Yājñavalkya<sup>1</sup> provides that a portion of land should be set apart at the discretion of the villagers or of the king as pastures. Manu<sup>2</sup> and Yājñavalkya<sup>3</sup> prescribe that on all sides round a village, kharvaṭa and town an uncultivated space for pastures between the village and the fields was to be kept, Pastures respectively, of 100, 200 and 400 dhanus in extent.

Pasture lands were divided from surrounding fields by fences to protect the crops from damage by the grazing animals. Many terms relating to pasture lands are to be found in our inscriptions, such as gosuti<sup>4</sup>, gopathaśara,<sup>5</sup> gocara,<sup>6</sup> trṇayūti.<sup>7</sup> That there was ample provision for pasture lands is obvious from these inscriptions.

From the great importance of cattle in agricultural life, they were regarded as sacred. We shall see later that other animals too were worshipped and held sacred, owing to their utility. The purity and sacredness of cows are dealt with at considerable length in the Dharmaśāstras and other literary sources. Many references are also found in the

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1. Yāj. II. 166.

2. Manu. VIII. 237.

3. Yāj. II. 167.

4. Vogel. Antiquities of Chamba, p.167-68.

5. Khoh copper-plate ins. G.I., p.125.

6. Ins. of Vidagdhadeva. A.S.I.R. 1902-3, p.252.

7. Nirmand copper-plate. G.I. p.289.

inscriptions, which we may touch upon here. In the Āraṅg copper-plate, the cow has been deified as the daughter of the Sun.<sup>1</sup> Making gifts of cows was regarded as a highly meritorious act, and kings were described or took upon themselves the title of "giver of many cows", as in the Sacredness Allāhābād pillar-inscription, where Samudragupta is described as "giver of many thousands of cows".<sup>2</sup> Moreover, giving the price of a number of cows was also considered an act of great religious merit, as in the Maukhari inscriptions dated 237 A.D.<sup>3</sup> Slaughter of cows was considered sinful and heavily punishable, and often we find in our inscriptions the confiscator of granted land described as being as much a sinner as the killer of a cow and a Brāhmaṇa, these crimes being equally culpable.<sup>4</sup> The cow with her calf is often represented in sculptures, as in the Rājim copper-plate.<sup>5</sup> Even cow-dung was regarded as sacred<sup>6</sup>. Great respect was accorded to cows, as we see from the Eran inscription,<sup>7</sup> which says: "Let prosperity attend all the subjects headed by the cows and the Brāhmaṇas".

#### Elephant Breeding.

From the point of view of the king and his kingdom, the elephant was of the greatest importance for the purposes of warfare and defence. According to Kauṭilya<sup>8</sup> and Kāmandaka<sup>9</sup> the destruction of enemies' forces and victory over

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1. G. I. pp. 195, 200, 299.  
2. G. I. p. 14.  
3. I. A. XXIII, pp. 42-52.  
4. G. I. p. 34.  
5. Ibid. p. 296.

6. Watters I, p. 147.  
7. G. I., p. 161.  
8. Arth. II. 2. VII. 11.  
9. Kām. XIX. 62.

them depended on elephants. Kauṭilya says: "The victory of kings (in battles) depends mainly upon elephants; for elephants, being of large bodily frame, are capable not only of destroying the arrayed army of an enemy, his fortifications Importance and utility and encampments, but also of undertaking works that are dangerous to life". Hastipradhāno vijayo rājñām;<sup>1</sup> hastipradhāno hi parāṇīkavadhaḥ;<sup>2</sup> nāgeṣu hi kṣitibhujām vijayo nibaddhas tasmād gajādhikabalo nṛpatiḥ sadā syāt;<sup>3</sup> mukhyaṃ dantibalaṃ rājñām samare vijayaiṣiṇām tasmān nijabale kāryā bahavo dviradā nṛpaiḥ.<sup>4</sup> The four feet, the two tusks, the trunk and the tail are eight weapons of an elephant.<sup>5</sup>

Apart from their military importance, elephants were also widely used for riding and hunting.<sup>6</sup> It was customary for the kings to tour their cities on the back of elephants to impress the people.<sup>7</sup> Then they were trained and taught suitable work.<sup>8</sup> They were regarded as the best beasts of burden, and were also used for drawing carriages.<sup>9</sup> Elephants are still used to a large extent to carry huge logs and to pull large boats constructed on the land down to the river. It is not inconceivable that in our period also they were used for similar purposes. Whether dead or alive, they had considerable economic value by virtue of their products. Ivory has ever been regarded as one of the most valuable of

1. Arth. II. 2.

2. Ibid. VII. 11.

3. Kām. XIX. 62.

4. Mān. II. 8. Verse 678, p. 90.

5. N. V., p. 207.

6. Arth. II. 31. 32.

7. Śukra. I. 744.

8. Arth. II. 31.

9. Śukra. IV. 7. 352-53.

products. The tusks of living elephants were cut off periodically. Kauṭilya instructs: "Leaving as much as is equal to twice the circumference of the tusk near its root, the rest of the tusks shall be cut off once in  $2\frac{1}{2}$  years in the case of elephants born in countries irrigated by rivers (nadīja), and once in 5 years in the case of mountain elephants".<sup>1</sup> And those bringing in the tusks of dead elephants were rewarded.<sup>2</sup>

As in the case of cattle, there was also a separate official to superintend the care of elephants. In an inscription of Jayacandra of Kanauj<sup>3</sup> we find a term "gajapati", which has been explained by Kielhorn as a high official of the State.<sup>4</sup> It seems that this officer was the same as the superintendent of elephants (gajādhyakṣa) whose functions are detailed in the Arthaśāstra.<sup>5</sup> The superintendent of elephants had to take steps to guard elephant forests and supervise the elephants that were in the stables, Superintendent of elephants the catching, training and feeding of them, their accoutrements, and so on. Kauṭilya devotes one chapter to the training and classification of elephants<sup>6</sup> and their medical treatment when they fell ill. The training was regarded as being of prime importance, and it was said that elephants, if not properly trained, cause loss of wealth (because they eat vast quantities of fodder

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1. Arth. II. 32.  
2. Ibid. II. 2.  
3. I. A. XV. p. 9.

4. Ibid. Note 52.  
5. Arth. II. 31.  
6. Ibid. II. 32.

and grain), and of lives (asīkṣita-hastinaḥ kevalam artha-prāṇaharāḥ).<sup>1</sup>

Medhātithi on Manu<sup>2</sup> says that kings had a monopoly of elephants because it is well-known that they were most useful to them. Bühler supports this view and states that the taming and sale of elephants used to be a royal monopoly.<sup>3</sup>

King's Monopoly Megasthenes<sup>4</sup> comments that a private person was not allowed to keep an elephant or a horse and that those animals were held to be the special property of the king. Kauṭilya and Śukra also confirm this view.<sup>5</sup>

The great value of elephants from the military and economic standpoint caused them to be regarded as sacred, and the various authorities enjoin that they be worshipped with specific rites. Kauṭilya<sup>6</sup> speaks of the waving of lamps before elephants thrice in the cāturmāsya (from about July to October), and at the time when two seasons meet.

Sacredness Kālidāsa in the Raghuvamśa<sup>7</sup> refers to the performance of this ceremony. Kāmandaka<sup>8</sup> also speaks of waving lamps before horses and elephants.<sup>9</sup> Elephants are said to be frequently worshipped in the Mahābhārata.<sup>10</sup>

#### Horse Breeding.

Like the elephant, the horse also was a very valuable

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1. N. V. 22. 5. p. 208.  
2. Manu. VIII. 400.  
3. S. B. E. XV. 323 f n  
4. Frag. XXXVI. p. 90.  
5. Arth. II. 31. also  
Śukra I. 603-8.

6. Arth. II. 32.  
7. Raghu. 4. 25.  
8. Kām. IV. 66.  
9. For explanation of nīrājanā-  
vidhi, vide Ykt., p. 178  
10. Mbh. IX. 20. 3.

animal. Its importance in warfare, riding and hunting are obvious. In the old hand-to-hand fighting, horses were indispensable for bearing the warriors on their backs and for drawing chariots in ancient warfare,<sup>1</sup> for which they were regularly trained,<sup>2</sup> and we have innumerable references to the enormous number of horses used by a single army in

battle.<sup>3</sup> Hiuen Tsiang<sup>4</sup> speaks of 2,000 horses and Utility 100,000 cavalry in Harṣa's march against the murderer of his elder brother. Horses were of great economic importance as objects of trade. Kauṭilya<sup>5</sup> and the Sabhāparva<sup>6</sup> mention the various parts of the country from which good breeds of horses came for the purposes of trade. They were also valued as beasts of burden and for draught.

There was a special superintendent of horses, with well-defined duties, to deal with the royal stables. In the Udayagiri Cave inscription we find the term 'āśvapati' (literally 'lord of horses'), which Fleet interprets as a state official in charge of horses.<sup>7</sup> This must be the same as Kauṭilya's āśvādhyakṣa.<sup>8</sup> His work was to register

Superintendent the breed, age, colour, marks, group or  
of horses classes and place of origin of horses, to  
classify them as those kept in sale-houses for sale, those

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1. Cf. McGrindle. Meg. p.89; also Watters I, p.171.
  2. Arth. II. 30.
  3. 4,000 in Rām. VII. 64. 2-4; 3 lakhs of horses in Dke. VII, B. S. S., p.133, ed. 1919, etc.
  4. Beal. I. p.213.
  5. Arth. II. 30.
  6. Sabhā. 53. 5.
  7. G. I. p.260 n.
  8. Arth. II. 30.



recently purchased, those captured in wars, those of local breed, those sent thither for help, those mortgaged and those temporarily kept in stables. He was also to report to the king those animals that were inauspicious, crippled or diseased, and supervise the construction of stables, the feeding and the training of the steeds.<sup>1</sup>

The horse was also worshipped like the elephant, with the waving of lamps before it in certain seasons.<sup>2</sup>

Sacredness The Brhatsamhitā gives a long description of the ceremony of waving lamps before horses to be performed every year in the month of Āśvina or Kārttika by their owners.<sup>3</sup> Kautilya prescribes that "horses shall be washed, bedaubed with sandal powder and garlanded twice a day. On new moon days sacrifice to Bhūtas, and on full moon days the chanting of auspicious hymns shall be performed. Not only on the ninth day of the month of Āśvayuja, but also both at the commencement and close of journeys (yātrā) as well as in the time of disease shall a priest wave lights invoking blessings on the horses".<sup>4</sup>

In many of the inscriptions of our period, there are references to the ceremony of Āśvamedha, after the selected steed had been turned loose for a year to roam about at will, guarded by armed men. Āśvamedha is a most important and

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1. Arth. II. 30.

2. Raghu. 4. 25; Kām. IV. 66.

3. Br. S., Ch. 44.

4. Arth. II. 30.

Aśvamedha elaborate ceremony, of great antiquity, signifying that the king had gained many victories and claimed imperial rank. There is a considerable literature on it. Kings sometimes took upon themselves the title of Aśvamedhāhartr̥, the restorer of Aśvamedha sacrifice, as in the Mathurā stone inscription of Candragupta II;<sup>1</sup> or of Aśvamedha-parākrama -- "he who has displayed prowess by a horse-sacrifice".<sup>2</sup>

#### Other Animals.

Animals such as camels, asses, mules, hogs, sheep and goats were also of domestic usefulness, but as their importance is not nearly as great as the three invaluable animals that have been dealt with, there is no need to discuss them at length. A certain proportion of camels were used in war<sup>3</sup> and the camel is esteemed second only to the elephant as a beast of burden. Camels, asses and mules were used for pulling carts, and for bearing loads. These animals, and also sheep and goats, gave products of economic value when they were dead. Their skins, fat, bile, sinews, teeth, hoofs, horns and bones had to be yielded up to the superintendent of cows, who apparently was responsible for disposing of these products. Goats and sheep were reared for their flesh and skins, and the sheep yielded wool. The sheep and other wool-bearing animals were shorn of their wool once in six

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1. G.I. p. 28.

2. J.A.S.B. L. III, pt. I, p. 175 ff.

3. Śukra IV. 7. 41.

months.<sup>1</sup> Care was apparently taken over their breeding and multiplication. Kaṭilya advises that a herd of 100 heads of asses and mules shall contain 5 male animals and that of goats and sheep ten.<sup>2</sup>

### Protection of Animals.

Because of their value to the king and the community, these animals were protected by the State and wanton cruelty and injury guarded against by fines and punishments. Manu gives a scale of fines as follows: If large animals such as cows, horses, camels or elephants were killed, the fine was to be 500 paṇas. For injuring minor quadrupeds or young animals the fine was to be 200 paṇas; for hurting deer and birds 50 paṇas; for killing donkeys, sheep and goats 80 paṇas (5 māṣa); and for killing dogs or pigs 16 paṇas or 1 māṣa.<sup>3</sup> Kaṭilya feels that the killing of an elephant should be punishable by death.<sup>4</sup> Stray cattle were to be driven out by the use of ropes or whips, and persons hurting them would be liable to the punishment for assault or violence.<sup>5</sup> For causing pain with sticks and other such weapons to minor quadrupeds, one or two paṇas was to be levied, and for wounding them the fine was to be doubled. In the case of large quadrupeds, not only double the above fines were to be paid, but also an adequate compensation was to be given, sufficient to heal the beasts.<sup>6</sup> To each animal department were attached.

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1. Arth. II. 29.

2. Ibid.

3. Manu. VIII. 296-98

4. Arth. II. 2.

5. Arth. III. 10.

6. Arth. III. 19.

specialist veterinary surgeons to deal with the ailments of the beasts brought to them for treatment. In the case of horses, for example, Kauṭilya says that the surgeons should apply requisite remedies against undue growth or diminution in the body of the horses and also change their diet according to changes of season.<sup>1</sup>

### Ahimsā.

Ahimsā as a moral principle was upheld by most of the law-givers, who pronounced against the eating of meat, wanton destruction of animal life, and needless cruelty to living creatures. Manu decrees total abstention from killing animals, even in sacrifices. He says that no flesh can be had without killing living beings, and killing such beings cannot lead to heaven; therefore one should give up flesh.<sup>2</sup> In the Mahābhārata there is a long discourse on the virtues of ahimsā and abstention from meat.<sup>3</sup> In the Śāntiparva not only is the killing of birds and other animals condemned as a sin, but all sorts of cruelty and physical oppression are also severely indicted.<sup>4</sup> The doctrine of ahimsā was probably promulgated at the outset as a result of the great importance of animals as shown above, with a view to their preservation. Large-scale

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1. Arth. II., 30.

2. Manu. V. 46-55. Also Viṣṇu. 51. 69-78.

3. Mbh. XIII. 115 f.

4. Śānti. 261. 37 ff; XIII. 23. 73; XIV. 28. 16. ff;  
cf. also Yāj. I. 177; Rām. Kiṣ. 17. 39; Mār. P. 35. 224,  
which restrict the eating of meat to the flesh of  
only a few animals.

eating would tend to diminish their numbers more quickly than it was possible to replace them. But from this practical and economic necessity, the doctrine gradually assumed the form of a religious principle and was widely put into practice, so much so that, although there was little direct prohibition of meat-eating, the influence of this moral principle was so great that in actual practice meat was not very largely eaten. Fa-Hien on his travels in India states that most of the people were vegetarians. He observes that throughout the whole country the people do not kill any living creature, that they do not keep pigs and fowls, and do not sell live cattle, and that there were no butchers' shops in the markets.<sup>1</sup>

This statement cannot be taken to be literally true. He obviously formed this idea because he did not see any evidence of meat-eating. But the existence of slaughter houses and rules for the killing of animals, the protection and preservation of animals in order that they should not be spoilt for food by killing out of season, the rearing of cocks, pigs and other animals that seem to have no utility apart from their value as food, and butchers and sellers of cooked meat are described in the Arthasāstra.<sup>2</sup> All this seems to indicate that meat was eaten, but was not a very widespread or popular food.

Meat-eating The eating of meat was restricted to certain varieties only. Hsuen Tsiang observes that the

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1. Legge, p.43

2. Arth. II. 26; V. 2; II. 4.

flesh of oxen, asses, elephants, horses, pigs, dogs, foxes, wolves, lions, monkeys and apes is forbidden, and those who eat such food become pariahs.<sup>1</sup> He further relates that in his travelling palace Harṣa would provide choice meats for men of all sorts of religion. Kālidāsa,<sup>2</sup> Bāṇa,<sup>3</sup> and Daṇḍin<sup>4</sup> all confirm the eating of certain varieties of meat, such as the flesh of goats, rabbits, deer, and so on.

### Fish.

Fish were also cultivated and eaten. The Aphsaḍ stone inscription<sup>5</sup> describes how large fishes splashed about in the tank excavated at the behest of queen Koṇadevī. Fishermen were to give one-sixth of their haul as fee for fishing licence.<sup>6</sup> From this it is clear that fishing was carried on to some extent. Persons who entrapped fish under state protection were to be heavily punished.<sup>7</sup> Apparently some ponds and tanks were kept as fisheries, where the fish were cultivated for food and were not to be caught before their time. Manu, however, forbids the eating of fish, except for certain varieties, such as pāṭhina, rohita, rājīva, siṃhatuṇḍa and fish having scales. He considers the eating of fish other than these to be worse than eating meat.<sup>8</sup>

We have seen in discussing the rearing of animals that some of them, like the cow, the elephant and the horse, were

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1. Watters I, p.178

2. Śak. Act II.

3. H. c. p.208

4. Dke. pp.216-17.

5. G. I. p.208.

6. Arth. II. 28.

7. Ibid. II. 36.

8. Manu. V. 16.



Deification of animals held sacred and were worshipped according to prescribed rites. This attitude to these animals was a direct result of their great economic and military utility. When this practical importance was strengthened by the principle of ahimsā, we get the tendency to raise their position further by deification.

## 5. PARKS AND FORESTS

Importance -- Forest Kingdoms -- Military and Economic Value.  
Types of Forests. Protection -- Superintendent of Forests.  
Forest Products. Sacredness of Trees.

In our description of the village we have seen that on its outskirts the pasture land surrounding it gradually merged into forest. The growing need for habitable and cultivable lands necessitated the extensive clearing of forests on the one hand, while on the other the military and economic importance of forests demanded that some of them should be preserved and the wild flora and fauna found there should be protected. We have already discussed what means were pursued for the conversion of forests into rural settlements. We shall now proceed to deal with the forests that were preserved for the benefit of both the king and the people.

Our inscriptions sometimes clearly indicate which forest is referred to, when a forest is mentioned, by giving its boundaries, as there were many forests around the village. Thus in the Tripperah copper-plate of Lokanātha the four boundary regions have been defined as follows: "On the east

Description  
of forests in  
inscriptions

the Kaṇāmōṭikā hill, on the south the limit  
line of the two villages Paṅga and Vāpikā.

On the west portion of the Tāmra-pattra of Jayeśvara, and in the north the tank of the Mahattara Raṇasubha".<sup>1</sup> Besides, forests are often described, to distinguish them from others. The above forest is described thus: "In the viṣaya of Suvvūṅga in the forest region, having no distinction of natural and artificial, having a thick network of bush and creepers, where deer, buffaloes, boars, tigers, serpents, etc. enjoy themselves according to their will all pleasures of home life".<sup>2</sup>

Some forest-regions formed independent kingdoms under tribal chieftains, and kings who overpowered these chiefs and seized their territories conferred upon themselves the title of 'conquerors of forest-kingdoms'. These forest-kingdoms were designated 'aṭavī-rājya'. Bāṇa, in his Harṣacarita refers to such forest-regions on the outskirts of the Vindhya, where different tribes used to live.<sup>3</sup> In the Allāhabād pillar-inscription of Samudragupta we are told that "he (Samudragupta) made all the kings of the forest countries to become his servants".<sup>4</sup> The Khoh copper-plate of Hastin tells us of

Forest  
Kingdoms

eighteen forest kingdoms inherited by the Mahārāja together with the kingdom of Dabhālā.<sup>5</sup> The location of these eighteen forest kingdoms is doubtful. Two other

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1. E. I. XV. p. 311.  
2. E. I. XV. p. 311.  
3. H. c. pp. 228-9.

4. G. I. p. 13.  
5. G. I. p. 113.

terms, "vana-rāṣṭra" and "vana-rājya", occur in the Brhat-Saṃhitā<sup>1</sup> for forest kingdoms lying in the north-east division of India as mapped out by Varāhamihira. It appears that the State army might be recruited from the independent forest-tribes dwelling in these kingdoms. Śukra puts the Kirātas and people living in forests within this class.<sup>2</sup>

#### Importance of Forests.

Forests were of immense importance from the point of view of military strategy. Thick impenetrable forests on the borders of a kingdom, where ferocious beasts roam at will, form a natural frontier defence which will daunt any attacking force. The presence of a river in the forest makes the kingdom even more secure, as the river too will be a natural obstacle to the approaching army. The wild animals would roam into the enemies' lands if the two territories were juxtaposed and cause much destruction, hence it was regarded as an act of national service if people vied with each other in planting such forests close to an enemy's forest. Kautilya impresses

Military upon the people that "of game-forests whoever plants a forest full of cruel beasts close to an enemy's forest containing wild animals, causing therefore much harm to the enemy, and extending into an elephant forest at the country's border, over-reaches the other."<sup>3</sup> A forest with a river increased the fertility of the land, provided a natural means of irrigation and made the land self-sufficient.

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1. Br. S. XIV. VV. 29. 30.

2. Śukra. IV. VII. 28.

3. Arth. VII. 12.

The forest afforded a refuge in time of calamities, and the spreading branches of its trees provided shelter against heat. Forests were also valuable because of their economic products, such as timber and trees of various kinds, the marketable

Economic parts of forest animals, the elephants that formed a strong arm in the country's defences, game and forest produce of all kinds, leaves, flowers and fruits, herbs and plants, that were used as food or for other purposes. This great military and economic importance of forests is recognised by Kautilya when he says that kings should over-reach their rivals in planting such forests to protect and to enrich themselves. He urges: "Of timber forests, whoever plants a forest which produces valuable articles, which expands into wild tracts and which possesses a river on its border, over-reaches the other; for a forest containing a river is self-dependent and can afford shelter in calamities".<sup>1</sup> Forests also conserved moisture and humidity and so increased the fertility of the region. The animals and forest products, and the various taxes imposed in connection with forests and forest produce, provided the king with a rich source of wealth.

#### Types of Forests.

There were two types of forests - vana and aranya. Vanas were more in the nature of parks owned by the king or by private individuals, and were pleasure haunts where they disported themselves with the ladies of their households.

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1. Arth. VII., 12.

Vana and Aranya

Sometimes ascetics were given permission to carry on their religious observances in them. Vana seems to imply parks and gardens trimmed and beautified to some extent by man's hand, whereas aranya refers to wild tracts left in their natural state, covered with thick vegetation and inhabited by beasts of all kinds.

Five kinds of forests

Kautilya classifies forests into five kinds according to their function and the specific uses to which they were put, as follows:<sup>1</sup> (a) forests used by hermits as religious retreats and provided for Brāhmaṇas to be used as soma plantations, as centres of religious learning and for the

Religious retreats

performance of ascetic rites. Such forests were granted on condition of protection for both animate and inanimate beings, and were named after the tribal name or gotra of the Brāhmaṇas resident there; (b) the king's reserved forests, provided with only one entrance and rendered inaccessible to others by the construction of ditches all round,

Reserved game forests

containing plantations of delicious fruit trees, bushes, bowers and thornless trees, with an expansive lake of water, full of harmless animals, and with tigers (vyāla) and other beasts of prey (mārgāyuka), all deprived of their claws and teeth. These were kept for the king's sports;<sup>2</sup> (c) on the extreme limit of the country or in any other suitable

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1. Arth. II. 2.

2. cf. Śukra. X. 665-6: He should sport with tigers, peacocks, birds and other animals of the forest, and in the course of the hunting should kill the wild ones.

Public game forests spot, was located another game-forest, open to all; (d) some forests were specially reserved for their timber and other valuable plant and animal products that they yielded; while (e) on the extreme outskirts of the country were situated elephant forests, separated by wild tracts. The proper upkeep of these elephant forests, a knowledge of their geography and the catching of wild animals was an important aspect of the nation's defence system, as also all the details regarding the care and training of elephants already discussed in connection with animal farming.<sup>1</sup>

Superintendent of Forests.

The forests came under the jurisdiction of a special state official, the superintendent of forests and woods. In our copper-plates we have references to an officer called gaulmika. The Bihār stone pillar-inscription alludes to the offices of gaulmika, śaulika and āgrahārika.<sup>2</sup> Gaulmika seems to be the same as gulmādhyaṅga, mentioned by Kauṭilya,<sup>3</sup> who is the superintendent of forests (gulma = Gaulmika forest). A certain amount of controversy has arisen over the term. Some suggest that gaulmika was the officer-in-charge of the gulma squadrons, a gulma squadron consisting of nine elephants, nine chariots, twenty-seven horses and forty-five foot soldiers.<sup>4</sup> Ghoshal takes

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1. Arth. II. 2.  
2. G.I. p.152.

3. Arth. II. 17.  
4. E.I. XII. p.141



gaulmika to be the collector of customs duties, and refers to "gulmaḍeya" used in the Arthaśāstra as dues paid at the military police stations.<sup>1</sup> But there seems to be no adequate reason for rejecting Fleet's suggestion that gaulmika is the same as gulmādhyaḥṣa, the superintendent of woods and forests. Our inscriptions do not indicate the functions of this officer, but they were probably similar to the duties of Kauṭilya's superintendent of forests.

This official was charged with collecting timber and other forest-products by employing guardians of productive forests. He was empowered to start productive works in forests, and also to fix adequate fines and compensations to be levied upon those who caused damage to such forests. The commentator adds in this connection that cutting and carrying off branches of such trees as would be useful for axles of carts, and so on, was not considered an offence.

His duties

The superintendent was also to carry on, either inside or outside (the capital city), the manufacture of all kinds of articles necessary for life or for the defence of forts.<sup>2</sup> Śukra adds to these duties that of recording the number of forests and the income accruing from them (aranyasambhava).<sup>3</sup> Various taxes were levied on forests and forest products, and these were apparently collected by the superintendent. This was an important public office, and Śukra defines as a necessary part of a superintendent's

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1. H.R.S. p. 292  
2. Arth. II. 17.

3. Śukra. II. 207-208.

His equipment the knowledge of the causes of  
qualifications growth and development of flowers and fruits,  
the ability to plant and cure the trees by administering  
proper soil and water at the suitable time and initiation into  
the medicinal properties of plants.<sup>1</sup>

### Protection and Preservation.

Amongst the earliest epigraphic records of the protection of forests may be mentioned Pillar Edict 5, where Aśoka enjoins that "forests must not be burnt either uselessly or in order to destroy living creatures". The ancient law-givers all prescribe fines and penalties for the protection and preservation of forests. Manu says that the destruction of green trees for firewood involves the loss of caste.<sup>2</sup> He also warns that those who despoiled trees and plants should be penalised to the lowest, middle or highest degree, according to the amount of destruction they caused to leaves, flowers or fruits.<sup>3</sup> The Viṣṇu Dharmaśāstra<sup>4</sup> prescribes graduated fines

Fines and for the destruction of trees, plants, branches,  
penalties  
for cau- flowers and fruits, according to their usefulness  
sing  
damage and sanctity. Kātyāyana<sup>5</sup> prescribes fines for causing loss by injuring or felling trees, shrubs and creepers.<sup>6</sup> Kauṭilya also gives a list of fines for damaging plants or plant-products either in the king's forests, in

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1. Śukra. II. 317-8.

2. S. B. E. XXV. p. 67.

3. Manu. VIII. 285 -- vanaspatinām sarveṣām upabhogo yathā  
yathā - tathā tathā ḍamaḥ kāryo himsāyām iti  
dhāraṇā.

4. Viṣṇu V. 55-59.

5. Kāt. 793.

6. Cf. Yāj. II. 227-9.

parks, in places of pilgrimage, in forests of hermits or in cremation or burial grounds. Trees marking boundaries and those regarded as sacred were also protected by attaching penalties to any damage caused to them.<sup>1</sup>

Preservation of forests implies preservation of game. Kauṭilya also devises fines and penalties for interfering with game under state protection. One-sixth of live animals, such as birds and beasts, were let loose in forests under state protection. Cattle, wild beasts, elephants and fish living in these reserved forests were to be entrapped and killed outside the forest preserves if they became vicious and endangered the lives of other creatures. Persons entrapping, killing or molesting deer, bison, birds and fish in these same forests were to suffer the highest punishment, those trespassing in forest preserves the middle punishment. A person capturing Protection of wild fauna or molesting fish and birds was to be fined 26½ paṇas, and if he did the same to deer and other beasts he was to be fined twice as much.<sup>2</sup> Certain animals and game-birds were to be protected from molestation, and anyone violating the rules was to be heavily punished. "Elephants, horses or animals having the form of a man, bull, or an ass, living in oceans, as well as fish in tanks, lakes, channels and rivers; and such game birds as krauñca (a kind of heron), utrośaka (osprey), dātyūha (a sort of cuckoo), hamsa (swan),

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1. Arth. III. 19.

2. Arth. II. 26.

cakravāka (a brahmany duck), jīvañjīvaka (a kind of pheasant), bhrīgarāja (*Lanius malabaricus*), cakora (partridge), matta-kokila (cuckoo), peacock, parrot and madana-śārikā (maina), as well as other auspicious animals, whether birds or beasts, shall be protected from all kinds of molestations".<sup>1</sup> The

Taxes on superintendent of the slaughter-house was empowered  
forest  
animals to exact taxes in kind as follows: 1/6th of beasts of prey captured, 1/10th or more than 1/10th of fish and birds that preyed on others, and the same amount of deer and other beasts taken.<sup>2</sup>

#### Forest Products.

The forests were of considerable economic importance because of products from animals and plants found therein. The animal products were firstly the elephants, that were tracked down and captured in the elephant forests by trained workers.<sup>3</sup> Then the wild animals, ferocious or otherwise, were hunted. Apart from their value in warding off enemies, Animal destroying the enemy's land, and providing sport,  
products their flesh was no doubt eaten, especially the flesh of beasts like the wild boar and deer. Then their skins, horns, hoofs, teeth, bones, sinews, fat and bile and the tusks of elephants were valuable marketable products.<sup>4</sup> Manufactories were set up to turn these products into useful commodities.<sup>5</sup>

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1. Arth. II. 26.

2. Ibid.

3. Ibid. II. 2.

4. Arth. II. 17.

5. Ibid. II. 2. 17.

Then the trees and plants provided food and products of many kinds. The Mahābhārata,<sup>1</sup> highly eulogising plant life, divides plants into six kinds:- vrkṣa (tree), latā (creepers that cling to trees), vallī (creepers that spread on the ground), gulma (bushes), tvakṣāra (trees whose bark is strong, while the inside is hollow, like bamboos) and grass; and

Kinds of plants forbids the felling even of the leaves of trees,<sup>2</sup> as trees gave shelter against heat and also yielded flowers and fruit, and when felled, their wood was useful in building houses, for making implements of husbandry and for producing heat and warmth.<sup>3</sup> Timber was one of the most important of all forest products, and special timber forests were reserved for trees yielding timber and other forest produce.<sup>4</sup> Śukra divides plants into domestic and wild, and instructs the king to have the domestic plants planted in villages and the wild trees in the forests.<sup>5</sup> Domestic trees are those which bear good fruits,<sup>6</sup> whereas wild ones are those trees which bear thorns, such as the khadira (catechu), and so on.<sup>7</sup> He gives a list of other large trees both wild and domestic,<sup>8</sup> and advises that expansive trees, shrubs and creepers are to be carefully planted in villages if domestic, Forest products in the Arthaśāstra in forests if wild.<sup>9</sup> Kautilya gives about a dozen categories of forest products:<sup>10</sup>

1. Anu. 58. 23-32.
2. Śānti. 69. 42.
3. Ibid.
4. Arth. II. 2.
5. Śukra. 91-93

6. Śukra. 95-102.
7. Ibid. 113-4.
8. Śukra. 122.
9. Ibid. 123-4.
10. Arth. II. 17.

- (1) Trees of strong timber, such as teak (sāka), palmyra (tāla), khadira (Mimosa catechu), sarala (Pinus longifolia).
- (2) Bamboo and allied trees.
- (3) Creepers, including plants such as the cane and betel.
- (4) Fibrous plants, such as panic grass (dūrvā), hemp (śana) and others.
- (5) Plants like muñja (Saccharum munja), and balbaja (Eleusine indica), which yield rope-making material.
- (6) Tālī, tāla and bhūrja, giving leaves (patra) often used as writing material.
- (7) Kimpśuka, kusumbha and kuṅkuma, yielding flowers used to give colouring matter and dyes.
- (8) Bulbous roots and fruits, being medicinal herbs and plants.
- (9) Other plants classified as poisonous; and snakes and worms kept in pots are included in the list of poisonous products.
- (10) Animal products, including the skins of the alligator, leopard, porpoise, lion, tiger, elephant, buffalo and gayal and others.
- (11) Other products derived from animals, mentioned earlier, may be obtained from these beasts, as well as from cattle, birds and snakes.
- (12) Certain metals apparently to be found in the forests or derived from them. These are iron, copper, bronze, lead, tin, mercury and brass.<sup>1</sup>

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1. Arth. II. 17.



We see how comprehensive is Kauṭilya's list of forest products. He says that utensils are made from cane, bark and clay, which are obtained from the forests, as are charcoal, bran and ashes and other things. Firewood and fodder are also provided by forest trees; grass and other produce, and menageries of beasts, birds and cattle are made up of collections from the forests.<sup>1</sup>

Trees and plants in inscriptions Our inscriptions mention some of the trees and plants found to be growing in the parks and forests of our period. Many flowering trees are mentioned. The Māliyā copper-plate inscription of Dharasena<sup>2</sup> refers to the kalpa tree, which is believed to be a tree in Indra's Paradise and is supposed to grant all desires. In the Nāgārjunī Hill Cave-inscription of Anantavarman,<sup>3</sup> besides mention of the kalpa tree, we also find a reference to the perfume of priyaṅgu and vakula groves. The Gaṅgdhār stone inscription mentions Flower trees kulatāla trees, flowers of the bandhūka and bāṇa trees.<sup>4</sup> The Mandasore stone pillar-inscription of Kumāragupta and Bandhuvarman refers to numerous kinds of trees, flowers, creepers and bushes. We have here the aśoka and ketaka flowers, the flowers of roḍhra and priyaṅga plants, jasmine creepers, lavalī trees, branches of the nagaṇā bushes, sindhuvāra trees and atimuktaka creepers.<sup>5</sup> The Khoh copper-plate of Hastin, dated 482-483, while describing the boundaries

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1. Arth. II. 17.  
2. G. I. p. 168.  
3. Ibid. p. 228.

4. G. I. p. 77.  
5. Ibid. p. 87.

of the village granted, refers to a vr̥ka tree, a clump of amrāta trees.<sup>1</sup>

Besides these, we have allusions to a number of fruit trees. Thus in the Bihār stone pillar-inscription of Skandā-gupta are mentioned "trees ..... the groves of fig trees and castor oil plants, the tops of which are bent down by the weight of their flowers".<sup>2</sup> The Mandasore inscription of

Fruit trees Yaśodharman speaks of fresh sprouts of mango trees and a grove of thorny apple trees.<sup>3</sup> The Alīnā copper-plate of Śīlāditya also mentions the fresh sprout of a śaivala plant.<sup>4</sup> Other inscriptions give us further names of trees and plants.<sup>5</sup> Kālidāsa<sup>6</sup> in his different works and Bāṇa<sup>7</sup> in his Harṣacarita have named many of these trees and plants.

Trees and plants were regarded as living organisms, and the Śāntiparva describes how trees have life since they feel pain and pleasure and grow through cuts.<sup>8</sup> Some trees were regarded as sacred and were worshipped. Manu<sup>9</sup> and Yājñavalkya<sup>10</sup> and the Kādambarī<sup>11</sup> mention rites of worship in connection with

Sacredness of trees trees, and leaves that were hung during ceremonies. Trees and gardens were often granted, and these

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1. G. I. p. 105.

2. Ibid. p. 51. 1st part.

3. Ibid. p. 155-56.

4. Ibid. p. 184.

5. Ibid. p. 228.

6. Raghu IV. 57; V. 48; XIII. 32; Kum. I. 9; VII. 52; Vik. IV; Sak. VII. 2; Megh. II. 44.

7. H. c. p. 227-28.

8. Śānti. 184. 1-17.

9. Manu. IV. 39.

10. Yāj. I. 133.

11. Kād. para. 56.

grants followed the same procedure as gifts of tanks and wells. Hemādri<sup>1</sup> deals with the planting of trees, the dedication of a garden and the merit acquired by making gifts of various trees.<sup>2</sup>

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1. Hem. Dāna. pp. 1029-1055.  
2. Cf. Matsya 59. Agni 70.

### CHAPTER III

#### LAND ORGANISATION

##### 1. LAND GRANTS

Classes of Land Grants -- Manner of Donation -- Purchasers --  
Procedure of Land Sale -- Conditions and Safeguards --  
Sale Deeds.

Inscriptions of our period, which are mainly copper-plate grants, deal in most cases with the granting of lands. Although most of the grants recorded are to Brāhmaṇas or to religious establishments, donation of lands to people other than Brāhmaṇas is also known. Thus the Khoh copper-plate of Mahārāja Sarvanātha records the re-transfer of land originally granted to one Pulinda-bhaṭa, to a Brāhmaṇa.<sup>1</sup> Bhaṭa literally means a 'soldier' and perhaps the soldier came from the Pulinda caste, and so was certainly not a Brāhmaṇa. He was granted the usufruct of two villages as a mark of favour from the king, and he was transferring this right, Classes of land grants in the present inscription, to a Brāhmaṇa.

Kauṭilya<sup>2</sup> recognises land grants to (a) Brāhmaṇas with the right of alienation, (b) crown officers for expenses of public charities, (c) queen and princes, (d) officials, in usufruct, for payment of services, (e) military fiefs on condition of supplying troops. The above inscription records a grant corresponding with Kauṭilya's class (a) but had

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1. G.I. p.135.

2. Arth. II. 1.

originally been one of class (d). Under the Kṣaharātas and Sātavāhanas, land grants were made to members of the royal family, with power of alienation, and to religious bodies.<sup>1</sup> The Chinese pilgrim Hiuen Tsiang<sup>2</sup> describes a four-fold division of land in the regions of ancient India visited by him as follows:- "One part for the expenses of government and State worship, one for the endowment of great public servants, one to reward high intellectual eminence, and one for acquiring merit by gifts to the various sects. His second class corresponds with Kauṭilya's class (d) above, and with the grant to the soldier Pulinda-bhāta. His third group is the same as Kauṭilya's allocation of lands to learned Brāhmaṇas for religious purposes,<sup>3</sup> and our inscriptions supply us with innumerable examples of gifts made to various religious bodies for the purpose of acquiring merit. But in spite of these classes of land grants, most of the epigraphic materials of our period at our disposal record grants to Brāhmaṇas for the purpose of acquiring merit. This may be explained by the fact that our period is well known as the period of renaissance of Hinduism,<sup>when</sup> Brāhmaṇism had reached its zenith of power and influence. King and people vied with each other in the race for ensuring a position for themselves in the next world by enriching Brāhmaṇas in this. It may also be possible that all the inscriptions have not yet been unearthed. There might have been others in support

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1. E. I. VII. 7; VIII. 8.

2. Watters I, p. 176.

3. Arth. II. 1.

of the land division described both in the theoretical work, the Arthaśāstra, and in Hiuen Tsiang's account of what he saw actually being practised. Hence we may be justified in reconstructing the general system of land tenure, on the basis of the inscriptions.

The copper-plate inscriptions of our period reveal the manner of making these grants as being of three kinds. In most cases, lands were purchased, and then bestowed upon religious establishments. The Dāmodarpur copper-plate inscription of the reign of Budhagupta records the purchase of land with the object of providing some Brāhmanas with a dwelling place.<sup>1</sup> The Faridpur copper-plate grant also tells us of land being bought and then donated to a Brāhmaṇa, Manner of donation called Candrasvāmin.<sup>2</sup> In some cases, we find that the king makes grants of land to religious bodies at the request of high officers of the State. In the Gunāighar plate, it is recorded that at the request of the Mahārāja Rudradatta, Vainyagupta himself made a grant of land to the Saṅgha belonging to the Mahāyāna sect.<sup>3</sup> The Tripperah plate of Lokanātha shows that the royal officer Pradoṣaśarman requests the king to grant some land for building a temple to Ananta-Nārāyaṇa for the installation of an image, and for the daily/maintenance of worship; and the king accordingly makes a grant.<sup>4</sup> Again, in some other cases, we find no

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1. E. I. XV. p. 134.  
2. I. A. XXXIX, p. 193.

3. I. H. Q. VI. p. 53.  
4. E. I. XV. p. 306.



mention of any applicant for the purchase of land, nor of any request to the king to donate it. Apparently the king here grants lands for religious purposes of his own accord. From the Khoh copper-plate inscription of the Mahārāja Hastin, we find that the Mahārāja himself grants a village to some Brāhmaṇas.<sup>1</sup> The Vappaghoṣavāṭa<sup>2</sup> and Ashrafur<sup>3</sup> plates also tell us of the king making direct grants.

Now let us discuss the purchase of land for the purpose of donation. The purchasers fall into two classes. They may be private individuals, or officers of the State. When private individuals purchased land they did so singly, or jointly or in a body. The Dāmodarpur copper-plate inscription of the reign of Kumāragupta I records the purchase of land by a Brāhmaṇa Karpaṭika.<sup>4</sup> In the Baigrām copper-plate inscription two brothers jointly applied for the same land.<sup>5</sup> From the Pāhādpur copper-plate we see that another joint purchase was made, this time by the Brāhmaṇa Nāthaśarmā and his wife Rāmī.<sup>6</sup> The purchasers might also be officers, as we see from the Dāmodarpur plate of the reign of Budhagupta<sup>7</sup> where the donor was one Nābhaka, who is described as the grāmika of the village of Caṇḍa-grāma. Similarly from the Dhanāidaha copper-plate we see that the purchaser of the land was an āyuktaka.<sup>8</sup> The Sāñci stone inscription records the grant of a village by the purchaser Amrakārdava,

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1. G. I. p. 93.

2. E. I. XVIII, p. 60 ff.

3. M. A. S. B. I, p. 90.

4. E. I. XV. p. 129, pl. No. 1.

5. E. I. XXI. pp. 78-83.

6. E. I. XX. pp. 59-64.

7. E. I. XV, p. 136, pl. No. 3.

8. J. A. S. B. 1909 (N. S.)

Vol. V, pp. 459-461.

who was apparently an officer of Candragupta II.<sup>1</sup>

Procedure of Land Sale.

An elaborate procedure was followed when purchasing land. As described in the records, the applicant first of all intimated to the local government his desire to purchase some land, the aims and objects of his desire, and his willingness to pay the proper price for it, according to the

market value. Most inscriptions bear this out, Application as in the Nandapur copper-plate, where a petition

is made for the purchase of some fallow land.<sup>2</sup> Cultivated lands were also applied for according to the same procedure.

Thus in the Faridpur grant of Dharmāditya, the applicant apprises the local authorities thus: "I wish to buy a parcel of cultivated land from your honours and to bestow it on a

Brāhmaṇa; therefore do ye deign to take the price from me, to divide the land in the district and to give it to me".<sup>3</sup>

Next the local government on receipt of such an application referred the matter to the office of the pustapāla or record-keeper, for making the necessary enquiries as to the ownership of the land, the State interest in that land, the intending purchaser, and so on. If there was no objection, then the

pustapāla gave his consent to the sale of the The Pustapāla land. In the above grant, we see that the the matter was sanctioned by the pustapāla Vinayasena, and so

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1. G.I. p. 29.

2. I.A. XXIII, p. 52.

3. I.A. XXXIX, p. 197.

the transaction proceeded without a hitch. But matters were not always arranged smoothly. Disagreements did arise in this period, as they are sometimes liable to occur in the case of business transactions. In the Dāmodarpur plate of Dāmodaragupta,<sup>1</sup> there is a slight indication of disagreement between the viṣayapati and the pustapāla (viṣayapatinā kaścid virodhaḥ). It is difficult to say what was the subject of disagreement, but obviously some objections were raised by the office of the pustapāla. After receiving the consent of the pustapāla to the purchase of the land, the applicant paid in Payment cash the agreed price for the land, in the presence of the adhikaraṇa. The plot was inspected by the mahattaras and others, then the land demarcated according to the standard measure, and the permission of the State to the sale was declared after the price of the land had been settled. This declaration was an important part of the procedure and Gift in pre- both the declaration and the making of the sence of Village Elders gift took place in the presence of the headman of the village, Brāhmaṇas, kuṭumbikas, royal officers, and so on. In their presence, also, the land was measured according to local custom, the boundaries dividing it from the surrounding land were clearly defined, and then the land was made over to the purchaser or purchasers. Thus the Nandapur plate states: "Therefore having known this, you should give away (the plot) in a land that may not cause hindrance to (the)

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1. E. I. XV. p.143, pl. No. 5.

cultivation by householders after measuring it (by the standard unit of) 8 x 9 reeds, according to the cubit length of Darvikarma and also after demarcating the area in four directions by permanent marks of chaff, coal, etc."<sup>1</sup>

All this careful procedure in the presence of village elders and responsible leaders of the community was obviously to ensure that no injustice was done during the transactions, as we see from Dharmāditya's plate.<sup>2</sup> It was apparently necessary that the decision of the assembled persons should be unanimous. The leading men of the village and the common folk in this grant considered the application of Vātabhoga, and on reaching unanimity, turned the matter over to the record-keeper for investigation.<sup>3</sup>

The conditions and safeguards attached to the grant are also defined and recorded in the copper-plate. There were many conditions, some of which may be mentioned here. The lands were sometimes granted in perpetuity, as in the Khoh copper-plate of Mahārāja Sarvanātha,<sup>4</sup> which specifies that the land was to be enjoyed "by the succession of him and (his) sons, sons' sons, sons of the latter, etc. -- Conditions to endure as long as the moon and the sun".

Taxes and dues from which the donee was to be exempt, those reserved by the king, and those transferred to him, were all mentioned. The villagers were warned to pay the customary tributes and royalties to the donee, and to render him all

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1. I. A. XXIII, p. 56.

2. I. A. XXXIX, p. 193 ff.

3. Ibid.

4. G. I. p. 131.

obedience, as in the Khoh copper-plate of Jayanātha.<sup>1</sup> In the Chammak plate of Pravarasena II, a village was granted "free from (all obligation of) forced labour", and carried with it "the hidden treasures and deposits and the *kl̥pta* and *upakl̥pta*".<sup>2</sup> The Poona plate of the Vākātaka queen Prabhāvatī-gupta reserves certain rights in making a grant, such as "the right to pasturage, hides, charcoal, the purchase of fermenting drugs and mines; not entitling to the succession of cows and bulls; not to have an animal sacrifice; not to have the right of abundance and flowers and milk", but carrying with it the right to hidden treasures and deposits, with *kl̥pta* and *upakl̥pta*".<sup>3</sup> In the Chammak plate quoted above, certain conditions had to be fulfilled by the donees, failing which the land was liable to confiscation.<sup>4</sup> The grant of Mahārāja Svāmīdāsa,<sup>5</sup> records the donation of land according to the conditions of the brahmadeya grant, which seems to have been well understood. It is stated: "I hereby consent to the brahmadeya grant of a field the holding of the merchant Āryya ---- to the Brāhmaṇa named Muṇḍa ---- so long as he does not transgress the conditions of his brahmadeya grant".

Certain safeguards were also promised, such as protection against the entry of irregular and regular troops, as in many of the grants, such as the Rāypur copper-plate grant of Mahāsudevarāja.<sup>6</sup> Moreover, in most  
Safeguards inscriptions we have definite injunctions that

1. G. I. p. 124.  
2. G. I. p. 242.  
3. E. I. XV. p. 39.

4. G. I. p. 242.  
5. E. I. XV. p. 286.  
6. G. I. p. 199.

the land granted should not be confiscated as in the Kārīṭalāī copper-plate of Jayanātha.<sup>1</sup> Lastly, we get a description of the merits of making such gifts, and the eternal damnation to be suffered by those confiscating or assenting to the confiscation of land once granted.<sup>2</sup>

The copper-plate charters recording the sale of land were given to the donees, being proof of their legal title to the land, and hence were very important. The Dharmāditya grant<sup>3</sup> declares that "the evidence of a sale is by the custom of giving a copper-plate". If the charter was lost or damaged, it had to be replaced, to preserve the proof of legal ownership. Thus in the Nidhanpur copper-plate of Bhāskaravarman<sup>4</sup>, we are told that the original charter had been burnt and had to be replaced. The existence of the office of the pustapāla suggests that there was an elaborate system of recording all the details of these grants making enquiries before the grant was made, and preserving records of the transaction. There was the regular practice of stamping these documents, according to the seal of the State. The discovery of the Basārḥ seals confirms this, and shows that not only were there regular official seals, but guilds, corporations, temples, monasteries, and even private individuals employed their own private seals.<sup>5</sup> The necessity for sale-deeds was also

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1. G. I. p.120

2. Ibid.

3. I. A. XXXIX, p.197.

4. E. I. XII. p.65.

5. A. S. I. R. 1903-4, No. 29, pp. 107-18.

recognised by the contemporary law-givers. Brhaspati mentions documents recording sale of property<sup>1</sup> and Nārada provides for the replacement of documents that were split, torn, effaced, lost or badly written.<sup>2</sup>

In the Arthaśāstra of Kauṭilya as well, we have elaborate rules and regulations for the purchase of land and villages. Kauṭilya says: "Rich persons among kinsmen or neighbours shall in succession go for the purchase of land and other holdings. Neighbours of good family, forty in number and different from the purchasers above-mentioned, shall congregate in front of the building for sale, and announce it as such. Accurate description of the exact Land-sale boundaries of fields, gardens, buildings of in the any kinds, lakes or tanks, shall be declared Arthaśāstra before the elders of the village or of the neighbourhood. If, on crying aloud thrice, 'who will purchase this at such and such price', no opposition is offered, the purchaser may proceed to buy the holding in question. If at this time the value of the property is increased by bidding, even among the persons of the same community, the increased amount, together with a toll on the value shall be handed over to the king's treasury. The bidder shall pay the toll.<sup>3</sup> Land sale by the method of auction is, however, not indicated in our inscriptions.

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1. Br. VIII. 7.

2. Nār. I. 146;

cf. Yāj. II. 91.

3. Arth. III. 9.



## 2. THE NATURE OF GIFT

When a private individual wished to purchase land in order to donate it for religious purposes, he not only applied to the State for the purchase, but also included with his application the request that the king grant it to him as a gift as in the Dāmodarpur copper-plate.<sup>1</sup> Why was such a request made? In the Baigrām<sup>2</sup> and Pāhādpur<sup>3</sup> plates, we find mention of two additional conditions along with akṣaya-nīvī-dharma. These are: 'samudaya-bāhyā-pratikara' or 'samudaya-bāhyādi .... a-kiñ-cit-pratikara', i.e. a request was made for the purchase and gift of the land under the rule of 'akṣaya-nīvī-dharma' along with the exemption from all royal dues. It was further desired that the purchaser might enjoy the land as long as the sun and the moon endured, without paying anything to the State. Accordingly, after receiving from the purchaser the agreed price for the land, the king made a gift of it to him by exempting it from all taxes. The king thus not only sold the land but also granted it. We see then why, with the application for purchasing the land, the would-be purchaser prayed that it be made into a gift. When the purchaser applied for the gift of the land he stated explicitly that he wished to acquire merit by donating it for religious purposes. It may seem that it was the purchaser only who made the donation, as he spent money in doing so. He got the

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1. No. 5 - E. I. XV. p. 143.

2. E. I. XXI, p. 78.

3. E. I. XX. p. 63.

king to make it tax-free and to grant other privileges so that the donation was increased in value and his merit thereby was greater. Did the king then have no part in the donation? Perhaps the situation is best explained if we regard the gift in the nature of a joint gift from the king and the purchaser. This arrangement was to the mutual advantage of both. The purchaser was the donor in that it was he who purchased the land, had it made tax-free and had it transferred to the donee. He gave a share of the merit to the king in return for certain advantages. But the king also participated in the giving by granting these advantages. As such, he was entitled to a share of 1/6th of the merit to be derived from making such gifts.. This explains the statement in the Pāhādpur plate,<sup>1</sup> 'yat paramabhaṭṭāraka-pādānām arthopacayo dharma-śaḍ-bhāgā - pyāyanañ ca bhavati' and is further supported by the Baigrām plates.<sup>2</sup> In the Dāmodarpur plate<sup>3</sup> also we find that the 'parama-bhaṭṭāraka mahārāja' was entitled to a share of the merits because he sold land along with the exemption from all sorts of taxes. Thus the gift was a joint one, and both parties shared in the merit accruing from making a gift for religious purposes.

### 3. LAND TENURE

In the inscriptions of our period, where land grants are recorded, we find in the same connection that certain

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1. E. I. XX. p. 63.

2. E. I. XXI. p. 78.

3. No. 3 - E. I. XV. p. 136.

definite rules are mentioned according to which these lands were granted. These are: (a) *nīvī-dharma*,<sup>1</sup> (b) *akṣaya-nīvī-dharma*,<sup>2</sup> (c) *ākṣayanī-dharman*,<sup>3</sup> (d) *apradā-dharma*,<sup>4</sup> (e) *apradākṣaya-nīvī-dharma* or *apradākṣaya-nīvī-maryādā*,<sup>5</sup> (f) *nīvī-dharmakṣaya*,<sup>6</sup> and (g) *bhūmi-cchidra-nyāya*.<sup>7</sup> Let us take these one by one and try to see what rules they signified.

The word '*nīvī*' may be interpreted as a synonym for *pari-pana* or *mūla-dhana* (i.e. the capital or principal in the matter of sale and purchase).<sup>8</sup> According to Basak, this Nīvī-  
dharma term means 'the fixed capital out of the interest on which an expense is to be met'.<sup>9</sup> When a piece of land was given according to '*nīvī-dharma*' it is clear that the land in question was the '*nīvī*' or capital or original, and the income accruing from this land might only be enjoyed during the life-time of the receiver.

The term '*akṣaya-nīvī*' occurs in the Sāñci stone inscription<sup>10</sup> and the Bihār stone inscription of Skandagupta.<sup>11</sup> Fleet translates '*eṣā akṣaya-nīvī*' from the Sāñci inscription as 'this permanent endowment', *akṣaya* meaning indestructible or perpetual. In the Pāhānpur<sup>12</sup> and Baigrām<sup>13</sup> plates we find Akṣaya-  
nīvī-  
dharma the expression '*akṣaya-nīvī-dharma*'. This seems to be an extension in meaning of *nīvī-dharma*. Land

1. E. I. XV. p. 131.
2. E. I. XX. p. 63.
3. E. I. XVIII. p. 63.
4. E. I. XV. p. 144.
5. Ibid. p. 133.
6. E. I. XVII. p. 345.
7. G. I. pp. 138, 170.

8. Cf. Amarakośa III. 3. 212;  
and Hemacandra II 534  
(*mūla-dravya*)
9. E. I. XV. p. 131 n.
10. G. I. p. 261.
11. G. I. p. 50.
12. E. I. XX. p. 63.
13. E. I. XXI. p. 78.

granted according to this rule was to be treated as *akṣaya-nīvī*, where the capital could in no circumstances be destroyed. That this was a perpetual grant is clear from the fact that in most cases where *akṣaya-nīvī-dharma* is mentioned we also find the words '*śāśvatā-candraka-tārakā*' as in the above two plates. Thus the grant was perpetual and could be enjoyed as long as the sun and the moon and the stars endured. *Ākṣayaṇī-dharman*, occurring in Vappaghoṣavāta grant of Jayanāga<sup>1</sup> is said by Dr. Barnett to denote the same form of tenure as the above.

In some cases, we find that this process has been reversed, the permanence of the grant destroyed, and the gift transferred (with State permission) by former grantees to later ones. Here we find the operation of the rule of *nīvī-dharmakṣaya*, as is illustrated by the Dhanāidaha plate.<sup>2</sup> This record tells us that a place names *Kṣudraka* was in the possession of two *Brāhmaṇas* known as *Śivaśarmā* and *Nāgaśarmā* and that it was granted to *Varāhaśvāmin*, a *Somavedī Brāhmaṇa*,

Nīvi- after reversing the process of *nīvī-dharma*.

dharmakṣaya Ghosal does not accept this view. He suggests another reading '*nīvi-dharmākṣayena*' which he construes as '*nīvi-dharma-a-kṣayena*' and translates as 'according to the custom of non-destruction of *nīvi-dharma*'.<sup>3</sup> But the Dhanāidaha copper-plate grant seems to contradict this interpretation and quite clearly indicates that the principle of *nīvī-dharma* was reversed. Thus where the term *nīvī-dharmakṣaya*

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1. E. I. XVIII. p. 63.

2. E. I. XVII. p. 345 ff.

3. H. R. S. p. 199.

is used, the implication is that the State reserved the right to resume the land once given according to *nīvī-dharma* and then to make a second bestowal.

The term *apradā-dharma* is apparently derived from *apradā* land, but this does not mean that this rule was only used in connection with *apradā* land. Other types of land were also granted according to this rule, as we find from the Dāmodarpur plate<sup>1</sup>, where *aprahata-khila* land was granted under the rule *apradā-dharma*. This term is obviously used in the same sense as *nīvī-dharma*. It was a perpetual grant and could not pass Apradā- from one generation to another or from one donee to dharma another. The grantee could use the land for ever. But he had no right to destroy the perpetuity of the endowment by selling or making a gift of the land. It might be noticed here that the condition of '*śāśvatā-candraka-tārakā*' does not exist in this case.

The expression *apradākṣaya-nīvī*, found in the Dāmodarpur plate,<sup>2</sup> seems to be used in a similar sense to *nīvī-dharmakṣaya*, but is used in connection with land given according to *apradā-dharma*. Under this condition, it is possible to reverse the rule of *apradā-dharma* and transfer land to other donees. Here Apradākṣaya- also Ghosal tries to construe *apradākṣaya-nīvī* nīvī as '*aprada-akṣaya-nīvī*' and gives as its meaning '*according to the custom of non-destruction of *apradā-dharma**'.<sup>3</sup> But this view is not very acceptable. Basak thinks that

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1. No. 5 - E. I. XV. p. 144.

3. H. R. S. p. 199.

2. No. 2 - E. I. XV. p. 133.

'this term can be explained thus: land could not, unless so conditioned, be alienated or transferred without State permission after being sold for the purpose of gift to Brāhmaṇas or a god.'

Anyway, it is clear from our inscriptions that 'nīvī-dharma', 'akṣaya-nīvī-dharma' and 'apradā-dharma' refer to almost the same conditions; and 'nīvī-dharmakṣaya' and 'apradākṣaya-nīvī' are terms similar in meaning. There may have been certain minute differences, of which we have at present little knowledge, as these terms have not yet been properly explained and their true meaning elucidated. In this connection it is also worth noting that we have the mention of 'apradā-dharma' and 'akṣaya-nīvī-dharma' only in cases where land had been granted for the maintenance of religious establishments. It is only in these cases that the king exempted the purchasers or enjoyers from royal taxation. There are a few cases, however, where this general principle was not followed. But in those cases the recipient of the grant was a Brāhmaṇa who was naturally expected to spend that money for religious purposes alone. These rules make it clear that religious grants were regarded as very important and every effort was made to see that the position of religious establishments was secured and protected against change and deterioration. The purchaser obtained the right of perpetual enjoyment, but he had no right to sale or mortgage.

It has been contended that the law of *nīvī-dharma* was applied only to land created out of waste land and extended to pious grants of villages. This is shown by the Vappa-ghoṣavāta grant of Jayanāga<sup>1</sup> according to which a village was granted a Brāhmaṇa under the condition of *akṣaya-nīvī*.

Another most important rule under which land was granted was the principle of *bhūmicchidra*. It occurs in many inscriptions of our period, such as the Khoh copper-plate of Sarvanātha,<sup>2</sup> the Alīnā copper-plate,<sup>3</sup> the Māliyā Bhūmi- copper-plate,<sup>4</sup> and so on. The Khoh copper-plate cchidra- says: "By this charter they have been assented to nyāya by me according to the rule of *bhūmi-cchidra*". This land was to be enjoyed as long as the moon, sun, ocean, rivers, etc. This is a rule derived from the *bhūmi-cchidra* type of land, but that does not mean that it applied only in the cases of *bhūmi-cchidra* land. There has been much controversy over the term *bhūmi-cchidra-nyāya* or the rule of *bhūmi-cchidra*, and various opinions have been expressed as to its interpretation. Dr. Bühler refers to a grant of Dhruvasena I of Valabhī and suggests that the term implies that "a village or the like is made over with all its appurtenances, produce, rights, etc."<sup>5</sup> According to Dr. Bhandarkar a grant given under this condition 'is to last as long as the sun or the moon shall endure, and should survive all revolutions

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1. E. I. XVIII. p. 63.  
2. G. I. p. 138.  
3. Ibid. p. 190.

4. G. I. p. 170.  
5. I. A. IV. p. 105.



and last unchanged for ever'.<sup>1</sup> Ghosal thinks that the term implies 'the gift of the full right of ownership for the first time'.<sup>2</sup> Dr. Barnett interprets the expression to mean that the "lands were granted to tenants with reservation of the king's right to eject at his will".<sup>3</sup>

There can be no doubt that the lands granted under this rule were granted in perpetuity not only to one person but to his successors for all generations to come. But controversy has risen over the point as to whether, if the land had been granted in perpetuity, the king had any right to eject tenants from it. There is, however, no reason to suppose that these two points of view cannot be reconciled. It is true that the land had been granted in perpetuity, but it had been so granted with certain reservations. Many have questioned the existence of evidence to show that this system of land implied tenancy at the pleasure of the crown. Reference may be made to Kaṭilya II.ii., styled 'bhūmi-cchidra-vidhāna', which treats of the king's action in converting forests and wildernesses into grazing grounds, retreats for Brāhmaṇas, and royal parks. Similarly, Yādavaprakāśa defines 'bhūmi-cchidra' as 'kr̥ṣya-yogyā bhūh'. Hence by comparing the two, as suggested by Dr. Barnett, bhūmi-cchidra-nyāya seems to mean 'the same condition as that under which tenants hold land in wildernesses and forests (royal demesnes) at the pleasure of the crown'.<sup>4</sup>

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1. I. A. I. p. 46 n.  
2. I. H. Q. V. p. 385.

3. J. R. A. S. 1931. p. 165  
4. Ibid.

It has been thought by some scholars that where such emphatic declarations have been made, handing over the land 'to the succession of son's son and son's son's son, to endure for the same time with the moon ... earth', where the grantee was offered not only the assignments of the specified taxes, but was also informed that even the king's own people were not authorised or empowered to confiscate this land, it would be contradictory to suggest that the king could possibly retain any rights over that land. The Cammak copper-plate inscription of Mahārāja Pravarasena II<sup>1</sup>, however, makes the position clear as follows:-

"śāsana-sthitiś ceyam brāhmaṇair īśvaraiś ca anupālaniyā tad yathā: rājñam saptaṅge rājye a-droha-pravṛttānām a-brahmaghna-caura-pāradārika-rājāpathyakāri-prabhṛtīnām a-saṅgrāma-kurvatām anya-grameṣvanaparādhānām a-candrāditya-kālīyah; atonyathā-kurvatām anumodatām va rājñah bhūmi-cchedam kurvataḥ a-steyam iti".

It is clear from the above that while the land was granted in perpetuity, certain definite conditions had to be fulfilled in order to keep it. So also the term 'bhūmi-cchidra-nyāya' holds certain implications of the conditional granting of land, and does not necessarily mean full and unconditional right of ownership.

#### 4. TYPES OF LAND

Various types of land are referred to in the inscriptions recording land grants. These types may broadly be classified into five groups, namely, (a) cultivated land, (b) waste land, (c) habitable land, (d) pasture land and (e) forest land.

##### Cultivated Land.

The Dhanāidaha inscription of Kumāragupta I<sup>1</sup> mentions the grant of cultivated land (kṣetra), and an application for the purchase of a plot of cultivated land (kṣetra-khaṇḍam) is recorded in the Faridpur copper-plate.<sup>2</sup> Wilson explains kṣetra as 'a tract of land specially fit for cultivation'.<sup>3</sup>

Cultivated land may be sub-divided into (i) dry-cultivation

land, which requires plenty of water for cultivation because it is not so fertile, and (ii) wet-cultivation land, which is naturally moist and fertile and so may be cultivated with the minimum of water. The Nāgamaṅgalā copper-plate<sup>4</sup> mentions the former and the latter is referred to in the Arthaśāstra.<sup>5</sup> A comparison of the areas denoted by certain land measures like khaṇḍuka and kolaga, shows that wet land was about six times as important as dry land.<sup>6</sup>

The new Gurjara plate grant of Jayabhata mentions vāpaka-kṣetra.<sup>7</sup> The exact meaning of the term is not very

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1. E. I. XVII. p. 348.  
2. I. A. XXXIX, p. 197.  
3. G. I. T. p. 284.  
4. I. A. II. p. 161.

5. Arth. II. 35.  
6. Cf. Kisanwar Glossary.  
7. I. A. XIII. p. 80.

clear. Bhagwanlal Indraji, without referring to any authority, however, has attempted to explain it as 'a field which by means of irrigation yields a rabi crop of rice, etc. after Vāpa-ksetra the kharif crop has been gathered.<sup>1</sup> The Dharmāditya grant refers to vāpa-ksetra,<sup>2</sup> which in all probability is the same as vāpaka-ksetra. 'Vāpa', in its derivative sense, means the field where seeds are sown (upyate asmin iti vāpaḥ). It appears that the plot of land which was specifically assigned to the sowing of seeds prior to their transplantation, was called vāpa-ksetra or vāpaka-ksetra.

The term 'kedāra' is found in the Taleśvar inscription.<sup>3</sup> Kauṭilya uses the word in the sense of wet crops<sup>4</sup> and as a field where wet crops are grown.<sup>5</sup> Monier Williams gives it as 'a field or meadow especially one under water'. In the Mahābhārata<sup>6</sup> kedāra-khaṇḍa is used to mean a dyke Kedāra or a ridge to hold back water. Kedāra-land was probably land covered with water or else a field by the side of a dam or on a bank or ridge. It may be compared with kaṅgu-ksetra mentioned in the Nāgamaṅgala copper-plate of Prṣṭhivī-Koṅgani.<sup>7</sup> Kaṅgu in Tamil means a ridge to retain water in the rice fields; a dam or anicut; the side of a bank or ridge. Hence kaṅgu-ksetra seems to be the same as kedāra-ksetra, namely, a field beside a dam or on a bank.

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1. I. A. XIII. fn. 43.  
2. I. A. XXXIX, p. 195  
3. E. I. XIII. p. 121.  
4. Arth. II. 24.

5. Ibid. III. 9.  
6. Mbh. I. 3.  
7. I. A. II. p. 159.

Kaṅgu-  
ksetra Kaṅgu-kṣetra has been interpreted as waste land,<sup>1</sup> but the above explanation seems more likely. Kaṅgu also means black millet and kaṅgu-kṣetra may possibly mean a field on which this crop was grown.

The Chambā plate of Yagākaravarman<sup>2</sup> mentions kolhika, śabdabagga and kutika. Vogel has explained the term 'kolhika' as 'irrigated land'. He thinks that 'the word is evidently

Kolhika sanskritised kohli, which indicates an irrigated field used for rice cultivation. The word is derived from kuhl(a), meaning 'a channel'.<sup>3</sup> The second part of the compound 'śabdabagga' is the vernacular word 'bāgh' or 'bāg', meaning "a field or land which, being well supplied with water, and adapted to the cultivation of various useful and

Bagga  
or bāg edible vegetable substances, is appropriate to their growth, or to that of betel, hemp, sugar-cane, plantains, saffron, ginger, pepper, tobacco, onions, garlic, chillis and other vegetables: to that of fruit trees and the areka, cocoa-nut and other palms. It is assessed at a higher rate than arable lands, according to the value of the produce".<sup>4</sup> By the other expression 'kutika' a special kind of land is indicated. In the Kullū dialect the word 'kuṭ' means cultivated

Kutika land lying at a high elevation, yielding in the course of two years only two crops, buck-wheat followed by wheat.<sup>5</sup>

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1. I.A. II. p.161.

2. A.S.I.R. 1902-3, p.250.

3. Ibid. fn.

4. G.I.T. p.44.

5. Diack's Kullūi Grammar, p.75.

The Nirmaṇḍ copper-plate inscription of the Mahāsāmanta and Mahārāja Samudrasena<sup>1</sup> gives us another expression 'dvesa-bhūmi'. Fleet has left the word unexplained. Mitra translated it as 'grazing ground'<sup>2</sup> without referring to any authority to substantiate this interpretation. The object of the inscription is to record the grant of a Dvesa-  
bhūmi village together with the level and marsh lands and forest lands including dvesa land. Saletore<sup>3</sup> understands the word to mean a specified portion of the village, so called "probably out of dislike or repugnance owing to its lack of fertility or some other reason which rendered it for all practical purposes useless". This interpretation pre-supposes the identity between 'dvesa' and 'dveṣa'. But there is no reason for this presumption. It is possible that the 'dvesa' of our inscription still survives in 'dosāi' which perhaps means land producing two crops a year.

Saletore<sup>4</sup> takes 'vaidila' occurring in the Nirmaṇḍ copper-plate<sup>5</sup> as land on which leguminous plants were grown. Some scholars have taken 'vaidila' as a variation of 'vidula', which, according to Indrajī, means 'one of the articles levied from every village in times of war, and the grant allows the donee an exemption from the taking away of arrows and other ammunition in times of war.'<sup>6</sup> Neither interpretation is very satisfactory. If, however, we are permitted to read 'vedila'

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1. G. I. p. 290.

2. Ibid. fn.

3. Saletore, p. 346.

4. Saletore, p. 320.

5. G. I. p. 290.

6. I. A. XII, p. 123. fn. 81.

for 'vaidila', then the sentence makes sense. 'Vedila' means 'an outside wall',<sup>1</sup> hence 'vaidila' might be a boundary wall. This meaning suits very well the text of the inscription, which states that the holding in question was on the edge of the newly constructed 'vaidila'.

#### Waste Land.

The terms khila-kṣetra, aprahata, apradā and bhūmi-ecchidra, occurring in our inscriptions, have all been explained to indicate waste land of one kind or other. Khila land is mentioned frequently in many inscriptions of our period, as in the Nandapur copper-plate grant,<sup>2</sup> which reveals how fallow land (khila-kṣetra) had to be purchased according to the

local system of sale of this kind of land; and in the Khila Dāmodarpur copper-plate of Budhagupta.<sup>3</sup> The term 'khila' means 'waste or uncultivated land, though capable of being brought into cultivation'.<sup>4</sup>

'Aprahata' land is mentioned in the Dāmodarpur copper-plates of Kumārāgupta.<sup>5</sup> The words 'khila' and 'aprahata' seem to be synonymous, according to Amarakośa<sup>6</sup> and Halāyudha,<sup>7</sup> who have interpreted it as 'untilled land, or waste, fallow land'. But as both the words have been used

side by side in the same plate, there might be a Aprahata difference in meaning between them, although the implication of the two words is similar. Thus, while 'khila'

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1. Winslow, Tamil. Eng. Dic.

2. E. I. XIII. p. 54.

3. E. I. XV. p. 137.

4. G. I. T. p. 285.

5. E. I. XV. p. 130.

6. Amara. II. 10. 5.

7. Halāyudha. 2. 3.



is cultivable waste, it is possible that 'aprahata' might mean waste land that is still lying untilled and is possibly not amenable to cultivation.

Another set of Dāmodarpur copper-plates, those of Budhagupta<sup>1</sup>, refers to 'apradā', which seems to be "land not given to anybody else before this transaction was effected; in other words, it means unsettled lands".<sup>2</sup> This type must have been an important one, for a distinct rule Apradā called 'apradā-dharma'<sup>3</sup>, used in the granting of lands, emerged from this type of land.

'Bhūmi-cchidra' is also a very important type of land. Like 'apradā', this term also gave birth to another rule or system of land tenure, known as 'bhūmi-cchidra-nyāya',<sup>4</sup> which was used in most of the land grants of this period. This technical fiscal expression has proved a puzzle to scholars. It was originally held to mean 'a fissure (furrow) of the soil'. Fleet suggested as the explanation of this word Bhūmi- "land fit to be ploughed or cultivated".<sup>5</sup> cchidra Bühler explained it as 'kr̥ṣṭayogyā bhūḥ', 'land unfit for tillage'.<sup>6</sup> This explanation of the word 'bhūmi-cchidra' has been confirmed by Dr. Barnett,<sup>7</sup> though as to the exact nature of the maxim 'bhūmi-cchidra-nyāya' they seem to differ in opinion. We have dealt with the interpretation of the rule 'bhūmi-cchidra-nyāya'. The term 'bhūmi-cchidra' means

1. E. I. XV. p.139.

2. Ibid. p.140 fn.

3. Ibid. p.144

4. I. A. IV. p.105.

5. G. I. p.138. n.2.

6. E. I. I. p.74. fn.

7. J. R. A. S. 1931. p.165.

barren land which has been cultivated for the first time.

The Dāmodarpur copper-plate<sup>1</sup> mentions 'vāstu', by which is meant 'habitable land'. In the Arthasāstra, houses, Habitable land fields, gardens, buildings of any kind, lakes and tanks are included under vāstu.<sup>2</sup> Wilson explains this word as "the site or foundation of a house".<sup>3</sup> It is thus land set apart as building sites, and is still commonly used in Bengal with meaning unchanged. The Narasimhapallī plates of Hastivarman<sup>4</sup> mentions 'niveśana' which has a similar meaning.<sup>5</sup>

Many terms are found in the inscriptions to denote pasture land. The Chambā plate of Vidagdhadeva mentions 'gocara'<sup>6</sup>, the Khoh copper-plate of Sarvanātha<sup>7</sup> has 'gopatha-śara', the Nirmaṇḍ copper-plate<sup>8</sup> gives <sup>the</sup> term Pasture land 'trṇa-yūti' and Vogel mentions 'gosūti'.<sup>9</sup> Wilson explains gocara as 'pasture land, land kept free from cultivation as the grazing ground of the village'.<sup>10</sup> In the Bihār stone pillar-inscription of Skandagupta,<sup>11</sup> we find another word 'grāma-kṣetrāni'. As the record is not complete, it is difficult to give the exact connotation of the word, but perhaps it meant a common open field, grazing ground or pasture land, something like the village common.

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1. E. I. XV. p. 144.

2. Arth. III. 8.

3. G. I. T. p. 544.

4. E. I. XXIII. p. 62.

5. Cf. Mon. Wil. Dic. (Sans.).

6. A. S. I. R. 1902-3, p. 252.

7. G. I. p. 125.

8. G. I. p. 289.

9. Inscription from Chambā, p. 167-68.

10. G. I. T. p. 179.

11. G. I. p. 50.

In the Māliyā copper grant of Mahārāja Dharasena II, we come across another expression 'padraka'. Fleet has explained the term in his translation as 'common land'.<sup>1</sup> He thinks 'padraka' is the same as 'padar', which, according to Wilson, means 'common land, land adjacent to a village left uncultivated'.<sup>2</sup> He also suggests that the word 'padraka' seems to be a fuller form of 'padra', which has been explained to mean 'a village, a road in a village, the earth, and a particular district'.<sup>3</sup> But he prefers the former interpretation as more likely to be correct. Bühler rendered this term as the modern 'pādr', 'a grazing place',<sup>4</sup> but he provided no authority for this supposition. As we look through the grant of Jayabhāṭa,<sup>5</sup> which bears the expression 'samī-padraka-grāme', the use of both 'padraka' and 'grāma' side by side makes it difficult to suppose that both the words are identical. Padraka is more satisfactorily explained as a quarter or ward of a town or village, or a small district. The present Bengali word 'pārā' of this meaning has possibly been derived from padraka.<sup>6</sup>

Forest land is mentioned in the Nirmaṇḍ copper-plate of Mahārāja Samudrasena as jaṅgala-bhūmi,<sup>7</sup> and avāṭa-bhūmi is given in the Ghugrahāṭi copper-plate of Saṁācārādeva, where,

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1. G. I. p. 170.

2. G. I. T. p. 386.

3. Will. Sans. Dic., p. 585.

4. I. A. XV. p. 337.

5. I. A. XIII. p. 78.

6. Padraka - paddaga - pādā - pārā; cf. also pātaka.

7. G. I. p. 289.

in reply to a Brāhmaṇa's petition for a piece of land, the elders decided to bestow it upon him, calling to mind the fact that 'the land which is full of pits and infested with wild beasts is unprofitable to the king'.<sup>1</sup>

Forest land

Terraced land is mentioned in the Chambā plate.<sup>2</sup> The term 'dāruvāṭikā' occurs in the same plate and has been explained to mean an orchard. Vanavāṭikā,<sup>3</sup> puṣpavāṭikā, tala-vāṭaka<sup>4</sup>

Orchards and Gardens all indicate gardens and orchards and lands used for such purposes. Vāṭa means an orchard or simply an enclosure. Kauṭilya mentions puṣpatala-vāṭasā.<sup>5</sup>

#### 5. LAND SURVEY

Price of Land. Demand. Boundaries -- their demarcation -- Location of Villages -- Boundaries of Plots.

Many references in the inscriptions of our period enable us to form some idea of the actual prices at which land was sold. The Dāmodarpur copper-plates<sup>6</sup> are the record of a period that extended over a hundred years. An analysis of this period shows that in Koṭivarṣa, one Kulyavāpa of vāstu and khila land was sold at three dināras. This price thus remained stable for a century. From the Faridpur plates,<sup>7</sup> we find that in Eastern Bengal each kulyavāpa of cultivated land was priced at four dināras. This price continued for

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1. E. I. XVIII. p. 76.

2. A. S. I. R. 1902-3, p. 249.

3. Inscription of Jayacandra. P. I. I, 102.

4. Khālimpur copper-plate; G. I. p. 217; E. I. XX. p. 63.

5. Arth. II. 24.

6. Nos. 1. 2. 4 & 5. E. I. XV. p. 113 ff.

7. I. A. XXXIX. p. 193 ff.

Price at least fifty years as the dates of the plates show.  
of  
Land The Baigrām plates<sup>1</sup> state that in Pañcānagarī viṣaya one kulyavāpa of fallow land was sold at two dināras. From the Pāhāḍpur plate,<sup>2</sup> as well, we find that one kulyavāpa of fallow land was sold at two dināras. The Taleśvara grant of Viṣṇu-varman indicates that one kulyavāpa of cultivated land was sold at eight suvarṇas.<sup>3</sup> From this it is clear that there was a considerable variation in prices, the prices of cultivated land varying from four dināras in Faridpur to double this rate in Taleśvara. But that certain definite rates existed in different regions is obvious from the Faridpur copper-plates, which fix the price of cultivated land along the eastern seas at the established rate of four dināras. The price of land would naturally depend on many factors such as the quality of the soil, the amount of irrigation carried out on it, the importance of the locality, its general economic prosperity, and so on. It is thus not possible to compare the prices without reference to these conditions. It is also probable that the price of land began to soar with increased demand, which would be the natural result of a steady growth of population.

This demand for land is revealed in our plates. In the Pāhāḍpur plates,<sup>4</sup> Nāthaśarmā and his wife granted one kulyavāpa and four dṛoṇavāpakas of land, purchased from four

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1. E. I. XXI. pp. 78-83.

2. E. I. XX. pp. 63-68.

3. E. I. XIII. p. 121.

4. E. I. XX. pp. 63-68.

different villages, for the maintenance of religious establishments at Vaṭagohālī. It would have been more convenient to have had these lands near about the vihāra, but apparently they could not get land in or about the village concerned, and hence had to seek it elsewhere. This shows that the demand was so great that they could not manage to get even one Demand for land kulyavāpa and four dṛonavāpakas of land in a particular village. Similarly in the Baigrām plates,<sup>1</sup> two brothers granted lands purchased from two different villages. In the Guṇāighar plates,<sup>2</sup> "eleven pāṭakas of land were purchased from one village not in a particular area but in five different areas!" In the Dāmodarpur plate<sup>3</sup> five kulyavāpas of land distributed in four different <sup>villages</sup> were sold to the same person. In the Aśhrāfpur plates<sup>4</sup>, we find that nine pāṭakas and ten dṛonas of land were granted from seven villages as a first instalment, and in the second instalment, six pāṭakas and ten dṛonas from eight villages. From this evidence we realise the nature of the demand for land. All good land, including dwelling places in and around a village, were either occupied or cultivated, and no large area could be found in a particular village, hence lands had to be purchased from different villages. Owing to the growth of population and other factors, even the forests and jungles were cleared and used for purposes of habitation. A good example of this is furnished by the Tṛipperah plates of Lokanātha.<sup>5</sup>

1. E. I. XXI. pp. 78-83.  
2. I. H. Q. 1930, pp. 45-60.  
3. E. I. XV. p. 144.

4. M. A. S. B. Vol. I, p. 85 ff.  
5. E. I. XV. p. 306.

The ever-growing demand for land is also indicated in the great care and accuracy observed with regard to the demarcation of boundaries. The villagers, *adhikarāṇas* and other officers responsible for land transactions were careful that the land proposed to be sold or granted should not create any trouble or hindrance to the land or dwelling places of other people. In the Pāhāḍpur plate<sup>1</sup> it is explicitly stated that the land proposed to be sold was to be marked and demarcated in such a way that it did not cause any harm to anybody. Similarly, in the Nandapur plates<sup>2</sup> it has been said, 'therefore having known this, you should give away (the plot) in a land that may not cause hindrance to (the) cultivation by householders after measuring it by (the standard unit of) 8 x 9 reeds, according to the cubit length of Darvikarma, and also after demarcating the area in four directions by permanent marks. This plate shows the prevalence of the practice of demarcating land by means of chaff, coal, etc. Similar indications have also been given in the Baigrām plate.<sup>3</sup> Husk ashes were used so that the lines might be permanent (*cira-kāla-sthāyi-tuṣāṅgarādi-cinhita-catur-dīn-niyamita* ....). It is probable that demarcating lines were incised deeply and upon them ashes were scattered to prevent the growth of grass and weeds, so that these lines might remain permanent. There was also the

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1. E.I. XX. p. 60.

2. E.I. XXIII. p. 52 ff.

3. E.I. XXI. pp. 78-83.



practice of setting up boundary pillars. In the Bhumrā stone pillar-inscription,<sup>1</sup> we are told that a boundary pillar was set up by Śivadāsa in the village of Ambōda. Moreover, plants, trees, canals, rivers, tanks and temples were also considered as boundary marks of the village or land. Even to-day, in different parts of north-eastern India, trees and pillars are boundary marks. The system of demarcating land with chaff-coal exists to the present day.

The plates follow the principles laid down by law-givers which were considered to be the usual practice. Kauṭilya in his Arthasāstra says: 'Boundaries shall be denoted by rivers, a mountain, forests, bulbous plants (grṣṭi), caves, artificial buildings (setu-bandha) or by trees such as śālmālī (silk cotton tree), śamī (Acacia suma), and kṣīra-vrkṣa (milky trees)<sup>2</sup>. In our inscriptions, too, a village was similarly demarcated. From the Khoh plate of Hastin we learn that the village granted was demarcated thus: 'On all sides there are (trenches) (of demarcation) and on the north by the well, the boundaries are that have been previously enjoyed'.<sup>3</sup> Thus it is apparent that the practice of demarcating boundaries was in existence from very early times.

The location of the village concerned was indicated in two ways. The village itself might be taken, and the villages, rivers and other land-marks lying along its

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1. G.I. p.112.

2. Arth. II.1. Cf. Manu. VIII. 246-7; Nār. XIV.1; Br. XIX.2.

3. Sanantād gartā ..... G.I. p.97.

boundaries on all four sides specified. This is the method followed in the above plate, where it is said that the village Location of Villages in question had the following boundaries: 'On the east (the boundary-trench or village called) korparagartā; on the north, Animuktaka-konaka, (and) a vr̥ka tree, in the centre of Valaka on the south side of the village of Vaṅgara, (and) a clump of amrāta-trees; on the west (the tank or village called) Nāgasarī; (and) on the south, the pariccheda of Balavarman'.<sup>1</sup> Or else the surroundings were taken and the position in relation to these adjoining areas was described as in the Siwanī plate of Pravarasena II, in which the boundaries of the village of Brahmapuraka have been defined as follows: 'On the bank of the river Karañjaviraka, on the north of the village of Vaṭapuraka, on the west of the village of Kiṇṇihikhetaka, on the south of the village of Pavarajjavātaka, and on the east of the village of Kollapuraka'.<sup>2</sup> We also find that sometimes the land marks were given in very broad and general terms, where the names of villages or rivers are mentioned and sometimes minute details of the boundaries were recorded such as trenches, tanks and clumps of trees.

The boundaries of plots were described more minutely, and being smaller areas, the need for noting minor details carefully is obvious. In the plates of Dharmāditya<sup>3</sup> and Gopacandra,<sup>4</sup> the boundaries of land are very clearly indicated.

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1. G. I. p. 105.

2. G. I. p. 248.

3. I. A. XXXIX, pp. 193 ff.

4. Ibid. p. 203 ff.

Boundaries  
of plots

Plate No. 2 states that on the east the land was marked off by the boundary of Soga's copper-plate field; on the south by the old-standing paṭṭuki (a kind of plant); on the west by gopatha; and on the north the boundary of Gargasvāmin's copper-plate land. Similar details of boundaries have also been recorded in the Dāmodarpur copper-plates.<sup>1</sup> In some cases, in order to be even more explicit, the names as well as occupations of the owners of surrounding fields along with the exact measurements of the plot under consideration were recorded. This is illustrated in the Gunāigher plate of Vainyagunta, where we are told of a plot measuring seven pāṭakas and nine dṛoṇavāpas, which had to the east the border of Gunikaragrahāra and the field of the engineer Viṣṇu; to the south the field of Miduvilala and the field belonging to the royal vihāra;<sup>to the west the (?) field;</sup> to the north the tank of Dasobhaga and the boundaries of the field of Vam/piyaka and Ādityabandhu.<sup>2</sup>

In the inscriptions of the later period, the boundaries of plots or villages have been further elaborated. A careful and detailed description of the same may be found in the Khālimpur plate of Dharmapāla.<sup>3</sup> It may be conceived that with the greater demand for land there arose quarrels with regard to boundaries, and in order to minimise such complications, these were so accurately defined and demarcated in

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1. E. I. XV. pp. 113 ff.  
2. I. H. Q. VI. p. 58.

3. E. I. IV. p. 249.

Boundary disputes the presence of many witnesses. Instructions regarding the settlement of boundary disputes are to be found in the Arthaśāstra and the writings of the law-givers. Kātyāyana gives six causes of land disputes.<sup>1</sup> Kautīlya, Nārada and Brhaspati all enjoin that boundary disputes were to be settled by elders and inhabitants of the village.<sup>2</sup>

From this description of different kinds of land, their measurement, boundaries, prices, and so on, it is obvious that the State had to maintain a separate department to deal with this work. It is not unlikely that this was the department of the pustapāla, where all records were kept. We have already discussed the functions of this department. In the later inscriptions we find that there were officers whose duty it was to look after the boundaries of land. Such officers were sīma-karmakara<sup>3</sup> and sīmā-pradātā.<sup>4</sup>

## 6. MEASUREMENT OF LAND

There were various land measures current in our period. They can be broadly classified into two groups: (a) linear measure and (b) square measure. Different localities used different measures and these varied considerably.

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1. Kāt. 732.

2. Arth. III. 9; Nar. XI. 2-3; Br. XIX. 8 ff.

3. Inscription of Jīvitagupta II - G. I. p. 217.

4. Nidhanpur copper-plate - E. I. XII p. 75.

Kauṭilya gives us a detailed table of measures as follows:-<sup>1</sup>

|                                |   |
|--------------------------------|---|
| 8 paramānu                     | = 1 ratha-cakra-viprut  |
| 8 ratha-cakra-viprut           | = 1 likṣā   |
| 8 likṣā                        | = 1 yūka of medium size   |
| 8 yūka                         | = 1 yava of medium size   |
| 8 yavas                        | = 1 aṅgula ( $\frac{3}{8}$ inch)  |
| 4 aṅgulas                      | = 1 dhanus-graha  |
| 8 aṅgulas                      | = 1 dhanus-muṣṭi  |
| 12 aṅgulas                     | = 1 vitasti or chāyā-pauruṣa  |
| 14 aṅgulas                     | = 1 śama, śala or pada  |
| 2 vitastis                     | = 1 aratni or prājāpatya-hasta (18 in.)                                 |
| 2 vitastis &<br>1 dhanus-graha | = 1 hasta measuring pasture land  |
| 2 vitastis &<br>1 dhanus-muṣṭi | = 1 kiṣku or kaṃsa  |
| 42 aṅgulas                     | = 1 kiṣku of sawyers and blacksmiths<br>used in measuring camp grounds. |
| 54 aṅgulas                     | = 1 hasta measuring timber forests                                      |
| 4 aratnis or<br>96 aṅgulas     | = 1 daṇḍa, dhanus, nālikā (6 ft.)                                       |
| 108 aṅgulas                    | = 1 gārhapatya dhanus measuring roads.                                  |
| 92 aṅgulas                     | = 1 daṇḍa measuring brahma-deya land.                                   |
| 10 daṇḍas or<br>4 hastas       | = 1 rajju   |
| 2 rajjus                       | = 1 parideśa (square measure)   |
| 3 rajjus                       | = 1 nivartana (square measure)  |
| 3 rajjus &<br>2 daṇḍas         | = 1 bāhu  |
| 1000 dhanus                    | = 1 goruta (sound of a cow)   |
| 4 gorutas                      | = 1 yojana  |

### Linear Measures.

In our inscriptions, we find hasta as the minimum unit for measuring land. As to the length of the hasta there has been a great deal of controversy. Kauṭilya's table above provides us with three lengths of hasta, viz. (a) 54 aṅgulas or  $40\frac{1}{2}$  inches (aṅgula =  $\frac{3}{4}$  inches). (b) 28 aṅgulas or 21 inches, and (c) 24 aṅgulas or 18 inches, used for measuring timber forests, pasture land and other areas respectively. Fleet<sup>1</sup> seems to have adopted Kauṭilya's prājāpatya hasta (18 inches) while Pargiter takes a hasta as 19 inches,<sup>2</sup> that being the

average of (b) and (c) of Kauṭilya. In the Faridpur Hasta grant of Dharmāditya<sup>3</sup> land was measured by the hasta of one Śivacandra (Śivacandra-hastena) and in the Pāhādpur plate<sup>4</sup> the hasta of one Darvikarma was applied for measuring land (Darvī-karma-hastena). This was probably to maintain a uniform standard of the linear measure and as far as possible to rule out variation. The hand was standardised by naming a particular individual who might have been the local land-owner or one whose hand was the standard length. This standard measurement might be conceived as being 18 inches which is the same as Kauṭilya's prājāpatya hasta and Fleet's standard hasta.

A nala consisted of several hastas. Many inscriptions<sup>5</sup> refer to nala as a measure of length. This 'nala' is obviously the 'nālikā' or 'daṇḍa' of Kauṭilya.<sup>6</sup> The above

1. Arth. Tr. p. 520.  
2. I. A. XXXIX. p. 215  
3. Ibid.  
4. E. I. XX. p. 63.

5. E. I. XV. p. 113 ff; XX. p. 63 ff.  
6. Cf. hālikā and hala - E. I. XV. p. 274.

table provides two different lengths of a nala. In ordinary cases, it consisted of 96 āṅgulas or 4 aratnis, i.e. 6 ft., whereas in the case of gifts for religious purposes, it was double the ordinary length, i.e. 12 ft. Like hasta, nala also has been a matter of controversy. Basing his argument on the modern 'kāṇī', Pargiter takes a nala to be 16 cubits.<sup>1</sup> Saletore follows Pargiter but unaccountably gives the length of the nala as 11 cubits.<sup>2</sup> But the connection between modern 'kāṇī' and our nala has not been established. Dikshit gives the length

Nala 6, 8 or 9 cubits in different cases,<sup>3</sup> and Sen thinks that there were two nalas, one of nine cubits for measuring length, the other of 8 cubits for breadth.<sup>4</sup> But these views are based on an interpretation which, as we shall see later on, does not seem to be reasonable. As we have taken Kauṭilya's prājāpatya hasta to be a standard one, we are inclined to think with Kauṭilya that the nala ordinarily consisted of 4 hastas or 6 ft, but varied in length in special circumstances. In some later inscriptions, the nala is seen to bear the name of an individual or a place, as in the Śaktipur copper-plate, in which the nala is named Vṛṣabhaśaṅkara-nala after a person,<sup>5</sup> and the Samataṭīya-nala in the Barrackpore grant, named after a locality.<sup>6</sup>

#### Square Measures.

We may now deal with various square measures representing different areas. First, areas whose measurements are

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1. I.A. XXXIX. p.215

2. Saletore, p.357.

3. E.I. XX. p.63.

4. Sen. p.520.

5. Ins. of Beng. III. p.96-97.

6. E.I. XV. p.278.



based on nalas and hastas shall be discussed.

Nivartana is frequently mentioned in the inscriptions,<sup>1</sup> as well as in contemporary literature.<sup>2</sup> There were considerable variations in the area of a nivartana<sup>3</sup> as the following Nivartana tables will show:-

| <u>Manu</u>                   |                 | <u>Brhaspati</u>             |                   |
|-------------------------------|-----------------|------------------------------|-------------------|
| 5 cubits (karas)= 1 danda     |                 | 10 cubits                    | = 1 danda or rod. |
| 25 dandas (sq.) = 1 nivartana |                 | 30 rods (sq)                 | = 1 nivartana     |
| = 3906.25 sq. yd.             |                 |                              | = 22500 sq. yds.  |
| = .8071 acre                  |                 |                              | = 4.648 acres     |
| <u>Prajapati</u>              |                 | <u>Mit on Yāj.</u>           |                   |
| 4 cubits (karas)= 1 danda     |                 | 7 cubits                     | = 1 danda         |
| 25 dandas (sq.) = 1 nivartana |                 | 30 rods (sq)                 | = 1 nivartana     |
| = 2500 sq. yds.               |                 |                              | = 11025 sq. yds.  |
| = .5165 acre                  |                 |                              | = 2.27 acres      |
| <u>Kautilya</u>               |                 | <u>Lilāvati</u> <sup>4</sup> |                   |
| 4 cubits                      | = 1 danda (rod) | 10 cubits                    | = 1 vaṁśa         |
| 30 rods (sq.) = 1 nivartana   |                 | 20 vaṁśa                     | = 1 nivartana     |
| = 3600 sq. yds.               |                 | (sq.)                        | = app. 2 acres.   |
| = .743 acre                   |                 |                              |                   |

But if 8 cubits = 1 danda (measuring Brahma-deya land)

|               |                   |
|---------------|-------------------|
| 30 rods (sq.) | = 1 nivartana     |
| 1 nivartana   | = 14400 sq. yds.  |
|               | = nearly 3 acres. |

Thus a nivartana varied from half an acre to about  $4\frac{1}{2}$  acres. Wilson in his Glossary of Indian Terms gives its

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1. Nāsik E. I. VIII. p. 73; grant of Viṣṇugopavarman: I. A. V. p. 50. Gadval plate of Vikramāditya, E. I. X. No. 22.
  2. Manu, Prajapati, quoted in Sukra I, 386-417; Arth. Br. Sm. 7, 8, 9. Mit. on Yāj. I. 210.
  3. Cf. patti in the Kaśākūdi plates, S. I. I. II, pt. III. 1. 100. (nivartana = patti ?)
  4. Lilā. I. 7.

standard measure as: 10 cubits = 1 vaṃśa; 20 vaṃśas (sq.) = 1 nivartana, approximately 2 acres, which is identical with Līlāvati's table above; and Fleet has adopted the same view.<sup>1</sup> In the jumble of varying opinions, this suggestion of a fixed standard stands out at least as a working hypothesis.

The Viṣṇu-dharma-sāstra<sup>2</sup> gives another term 'gocarma', which is defined as 'that much land of whatever extent the crops raised on it which will maintain one man for a year'.

Brhaspati also defines it as 'that extent of land  
Gocarma which a thousand cows with their calves and a bull may occupy without being compelled to stand doing nothing'.<sup>3</sup> He further states that a gocarma comprises ten nivartanas.<sup>4</sup>

Most of the inscriptions of Eastern Bengal<sup>5</sup> refer to a term 'kulyavāpa' denoting an area of land. According to

Monier Williams' lexicon, kulya means eight droṇas  
Kulyavāpa or bucketfuls of corn, and Wilson defines vāpa as 'the act of sowing seed'.<sup>6</sup> Hence kulyavāpa in its literal sense means that extent of land on which eight bucketfuls of seed can be sown. According to the commentators on Manu, kulya or kula may mean that much land as would be

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1. I. A. V. p. 53 n.

2. Viṣṇu. V. 181.

3. Br. Sm. 7, 8, 9. Op. cit. H. of Dh. II. 2. p. 859 n.

4. Cf. Aparārka, P. 1225, and Hemādri, Vratakhaṇḍa, Pt. I. pp. 52-53.

5. Dāmodarpur E. I. XV. p. 113 ff; Pāhādpur XX. p. 63 ff; Farīdpur XXXIX. p. 193 ff. etc.

6. G. I. T.

required for the maintenance of a family.<sup>1</sup>

As regards the area of the kulyavāpa, Pargiter thinks<sup>2</sup> that it consisted of 8 x 9 reeds. The phrase 'aṣṭaka-navaka-nalābhyām', found in the Dāmodarpur plates,<sup>3</sup> has given rise to much difference of opinion. Dikshit differs from Pargiter in the interpretation of the above phrase. He contends that Pargiter's interpretation does not cover the case where only one figure, six, is used.<sup>4</sup> He therefore suggests Aṣṭaka- that in the one case a nala measuring eight or nine navaka- cubits was used, while in the other a six-cubit nala nala was indicated. But it is difficult to see how only one measure can describe an area. Moreover, where there is so much accuracy of statement, an indefinite eight or nine involving the difference of a whole cubit is unlikely. Sen<sup>5</sup> suggests that there might have been two nalas, one for measuring length and another for breadth. But this interpretation is not supported by any evidence and he seems to have overlooked the case of ṣaṭka-nala in the Pāhāḍpur plate. From the construction of the phrases it is clear that they refer to the number of nalas in each case and not to the number of cubits in the nala. The phrase 'aṣṭaka-navaka-nalābhyām' may be simply explained as Pargiter has done, to mean 8 x 9 reeds.

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1. Kullūka ad Sarvajña-nārāyaṇa on Manu VII. 119 -  
halam tu dviguṇam kulam iti vacanād dvābhyām  
halābhyām yā kṛṣyate bhūstām bhujjītyarthah.
  2. I.A. 1910, p. 215.
  3. E.I. XV. 113 ff.
  4. Pāhāḍpur plate, E.I. XX. p. 63.
  5. Sen. p. 520.

Where only one figure has been given, we may explain the area as 6 x 6 reeds.<sup>1</sup>

Fargiter's suggestion that the area of a kulyavāpa was 8 x 9 reeds does not seem likely for the following reasons:-

(a) The phrase 'aṣṭaka-navaka-nala' occurs in the same plate along with other terms such as pravarta,<sup>2</sup> dronavāpa, ādhavāpa,<sup>3</sup> in addition to kulyavāpa. There is no justification for supposing that the phrase in question qualifies only one of these terms, and that term kulyavāpa. (b) In the Baigrām plate, a number of plots are granted, among which was one measuring one dronavāpa. We shall see that this was smaller than a kulyavāpa, hence it would be difficult to measure it off from the measurements given for a larger area. (c) Even if the figures do refer to the kulyavāpa, it cannot be definitely said that they cover its whole area. (d) Lastly, the Dāmo-darpur plate mentions a village named Pañca-kulyavāpaka<sup>4</sup> which in its literal sense would seem to consist of 5 kulyavāpas of land. If a kulyavāpa was 8 x 9 reeds, a little larger than an acre, then the area of the village would be about 5 acres, which can hardly be conceived as the size of a village. 8 x 9 reeds and 6 reeds square might have been the units of area prevalent in different localities. The unit 8 x 9 reeds would be  $\frac{8 \times 4 \times 9 \times 4}{4} = 288$  sq. yds. (taking a nala = 4 hastas)

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1. Satkañ ca satkañ ca satkañ -- Eka-śeṣa-dvandva.

2. I. A. XXXIX. p. 202.

3. E. I. XX. p. 63.

4. E. I. XV. p. 144.

The area of a kulyavāpa would have been a certain number of times this unit. This must have been well known, but we have as yet no definite means of ascertaining this area.

The Pāhādpur,<sup>1</sup> Nandapur,<sup>2</sup> and other plates<sup>3</sup> mention drona or dronavāpa. Monier Williams' dictionary interprets

Drona or dronavāpa drona as a wooden vessel or bucket. Hence dronavāpa means that extent of land which can be sown with a drona of corn. The Pāhādpur plate states that a total area of one and a half kulyavāpas is granted in four plots measuring 4, 4,  $2\frac{1}{2}$  and  $1\frac{1}{2}$  dronavāpas. Hence it is clear that  $1\frac{1}{2}$  kulyavāpa are equal to 12 dronavāpas, i.e.

1 kulyavāpa would consist of 8 dronavāpas. The figures in the Baigrām plate<sup>4</sup> substantiate this result. Dronavāpikā found in the Taleśvara copper-plate grant of Viṣṇuvarman<sup>5</sup> is the same as dronavāpa.

The Pāhādpur inscription<sup>6</sup> and the Tipperah plate of Lokanātha<sup>7</sup> refer to ādhavāpa and ādhaka respectively.

According to Aparārka<sup>8</sup>, 4 prasthas = 1 ādhaka; 4 ādhaka = 1 drona; while Parāśara<sup>9</sup> gives 2 prasthas = 1 ādhaka and 16 ādhakas = 1 drona. Ādhaka is further sub-divided into

Adhavapa unmāna and this into kāka or kākini.<sup>10</sup> In the Taleśvara copper-plate,<sup>11</sup> we find mention of khārī

1. E. I. XX. p. 63.
2. I. A. XXII. p. 52.
3. Tipperah plate,  
E. I. XV. p. 306
4. E. I. XXI. p. 83.
5. E. I. XIII. 7B.
6. E. I. XX. p. 63.

7. E. I. XV. p. 305.
8. Apa. p. 305.
9. Parā. VI. 70.
10. Ins. of Beng. III, p. 78.
11. E. I. XIII. 7B.

and khārī-vāpa. It indicates an area that can be sown with a khārī measure of corn. According to Aparārka,<sup>1</sup> 16 dronas = 1 khari, while the Prāścittatattva,<sup>2</sup> quoting the Kalpataru, gives a different value, viz. 10 dronas = 1 khārī. The above inscription seems to favour the view that Khārī 16 dronas = 1 khārī. Accordingly, a khārī being of 16 dronas, would be equal to 2 kulyavāpas (because 8 dronas = 1 kulyavāpa).

Besides the above forms of measurement, we have references to another land measure known as 'pāṭaka', as may be found in the Tipperah plate of Vainyagupta,<sup>3</sup> Ashrafpur<sup>4</sup> plate and the grant of Lokanātha.<sup>5</sup> The Tipperah plate throws light upon the connection between dronavāpa and pāṭaka.

Pāṭaka The total measure of the granted land divided into five plots is eleven pāṭakas, comprised in one village. The measurement of the different plots are also given in the plate as follows:

|          |   |
|----------|---|
| 1st plot | 7 pāṭakas and 9 dronavāpas                            |
| 2nd "    | 28 "  |
| 3rd "    | 23 "  |
| 4th "    | 30 "  |
| 5th "    | 1 $\frac{3}{4}$ "                                     |
| Total    | 8 $\frac{3}{4}$ pāṭakas & 90 dronavāpakas = 11 pāṭaka |

This easily works out to the important equation

1 pāṭaka = 40 dronavāpakas. Laskar worked out the equation  
1 pāṭaka = 50 dronavāpakas from the Ashrafur plates.

1. Apa. 305  
2. Pr. T. p. 514  
3. I. H. Q. VI. p. 52.

4. M. A. S. B. I. pp. 85-93.  
5. E. I. XV. p. 306

This is definitely disproved by the present plate, in which exact figures are given, while the Ashraḥ<sup>p</sup>ur figures are only rough.<sup>1</sup> Unfortunately, there are no means yet available of determining the measure of a dronavāpa, as there is a great divergence of views regarding the corn-measure drona wherefrom it is derived. Again, when we look at the grant of Lokanātha, we find a systematic list of land grants to numerous Brāhmaṇas in which the share or definite area allotted to each has been specifically mentioned. In this list, we find the words ardha-pāṭaka and also twenty dronas used to indicate different plots given to different persons. If we accept the valuation that 1 pāṭaka = 40 dronas, then ardha-pāṭaka will be 20 dronas. It seems rather strange that in this record, where each plot of land has been so systematically defined, two expressions indicating the same area should have been used in different items. This term was used to denote the largest form of land measure in Eastern Bengal, and sometimes a village or a part of a village was understood by it.<sup>2</sup> It is the original of modern Bengali pādā or pārā. This area is also governed by the measurement of a nala, as we find in the Barrackpore grant, where pāṭakas are measured by 'sama-taṭīya-nala'.<sup>3</sup>

The Narasimhapallī plate of Hastivarman records the grant of a piece of land measuring six halas.<sup>4</sup> There is controversy as to the nature of this land measure. Saletore

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1. M.A.S.B. I. p.87.

2. Cf. Svacchanda-pāṭaka,  
E.I. XV. p.144.

3. E.I. XV. p.278.

4. E.I. XXIII. p.62.



interprets hala as a lineal measure like nala and Hala thinks that a hala is one plough length. He explains a passage from Bāṇa's Harṣacarita,<sup>1</sup> which refers to a thousand ploughs of land as a thousand plough-lengths either way; and again, where the Harṣa stone inscription mentions 'tathā atraiva dvi-hali kāṇam' <sup>Someke bṛhad āhāṣam iti,</sup> <sup>2</sup> Saletore takes a big plough of land to be a big plough-length.<sup>3</sup> It is difficult to accept his view. It is apparent from the context that it indicates an area of land. The Kādamba-padraka grant<sup>4</sup> shows that the hala itself was measured off by a rod both in length and breadth. A plough of land in modern times seems to be as much land as is cultivated by a man with a plough and two bullocks within a given time.<sup>5</sup>

It is very difficult to determine the exact area of a hala as it varied so much. Even <sup>in</sup> modern times it differs in different regions. Bhattacharya, in a note on the Gujrat copper-plate grant<sup>6</sup> gives the area of the hala, now current in Sylhet, as follows:- 7 cubits = 1 nala, 1 nala (sq.) = 1 rekhā, 4 rekhās = 1 yaṣṭi, 28 yaṣṭis = 1 kedāra, 12 kedāras = 1 hala. Hence, according to his view, one hala is equal to  $7 \times 7 \times 4 \times 28 \times 12 = 65856$  sq. cubits = 3.4 acres. But this area might not be the same as that of a hala of our period.

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1. Saletore, p.199  
2. E. I. II. p.125.  
3. Saletore, p.359  
4. E. I. XX. p.105.

5. Cf. Baden Powell, Ind. Vill. Comm. p.83.  
6. I. A. LII. p.18.

Buchanan<sup>1</sup> says that "the usual extent that can be cultivated by one plough is about five acres". Hunter writes, "the cattle are so poor that one pair of oxen cannot possibly work more than six acres".<sup>2</sup> Prannath, basing his view on these two opinions, says that one hala may therefore be taken to be five or six acres.<sup>3</sup> But this view does not seem to be tenable. We cannot conceive how far the hala varied in our period, when even the modern hala varies so much according to different localities. Hence we are not justified in inferring the area of the older hala from that of the present-day hala. Moreover, this view pre-supposes that the plough used in ancient times was drawn by a pair of oxen. But according to Kullūka, commentator of Manu,<sup>4</sup> there was a strong religious stigma attached to employing only two oxen to work a plough. It was customary to harness four, six or even eight oxen.<sup>5</sup> Besides, the area of a hala will depend on many factors, such as the cattle used, the size and physical condition of the cattle, the size of the plough, the character of the soil, and so on. From the commentary of Kullūka, it appears that two halas made up one kula of land where the hala was ploughed

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1. Dinajpur 1832, p. 235.

2. Orissa II. Ap. ii, p. 47.

3. Prannath, p. 83.

4. Manu. VII. 119.

5. Aṣṭagavam dharma-halam ṣaḍ-gavam jīvitārthinām. catur-gavam grhasthānām dvi-gavam brahma-ghātinām -- Hārīta, quoted in Kullūka on Manu. VII. 119; the Tai. Saṃhitā. V. 2. 5. 2., and Ath. Veda. VI. 91. 1. refer to six, eight or even twelve oxen; Keith refers to twenty-four oxen. C.H.I., p. 135.

by six oxen.<sup>1</sup>

Pādāvarta was generally used in measuring cultivable fields, ponds or vāpī and irrigation wells. This land measure is mentioned in the inscription from Kāthiāwād<sup>2</sup> as follows: 'cultivable fields 120, 180 and 130 pādāvartas and ponds or vāpī 32 pādāvartas'. Similarly, in the Māliyā plate of Dharasena II<sup>3</sup>, there is a reference to a hundred pādāvartas. Monier Williams, quoting Pāṇini, interprets this term as 'a square foot'. But from our inscription it appears much larger than this. Fleet takes the literal meaning as "the turning of a foot", and from the Māliyā plate, where a hundred pādāvartas are mentioned, he says that "it means a plot of ground measuring a hundred feet each way, i.e. ten thousand square feet, rather than only a hundred square feet,

Pādāvarta which would mean just ten feet each way and would be rather a small area for a grant".<sup>4</sup> Areas as small as 10, 15 and 20 pādāvartas are granted and if a pādāvarta is a square-foot only, this becomes a plot far too small for a grant. Hence Fleet's interpretation seems probable.

Pādāvarta was probably not our modern conception of a foot. It was perhaps derived from the royal foot or the foot of a deity, and out of veneration, this was thought of

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1. tathā-vidha-hala-dvayena yāvatī bhūmir vāhyate tat kulam iti. Cf. The Vaijayantī on Viṣṇu. III. 15 -- kulam haladvaya karsanīyā bhūh.

2. E. I. XI. 5. 19.

3. G. I. p. 170.

4. G. I. p. 170 n.

of as larger than the normal human foot.<sup>1</sup> It is also probable that the pādāvarta might have been measured off in paces. This is a very natural and convenient way of measuring a fairly small area, and it seems unlikely that it was not used. Ten pādāvartas may possibly mean, therefore, ten paces each way.

In the grant of Dharmāditya<sup>2</sup> we get another measure, pravarta, whose meaning is not very clear and which does not occur again, either in our inscriptions or in the literary sources. Whatever may be its area, it is quite clear from the above plate, where it says 'kulya-sowing areas of waste land plus a pravarta sowing area', that this was smaller than half a kulyavāpa of land, since the total price paid was two dināras, while the rate of a kulyavāpa of land was four dināras. There was possibly some connection between pādāvarta and pravarta, pravarta used in eastern Bengal perhaps being a variation of the term pādāvarta current in western India.

The Ganeśgaḍhplate of Dhruvasena I<sup>3</sup> says that four khaṇḍas of cultivated land at the north-eastern boundary, and another four at the north-western boundary, altogether 8 khaṇḍas containing 300 pādāvartas, are given away as a gift. Bose takes the word khaṇḍa to mean 'a measure of land'.<sup>4</sup>

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1. Cf. the myth of Vāmana with three steps.

2. I. A. XXXIX. p. 202.

3. E. I. III. p. 323.

4. Bose, p. 251.

The text says 'kṣetra-khaṇḍa-catustāyam'; 'evam kṣetra-khaṇḍānyastāni', which means four or eight plots of land. Here khaṇḍa or plot of land is an indefinite term, and we have no reason to suppose that it is used as a definite Khaṇḍa standard of land measure. From the context of the inscription, it seems unlikely that 8 khaṇḍas = 300 pādāvartas, so that 1 khaṇḍa =  $37\frac{1}{2}$  pādāvartas. It would be reasonable to surmise that 300 pādāvartas included the area of all the eight plots and these khaṇḍas might have varied in size.

The Nāgamaṅgala copper-plate<sup>1</sup> gives us another term 'kaṇḍuka', and says as follows: 'though it be but four kaṇḍukas of rice seed ..... two kaṇḍukas of waste land, it Kaṇḍuka should be protected in the same manner as a gift and Khaṇḍika to a Brāhmaṇa'. Another similar term, khaṇḍika, indicating a measure, is found in a later inscription.<sup>2</sup> Rao explains the word 'khaṇḍuka' with different areas applicable in the case of dry cultivation land and wet cultivation land. It is unlikely that these terms are the same: for, in the Nāgamaṅgala inscription, we find mention of both dry and wet cultivation land used in connection with kaṇḍuka.<sup>3</sup> According to Rao, 1 khaṇḍuka = 64000 sq. yds. of dry cultivation land and 10000 sq. yds. of wet cultivation land.<sup>4</sup> The Mādagihāl inscription of a later period gives us the term 'koḷaga' which, according to Dr. Barnett, 'is a dry measure of varying

1. I.A. II. p.151.

2. E.I. XII. p.62.

3. I.A. II. p.158.

4. Kisanwar Glossary.

capacity, and the area on which that amount is sown.<sup>1</sup> Rao also explains it as a 'land measure', so that 'a kolaga of seed required 32,000 sq. yds. dry cultivation and 500 sq. yds. of wet lands.<sup>2</sup> Thus we find that the area denoted by the term 'kolaga' is just half of that denoted by the measure 'khaṇḍuka'. Niveśana is referred to in the Narasimhapalli plate of Hastivarman<sup>3</sup> as another type of land measure.

According to Wilson, ground to the extent of Niveśana 2400 sq. ft. is equal to a niveśanammu.<sup>4</sup>

These are land measures of which some details are available in the materials at our disposal. There are Other some other terms to which no definite areas are measures assignable as we get nothing but their bare mention in the inscriptions. The Chammak copper-plate grant of Mahārāja Pravarasena II<sup>5</sup> gives the area of the village Carmāṅka as 8,000 bhūmis measured by the royal measure. A similar word ['bhū' is to be found in the Chambā plate of Jagākaravarman in 'two bhūs of irrigated land'.<sup>6</sup> A Soro copper-plate records the grant of eight 'timpiras' of land, in a village, by Mahārāja Sambhayaśas.<sup>7</sup>

Some of the commonest of the measures used in our period were based on analogies drawn from every day life. Thus the unit of length was the length of the hand, and

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1. E. I. XV. p. 327.  
2. Kisanwar Glossary.  
3. E. I. XXIII. p. 62.  
4. G. I. T. p. 380.

5. G. I. p. 238.  
6. A. S. I. R. 1902-3, p. 249.  
7. E. I. XXIII. p. 119.

people were in the habit of estimating an extent of land by illustrations from their rural experience. They talk of land in terms of how many heads of cattle could graze comfortably on it, of how much seed would be required to sow it, of how much produce it would yield to support a man for a year, and so on. The measures varied enormously. Many of them are extant to the present day, but as they varied so much in our period it is only natural to suppose that the areas they indicated then may have changed in value through the passage of the intervening centuries.

#### 7. OWNERSHIP OF LAND

Concept of Ownership -- Possession -- Legal Ownership -- Absolute Ownership. King as Absolute Owner -- in Legal Literature -- in Practice -- Testimony of Greek and Chinese Travellers. Some views about Ownership - Arguments against State Ownership examined.

The question of ownership of land is not only a very important aspect of the agrarian system in our period, but it is also a subject that has aroused considerable divergence of view-points in modern scholars of Indology. The controversy has centred round the issue of State versus Private Ownership of land, and those who have supported private ownership have again differed as to individual or communal ownership. We shall now attempt to examine the position in the light of the evidence that has accumulated, and put forth the various



arguments on both sides of the question. But before tackling the thorny question of who owned the land, it is necessary to deal briefly with the concept of ownership in our period and to see what rights were involved in the question of ownership.

Concept of Ownership.

At the outset we must distinguish among three concepts - that of absolute ownership; that of legal ownership or possession backed by legal safeguards, yet restricted by certain conditions imposed by a higher authority; and the concept of possession not supported by any legal backing.

The most primitive right to the land was acquired by him who cleared the forest and tilled the land to make it yield its fruits to him. Manu says, 'the field belongs to him who first clears it of tree-trunks, as the deer to him who first stalks it'.<sup>1</sup> But this analogy with the deer and its slayer cannot be valid in the case of land. The deer may be removed by the slayer and its flesh eaten, but the land can neither be removed nor destroyed, and as such, it can never be the complete property of the person occupying or enjoying it. At most he can take away and use the produce of the land, cut down trees and remove the wood. It will readily be realised that this kind of right over the land may have been the earliest, but it became at the same time the

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1. Sthānucchedasya kedāram āhuh śalyavato mṛgam; Manu. IX.44.  
See also Kullūka's comment on it.

most precarious. So long as the demand for agricultural and homestead land was restricted, and there was no one to dispute his right to it, the pioneer who cleared waste and made it cultivable was secure in his possession of it and could enjoy it without fear of having it taken away. But when a settled agricultural life became the common mode of existence, and the demand for land increased steadily, this form of title to the soil, without any legal sanction, was liable to be disputed. In actual effect, in most cases, he was left in possession of his land, but from the theoretical aspect, we can see that this title to the land was the earliest, the least secure and the most primitive in point of evolution of the idea of property. From human practice have arisen concepts, generalisations and legal maxims. The rule of "bhūmicchidranyāya" or tenancy at will, whereby land unfit for tillage is granted with the king's right to eject tenants at his will, is the regularisation whereby this sort of claim to the land is drawn into the framework of legal principles that supported the agrarian system of our times, and similar types of land were aligned together by being granted according to this same rule.

An advance in the evolution of the property-concept was made with legal safeguards that defined and upheld the position of the holder of the property. Various ancient authorities have stressed the importance of a legal title to property, as against mere possession that is not fortified

against challenge by legal sanction. Possession, according to them, is not nine points of the law. It requires a legal title to make it valid. Yājñavalkya says that ~~no~~ possession (bhoga)

Legal ownership has to be accompanied by a clear title (āgamena viśuddhena), in order to be really valid.<sup>1</sup>

According to Brhaspati, possession acquires validity when it is fortified by a legitimate title (sāgamah).<sup>2</sup> Nārada<sup>3</sup> states that possession becomes strong when supported by a clear title. He further declares that one who pleads mere possession and has no title should be considered a thief, on account of his putting forward the deceptive plea of possession, and that the king should punish as a thief one who enjoys a property even for hundreds of years without title.<sup>4</sup>

Mere possession, even if of very long standing, is thus not considered sufficient in the eyes of the law. There must be a legitimate title to the property in question. Our inscriptions clearly state that a copper-plate charter was regarded as evidence of legal ownership of a piece of land, as in the grant of Dharmāditya, Plate A.<sup>5</sup> When the charter was lost, it had to be replaced in order that the evidence of a legal title to the property should be preserved. In the Nidhanpur copper-plate of Bhāskaravarman<sup>6</sup> we are told that the

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1. Yāj. II. 29 - Āgamena viśuddhena bhogo yāti pramānatām  
aviśuddhāgamo bhogaḥ prāmānyaṃ naiva gacchati.

2. Br. IX. p. 2 ff.

3. Nār. IV. 85.

4. Ibid. 86-87.

5. I. A. XXXIX. p. 197

6. E. I. XII. p. 65.

original copper-plate was burnt and had to be renewed. How Modes of acquiring property was this legal title acquired? The ancient law-givers have associated their idea of legal ownership with certain practical attributes and certain modes of acquiring property. According to Gautama, a person becomes an owner (svāmī) by means of inheritance, purchase, partition, seizure (or appropriation of forest trees and other things which have no owner), and finding (or appropriation of lost property - the owner of which is unknown).<sup>1</sup> He further adds that, in the case of Brāhmanas, acceptance of a thing donated is an additional mode of becoming an owner, that conquest in the case of a Kṣatriya and gain (by trade or labour), in the case of a Vaiśya or Śūdra are also additional modes.<sup>2</sup> Manu gives seven lawful modes of acquiring wealth (vittāgama), namely, inheritance, finding (or friendly donation), purchase, conquest, lending at interest (or teaching), performance of work (or sacrificing for others) and acceptance of gifts from the virtuous.<sup>3</sup> Brhaspati declares the seven modes of acquiring immovable property to be by learning, purchase, mortgage, valour (i.e. conquest), through the wife (as dowry), inheritance (from an ancestor) and succession to an issueless kinsman.<sup>4</sup> Nārada mentions amongst his six methods of obtaining property those given by Brhaspati, with the exception

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1. Gaut. X. 39.

2. Ibid. 40-41.

3. Manu X. 115.

4. Br. quoted in V.P. p.153, Aparārka on Yaj. II. 27, S.B.E. Vol. 33, p. 309, V. 2.

of mortgage.<sup>1</sup> These, then, are the modes of acquiring property which were considered legally valid. These ancient sages have not dealt with the ownership of land, but have defined the legal ownership of property in general, so that difficulties as to ownership of different kinds of property may be well understood and circumvented.

Apart from the modes of acquisition that make property lawfully owned, certain characteristics are attached to possession in order to make the legal position indefeasible. What are these practical attributes that constitute legal ownership? Vyāsa and Pitāmaha state that possession in order to be valid must have five elements - it must have a good title Attributes of behind it, it must be of long standing, the legal property must have been held in continuous ownership possession, it must be held free from protest (by another person), and in the presence (i.e. before the very eyes) of the opponent.<sup>2</sup> The authors of the great medieval digests of the Sacred Law also offer their ideas as to what constitutes legal ownership. Jīmūtavāhana in his Dāyabhāga says that ownership implies the quality in the object owned of being used by the owner according to his pleasure.<sup>3</sup> According to Nīlakanṭha, author of the Vyavahāra-mayūkha, legal ownership or svatva is derived from purchase, acceptance and the like.<sup>4</sup>

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1. Quoted in Sm. C. II. p. 30.

2. Q. in Mit. on Yāj. II. 27 and Aparārka, p. 635.

3. Dāyabhāga, quoted in Vyavahāra-mayūkha, tr. by V. N. Mandlik, p. 31 n.

4. Vvm. p. 89.

Mitra Misra specifies that ownership attaches to the object owned the quality of being subject to use according to the pleasure of the owner.<sup>1</sup>

This idea of ownership which we have been attempting to trace in the legal literature is denoted by the term 'svatva'. Ghosal gives to this word a wider connotation than we think justified in distinguishing between ownership, indicated by words such as svam, svatva, svānya, svāmitva, and so on, and possession indicated by the verb bhuj (to enjoy)

and its derivatives.<sup>2</sup> These terms seem to us to Svatva denote the position of strong legal ownership described in the above paragraphs, but it does not imply absolute ownership or lordship, as certain restrictions and conditions are attached to this concept of ownership.

We have seen in tracing the probable evolution of the concept of ownership, that the earliest form of ownership was derived simply from making a piece of land one's own by taking it and using it. This could hold when there was no one else to contest the claim. But the evolution of rural communities necessitated a more stable and clearly defined form of ownership. Hence, from the usage that became current were formulated the principles of the ancient law-givers, embodying the concept of ownership which we may refer to as "legal" ownership, to distinguish it from "absolute" ownership. Legal ownership

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1. Viramitrodaya quoted VVM, p. 89.

2. Agr. Syst. of Anc. India Lecture V. p. 84.

strengthened the position of the possessor of the property and safeguarded him against possible challenge as to the validity of his title. But above the concept of legal ownership is superimposed that of absolute ownership, which was vested in Absolute ownership a higher authority. In a monarchical system, and with the increasing power of kingship, this higher authority resides in the kings, and absolute ownership belongs to them. Under the imperial sway of the Guptas, whose power and influence were undisputed, there does not seem to be adequate reason to doubt that the land belonged to the Crown, whoever may have been the original owners. Full power was vested in the kings, and whatever rights to the land and other property were acquired by the principles of legal ownership were derived from the king and subject to the ultimate authority of the State. This authority, in the case of wise and just kings, may have been sparingly and rarely exercised, but it was none the less real. The relationship between the king and those who owned portions of the soil was analogous to the relationship between a lessor and his lessees, and a certain amount of rent had to be paid for the land so leased.

King as Absolute Owner in the Legal Literature.

This concept of absolute ownership of land being vested in the king, who was the lord of the soil, the bhūmer adhipati, may be traced through the utterances of the law-givers relating to our period, and their later commentators. Manu declares



that the king was entitled to half of ancient hoards, and of metals found underground, as he was the lord of the soil (bhūmer-adhipatir-hi sah)<sup>1</sup>. Medhātithi amplifies this by saying that the king is the lord (prabhu) of the soil, and should get a share of that which is produced from the land belonging to him (tadīyāyā bhuvo yallabdham tatra yuktam tasya bhāgadānam). Bhaṭṭasvāmin propounds the same idea in his commentary on a rule of the Arthasāstra requiring the cultivators to pay varying water-rates according to the amount of irrigation carried on.<sup>2</sup> The śloka he quotes runs as follows:

"Rājā bhūmeḥ patir/drṣṭaḥ śāstrajñair udakasya ca

Tābhyām anyattu yad dravyam tatra svāmyam kuṭumbinām".

This has been translated by Shamasastri as "Those who are well versed in the śāstras admit that the king is the owner of both land and water and that the householders can exercise their right of ownership over all other things excepting these two". This embodies a concept of the king's prerogative over the soil that is of far-reaching political significance. He is regarded as lord or pati of land as well as water, and it is only in respect of other things that the householders (kuṭumbins) have right of ownership (svāmya). Kātyāyana goes a step further in declaring not only the king's lordship over the soil, but also his overlordship over the people. He says: "The king is declared to be the lord of the land .... Since all human beings reside on it (land), their (qualified) ownership

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1. Manu. VIII. 39.

2. Arth. II. 24.

thereof has been declared"<sup>1</sup> He is thus entitled not only to 1/6th of the produce of the soil, but also to an agricultural tax (bali) arising from the action of his subjects. The Gautama Dharmasūtra declares the king to be master of all with the exception of the Brāhmaṇas.<sup>2</sup>

King as Absolute Owner in Practice.

The king's absolute authority over the people and his virtual ownership of the soil, gave force to this conception of the king as lord of land and water and ruler over his subjects. But this principle of absolute ownership issued in certain concrete effects which we shall now proceed to enumerate. The king is seen to donate lands, whether a village, a part of a village, or certain plots. The Bhitari stone pillar-inscription<sup>3</sup> and the Khoh copper-plate<sup>4</sup> mention granting of the whole village by the king to Brāhmaṇas. (In these cases it has not been stipulated that the grantee shall receive the a) Donation of land the royal dues from other cultivators residing in the village). The Khoh copper-plates of Saṃkṣobha<sup>5</sup> and Hastin<sup>6</sup> record the grant of half of the village Opāni and Dhavaśaṇḍika respectively. And the Māliyā copper-

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1. Kāt. 16-17. - Bhūsvāmī tu smṛto rājā nānyadravyasya sarvadā tatphalasya hi śadbhāgaṃ prāpnuyān nānyathaiva tu bhūtānāṃ tannivāsītvāt svāmītvam tena kīrtitam. Rājanītiprakāśa (Rjnp, p. 271) explains tannivāsītvāt = bhūnivāsītvāt; svāmītvam rājña iti śeṣaḥ.

2. Gaut. XI. 1.

3. G. I. p. 52.

4. G. I. p. 97.

5. G. I. p. 112.

6. G. I. p. 130.

plate of Dharasena II<sup>1</sup> records the grant of the Mahārāja to a Brāhmaṇa of some plots of land at the villages of Antaratrā, Dambigrāma and Vajragrāma. Here the king enjoins that "no one should behave so as to cause obstruction to this person in enjoying it in accordance with the proper condition of a grant to a Brāhmaṇa, and cultivating it, or causing it to be cultivated". The land must be the king's if he is to donate it.

If the donee wished to transfer it to another the king's sanction was required. The Khoh copper-plate of Sarvanātha<sup>2</sup> records the sanction of the Mahārāja to the transfer, among private grantees, of two villages named Vyāghrapallika and Kāchharapallika. The inscription says: "Be it known to you b) Sanction that these two villages were bestowed, as a of transfer mark of favour, upon Pulinda-bhaṭa. And now they are granted by him to Kumārasvāmin... And, by (this) copper-plate charter, they have been assented to by me, according to the rule of bhūmicchidra". Apparently the gift had not given him an unrestricted ownership. The king still had a hand in further transactions over the same land and had to sanction the transfer among private grantees before it could become legally effective.

If a person desired to buy a piece of land, whether it be from the king himself or from a private individual, he had to apply to the king indirectly, through the local officers

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1. G. I. p. 170.

2. G. I. p. 136.

in whom his authority was vested. In the Dāmodarpur copper-plate, No.1, a Brāhmaṇa of the name of Karpatika made an application before the local government for purchasing a kulyavāpa of land from the State.<sup>1</sup> Again, in the grant of Dharmāditya (Plate B) an officer, Vasudevasvāmin, who wished to purchase a plot of land from an individual, placed his application before the district government.<sup>2</sup> We have seen that together with the application for the purchase of the land, the king's

c) Application to king for purchase or gift of land sanction for making the gift was also sought and our consideration of the procedure followed in the purchase of land has shown that the whole transaction was carried out through and by state officials. An application was made to the local authorities, this was checked by the record keepers, the state permission formally sanctioned, the land measured off, its boundaries demarcated, and the new owner installed, all in the presence of minor state officials in the persons of the village headman and other functionaries. The sale was duly recorded and the proceedings formally completed. If the king was not regarded as the absolute owner of the land, there would have been no need for these elaborate proceedings. Where the king's land was being purchased, this would have been understandable, but the same procedure was followed when buying land from another.

In the case of a gift of land to a religious body by a

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1. E.I. XV. p.114.

2. I.A. XXXIX. p.200.

private person, the king, by giving permission for the making of the gift, and by making the land rent-free, acquired 1/6th of the merit to be derived from making the gift. Not only d) Share of that, but the sale-proceeds of the trans-  
merit and  
sale-proceeds action whereby the donor purchased the land he wished to donate went to fill the king's treasury, as seems to be indicated by the Pāhāpur copper-plate inscription;<sup>1</sup> it is obviously the king who is selling the land. Even in the case of the sale of land other than Crown lands, if the price was increased by bidding, the extra amount, together with a toll on the value, was to go to the state exchequer.<sup>2</sup>

The king quite definitely reserved the right to confiscate land once granted, in certain cases. Whether, in actual practice he frequently or widely exercised his right is irrelevant. There can be no doubt that he had the right. The Chammak plate<sup>3</sup> tells us of certain definite conditions that had to be fulfilled, failing which the land was liable to be confiscated. The record of Mahārāja Bhulunda<sup>4</sup> enjoins e) Right of that "all persons should approve of his  
confiscation (grantee) enjoying it, cultivating it and causing it to be cultivated, so long as he does not transgress the conditions of his brahmadeya grant". Many inscriptions exhort future kings not to confiscate the land whose grant is being recorded. The Khoh copper-plate of Hastin states that

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1. E. I. p. 59 ff.

2. Arth. III. 9.

3. G. I. p. 235.

4. E. I. XV. p. 290.

"the confiscator of a grant and he who assents to an act of confiscation shall dwell a number of years in hell".<sup>1</sup>

Apparently kings did possess this prerogative and in these cases were asked not to exercise it. Lands granted under Bhūmicchidranyāya were held at the will of the Crown, and were subject to the prescribed conditions, and could be confiscated if these conditions were broken. Kautilya decrees that cultivable land left uncultivated was open to confiscation.<sup>2</sup> Lands could also be confiscated and given to others if the rent was not paid and was in arrears. The Vyavahāranirṇaya makes elaborate provisions for sale of land at the order of the king for non-payment of rent. It quotes Prajāpati<sup>3</sup> to the effect that the purchaser at such a sale must offer half or at least 1/4 of the real price of the field and that the original owner could get back his property sold for the royal dues by paying the full to the purchaser up to three generations. There are instances of the actual resumption of lands once granted to Brāhmaṇas, as in the Bāhūr grant.<sup>4</sup> Some lands are found to be given away a second time, obviously having been taken away from the previous enjoyers. In these cases, it is not always clear whether the lands were confiscated for some of the above reasons, or whether the lands were transferred to the second donee after the first had either sold it or received adequate compensation for it. Where neither price nor compensation was

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1. G.I. p.116.  
2. Arth. II. 1.

3. p. 350.  
4. S.I.I. II, p.513 ff.

are mentioned, it seems possible that the lands were confiscated. A perusal of some of the details of the Ashrāpur copper-plate of Devakhaḍga<sup>1</sup> will illustrate the above point. The king Devakhaḍga in the first instance donated nine pāṭakas and ten dṛoṇas to the Vihāras of the Ācārya Saṅgha-Mitra, and in the second instalment he donated six pāṭakas and ten dṛoṇas. Most of these lands were owned by individuals even up to the time of the donations, were apparently taken away from them, and then granted to the religious body concerned. The lands had previously been distributed as follows:

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|------|------------------------|-------|---|
| (1)  | 2 pāṭakas              | ..... | enjoyed by Rājamahiṣī Prabhāvatī.   |
| (2)  | $\frac{1}{2}$ pāṭakas  | ..... | enjoyed by a lady named Subhamsukā.   |
| (3)  | $1\frac{1}{2}$ pāṭakas | ..... | belonged to Mitrāvalī; but enjoyed by Vantiyoka.  |
| (4)  | $1\frac{1}{2}$ pāṭakas | ..... | enjoyed by Netrabhata.  |
| (5)  | 1 pāṭaka               | ..... | enjoyed by Sarvāntara, but was cultivated by Mahattrā Śikhara etc.                                |
| (6)  | 1 pāṭaka               | ..... | enjoyed by Jñānamatī.   |
| (7)  | 1 pāṭaka               | ..... | owned by Droṇimathikā.  |
| (8)  | $\frac{1}{2}$ pāṭaka   | ..... | enjoyed by Śakra.   |
| (9)  | 20 dṛoṇavāpas          | ..... | previously owned by Upāsaka and enjoyed by Svastiyoka.  |
| (10) | 27 dṛoṇavāpas          | ..... | enjoyed by Sulabdhā and others.   |
| (11) | 13 dṛoṇavāpas          | ..... | cultivated by Rājadāsa.   |
| (12) | 1 pāṭaka               | ..... | once donated by Parameśvara; but there is no mention of the grantee and the purpose of the grant. |



(13) 1 pataka ..... once donated by Udīrnakhadga, but at that time enjoyed by Śakra.

In the grant of Mahārāja Svāmīdāsa we hear of granting a field which was previously enjoyed by a merchant. The inscriptions run as follows - "I hereby consent to the brahmadeya grant of a field (kṣetra-padam), the holding of the merchant Ārya .... to the Brāhmaṇa named Muṇḍa".<sup>1</sup> The king's right of confiscation thus considerably restricted the ownership of the holders of the land.

The king's right to 1/6th, or sometimes 1/4, of the produce of the soil seemed to have been universally acknowledged. Not only was he entitled to a share of the produce, but he was also to receive a share of trees, flowers, roots and fruits that increased every year, and of leaves,

f) Share of pot herbs and grass. This may be looked upon  
produce as rent paid to the king in lieu of the use of the land. The king, in renting the land to the legal owner, did not relinquish his absolute ownership. He still kept a watchful eye over his lands. Manu warns that if anything harmful was done to the land, or if the crops produced were unsatisfactory, the cultivator could be punished.<sup>2</sup> If the land was left uncultivated, the state

g) Some could employ hired labourers from outside and  
powers have the land tilled.<sup>3</sup> In cases of emergency, when the king was in financial distress, he was empowered

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1. E. I. XV. p. 286.

2. Manu. VIII. 243.

3. Arth. II.1.

to order the compulsory raising of a second crop.<sup>1</sup> We see then that the legal owners did not have full rights over the soil and the State could step in if it thought fit.

Lands were often granted for the enjoyment of successive generations. Here too the ownership was restricted and did not embrace the right to sale, transfer or mortgage. But in some cases, there was a restricted enjoyment of land. Some-

h) Restricted enjoyment times the land was granted to a donee for life-time, and then resumed after his death and perhaps granted again.<sup>2</sup>

Besides these facts, we find that in various other types of land or property the king held absolute and undisputed rights. For instance, the Tipperah inscription of Lokanātha<sup>3</sup>

i) Undisputed rights over forest mentions the granting by the king of a forest region for the establishment of a temple and the residence of Brāhmanas. In our discussion of forests, we have seen how it was regarded as belonging to the king, and formed an independent head of revenue, and was classified according to its products and usefulness.<sup>4</sup> Waste land was over waste land also the specific property of the king,<sup>5</sup> and in many of our inscriptions, like the Dāmodarpur copper-plate,<sup>6</sup> we see that the king donated waste land, or received applications for khila-ksetra. Manu and Kauṭilya both regard as the responsibility of the king the provision of pasture lands for

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1. Arth. V. 2.  
2. Arth. II. 1.  
3. E. I. XV. 301.

4. Arth. II. 2.  
5. Ibid. 1 & 2.  
6. E. I. XV. p. 134.

over the grazing of the village herds.<sup>1</sup> Mines were  
pasture  
land beyond doubt regarded as a state monopoly. The  
Parasurāmapratāpa quotes a verse "Brahmā arranged that the king  
was to be the owner of all wealth and specially (wealth) that  
is inside the earth".<sup>2</sup> The Viṣṇu Dharmasūtra<sup>3</sup> says that  
over everything dug up from mines belonged to the king.  
mines  
According to Manu<sup>4</sup> and Medhātithi thereon, the king  
was entitled to a half share of the ore dug out of mines, as he  
was the lord of the earth and gave protection. This is also  
confirmed by the Arthaśāstra. The king also had full rights  
over over treasure trove (nidhi). In the Rāipur copper-  
treasure  
trove plate of Mahāsudevarāja<sup>5</sup>, a village is granted,  
together with its hidden treasures and deposits. The Artha-  
śāstra includes treasure trove in the list of the king's  
receipts from various sources.<sup>6</sup> The king also exercised his  
over right of ownership over waters, with regard to fishing,  
waters ferrying and trading in vegetables, in reservoirs  
and lakes.<sup>7</sup>

#### Testimony of Greek and Chinese Travellers.

This body of evidence seems to leave no room for doubt

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1. Manu. VIII. 237; Arth. II. 2.
  2. Dhanānāmīśvaro rājā Brahmanā parikalpitaḥ bhūgatānām viśeṣeṇa  
bhartāsau vibudhādhipaḥ, quoted in Par. folio 27A.
  3. Viṣṇu. III. 55.
  4. Manu. VIII. 39.
  5. G. I. p. 199.
  6. Arth. II. 6. See also Gaut. X. 43-45; Vas. III. 13-14;  
Manu. VIII. 35-39; Yāj. II. 34-35; Nār. VII. 6-7.
  7. Arth. II. 1 - matsyaplavaharita-paṇyānām setuṣu rājā  
svāmyam gacchet.

that, in our period, the land was owned by the Crown. The observations of Greek and Chinese travellers confirm this inference. The account of Megasthenes in the versions of Arrian, Diodorus and Strabo, all state that in India the land belonged to the Crown, and the cultivators had to pay a rent to the king. Diodorus says: "The second caste consists of the husbandmen who appear to be far more numerous than the others .... They pay a land-tribute to the king, because all India is the property of the Crown, and no private person is permitted to own land. Besides the land-tribute, they pay into the royal treasury a fourth part of the produce of the soil". Strabo observes. "The second caste consists of the husbandmen who form the bulk of the population .... The whole of the land is the property of the king and the husbandmen till it on condition of paying one-fourth of the produce as rent".<sup>1</sup> Megasthenes belongs to an earlier period, but the Chinese pilgrims, who travelled extensively over India, confirm this view by their testimony. Fa-Hien, who visited the greater part of Northern India during the reign of Chandragupta II, in his brief sketch of the "Madhyadesa" of the Brāhmanical writers, observes that "Only those who cultivate the royal land have to pay a portion of the grain from it."<sup>2</sup> This has been interpreted to mean that

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1. Ghoshal, following Monahan, has the last clause as "on condition of receiving one-fourth of the produce". This is an error in translation which has been pointed out by Dr. Barnett in J.R.A.S. 1931, p.166.
  2. Legge, pp.42-43.

the revenue was mainly derived from the rents of the Crown lands. Hiuen Tsiang, who visited India slightly after our period, says that "the king's tenants pay of the produce as rent".<sup>1</sup> He further writes: "Of the royal land, there is a four-fold division. One part is for the expenses of government and state worship, one for the endowment of great public servants, one to reward high intellectual eminence, and one for acquiring religious merit by gifts to the various sects."<sup>2</sup> By the term 'royal land', Hiuen Tsiang seems to have implied the State territory. Of the four divisions of the land mentioned by him, the first, which was meant to provide for the expenses of government and state worship was probably the largest, as land revenue formed the major source of the king's wealth. The second division, which related to the endowment of great public servants, no doubt corresponded to the grant of land to officials as remuneration for services, mentioned by both Kautilya and Manu. Kautilya says that royal officers were to be endowed with lands, which they would have no right to alienate by sale or mortgage.<sup>3</sup> The Khoh copper-plate of Sarvanātha mentions a grant of land to a soldier, Pulindabhata, as a mark of favour<sup>4</sup>. The third division of the State territory which was mentioned "to reward high intellectual eminence" corresponds to Kautilya's reference to the allotting of lands to learned Brāhmanas for Veda study, for the performance of

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1. Watters I. p.176.

2. Ibid.

3. Arth. II.1. Also Manu. VII.118-119.

4. G.I. p.136.

soma sacrifices, and for the provision of hermitages for ascetics.<sup>1</sup> Such grants were denoted by the term "vidyādhana" (the remuneration for learning), as in an inscription from Gujarat, of the chief Surāstra, which records the gift of a village as a fee of learning to a spiritual preceptor (ācārya).<sup>2</sup> Agrahāra and Brahmadeya lands were granted for these purposes. The evidence of Hiuen Tsiang in this respect is corroborated by his junior contemporary I-Tsing, who visited India some years later than he. Speaking of Indian scholars engaged in religious disputations, he comments that "they receive grants of land and are advanced to a high rank".<sup>3</sup> The fourth and last division of land mentioned by Hiuen Tsiang is amply substantiated by the majority of the records of land grants of our period, which were made to various religious sects for the purpose of acquiring spiritual merit.

#### Arguments against State Ownership.

Our discussion of the concept of ownership, the various concrete issues which involved the question of absolute ownership, and the testimony of foreign travellers, all lead us to the conclusion that in our period, the absolute ownership of the land was vested in the king. But much controversy has arisen over this topic. Let us now summarise the opinions of scholars who have written about this burning question and see how far our position is reconcilable with their arguments.

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1. Arth. II. 1.

2. I.A. XII. pp.193-4.

3. Takakusu, I-Tsing's Record of the Buddhist Religion, p.178.

Many scholars have made their contributions towards an understanding of this theme. Some have supported private ownership in toto, but have diverged over the issue of individual or joint-family as against joint-village ownership. Pargiter has quoted instances of all three.<sup>1</sup> The position taken up by some other scholars is that the land was owned jointly by the State and the individuals or community. Basak inclines to this view,<sup>2</sup> and Hopkins also seems to support this interpretation.<sup>3</sup> Others believe that in Ancient India, arable Some views about lands belonged to the people, subject to ownership taxes levied by the king in exchange for the of land protection he afforded his subjects, whereas other types of land, namely, waste land, forests, waterways, mines and treasure trove belonged to the State. This is the view endorsed by Kane and Ghoshal.<sup>4</sup> In his 'Hindu Revenue System', however, the position Ghoshal seems to take, whenever touching upon the topic of ownership of the soil, seems to be in favour of State ownership, and has been construed as such by Dr. Barnett in his review of the work.<sup>5</sup> He has, however, denied this charge,<sup>6</sup> and his views in his later work<sup>7</sup> have been indicated above. Others, like Altekar, have conceded to the State the ownership of some cultivable plots also, in addition to the above types of property.<sup>8</sup>

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1. I. A. XXXIX. p.193.

2. A. M. J. C. pp. 486 ff.

3. India Old and New, p. 221.

4. H. of Dh. Vol. II, Pt. II, p. 868; Vol. III, p. 495;  
Agrarian System of Ancient India, pp. 97-99.

5. J. R. A. S. 1931, p. 165 ff.

6. I. H. Q. VII. p. 384 ff.

7. Agr. Syst.

8. New History of the Indian People, p. 362.



Some like F.W. Thomas declare the king to be proprietor of land in so far as he was entitled to revenue and could evict defaulting cultivators.<sup>1</sup> The position taken up by Dr. Barnett and Dr. Breloer is that the Crown owned all lands, and all other forms of ownership were derived from the authority of the State.

Now let us examine some of the facts that have led outstanding scholars on the subject to hold a totally opposite point of view. One of the arguments that have been put forward in favour of private ownership of land is that in a sale of land only 1/6th of the sale proceeds went to the State, whereas 5/6th went to the village assembly funds. R.G. Basak<sup>2</sup> raises this point to support his theory that the ownership of land belonged jointly to the State and the people, or to the village assemblies, subject to the supervision of the king. This argument is based on a misinterpretation of a relevant passage by Pargiter<sup>3</sup>, which was accepted 1/6th of sale proceeds a misconception by Basak. Ghoshal has competently clarified the position by pointing out the mistranslation that gave rise to this line of argument. Dharmasādhāga has been mistranslated as 1/6th of the sale proceeds. Actually, it is an expression comparable with dharmaparatā-vāptih (to be found in the Dāmodarpur copper-plate inscription of the time of Budhagupta<sup>4</sup> and the same inscription of the

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Z. C.H.I. I. p.475  
2. A.M.J.C. p.486 ff.

3. I.A. XXXIX. p.193 ff.  
4. E.I. XV. No.7.

time of Bhānugupta<sup>1</sup> and the clause arthopachayo (dharm)ma-  
ṣadbhāgāpyāyanāñ/cha bhavati (in the Pāhāḍpur copper-plate of  
Budhagupta)<sup>2</sup>, meaning that the Emperor would acquire wealth  
as well as 1/6th of the spiritual merit. This comparison  
shows that the spiritual merit (dharma) is distinguished from  
the sale proceeds. The true explanation of the above clause  
is to be found in the sacred texts making the king eligible  
for 1/6th of the spiritual merits as well as demerits of his  
subjects.<sup>3</sup> As in all these cases the applicant for the  
purchase of the land signifies his desire to bestow it for  
religious purposes, the king in granting the application would  
have a share in the resulting spiritual merit.<sup>4</sup>

Basak further establishes his position on another  
ground, namely, that the State could not alienate lands  
"without the consent or approval of the people's representa-  
tives, the mahattaras and other business men of the province  
and the district, and sometimes even the common folk."<sup>5</sup>  
Pargiter, in giving an instance of joint village ownership,  
also puts forward this argument and says that transfers of  
land could not be effected except through the leading men of  
Consent the village. The mahattaras and village elders  
of village  
elders mentioned may be regarded as helping the state  
functionaries present on the spot who were authorised to carry

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1. E. I. XV. No. 7.

2. E. I. XX. p. 59 ff.

3. Cf. Mbh. V. 131. 12; XII. 69. 79 ff; XIII. 75. 5. 10. etc.

4. Vide Ghoshal. Hindu Revenue System, p. 207.

5. A. M. J. C. pp. 486 ff.

out the transaction on behalf of the State. We know that the grāmika or headman of the village was a state official appointed by the king and he obviously enlists the services of minor officials to help in making the transfer public and legally binding. These men would be required as witnesses to take cognizance of the legal transaction, and in such an important matter as the transference of rights of legal ownership the people of the village would have to be informed. Apart from that, these village elders, possessing local knowledge, would naturally be knowledgeable on all points that might be raised and would, by being co-opted in the transaction, be equipped to give guidance in future disputes or difficulties that might conceivably arise.

Altekar says that "In several villages, the State owned small fields of cultivable land, which are expressly described as rājyavastu, i.e. Crown lands, or the property of the State, in some of our records. These fields used to come under the State ownership usually on account of want of heirs or failure to pay the land tax."<sup>1</sup> His view is that only certain plots of cultivable land in different villages belonged to the king, whereas the rest of the land was under private ownership. He has translated Rājya-vastu as crown lands. But Crown lands should more properly be regarded as State territory, and not as the private property of the king. It will therefore be more

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1. History of the Indian People, p. 361.

satisfactory to regard rājya-vastu as the king's private property. There can be little doubt that, apart from their absolute ownership of the land arising from their political position, the kings and queens and other members of the royal family possessed private estates of their own. An inscription of the Sātavāhana kings<sup>1</sup> gives us an instance of a pious grant of land, which must have been made from <sup>the king's</sup> his own personal property (rājakaṁ kheta) <sup>and</sup> they may either have <sup>been</sup> purchased, or received as a gift from the State for personal enjoyment.<sup>2</sup> It is not unlikely that similar assignments of villages and lands were made to the queen or queen-mother by the State on certain specific occasions, in a later period as well. Altekar in the same context further states that when entire villages were given away in charity, what was donated was the right to receive the royal dues. The inhabitants of the villages were never exhorted to quit their private lands in favour of the donee, Ownership but to pay him the different taxes and to show and him proper courtesy; future kings were besought to desist not from evicting private owners but from collecting the royal dues. Altekar seems here to be confusing ownership with occupation. Ownership of a piece of land does not necessarily imply that the owner should occupy it; he may let it to another, or give it to another to use, being content with a

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1. E. I. VIII. No. 8. 5.

2. Cf. Aśoka's inscriptions M. P. E. No. 4 & Hāthigumphā inscription of Khāravela. In the Rāmāyaṇa we have a reference to the assignment of 1,000 villages made to queen Kauśalyā at the time of Rāma's consecration.

certain rent or share in the produce. The donee does not need to turn out the original occupants of the land if they do not interfere with his enjoyment of the land. The concern of the owner with the soil extends so far as the revenue it yields to him. If he receives the revenue it does not help him to upset former arrangements. He also says that where an entire village was granted along with specific fields or plots in it, only these plots belonged to the State and the rest was private property; and he concludes that the ownership of the cultivable lands was vested in private individuals or families and not in the State. How he arrives at this inference from this inconclusive evidence is not very clear. Perhaps the plots referred to were the only ones free for bestowal, otherwise it is not very apparent how in a whole village just a few plots were state property and the rest was private.

We have already shown how in cases, as in the Faridpur grant<sup>1</sup>, cultivable land was applied for to the State, and we have also indicated that the State possessed certain absolute rights over all land, including cultivable lands. If he did not own such land as well, there is no point in applying to him for the same.

The facts that may be construed in favour of private ownership of land have been ably summarised by Dr. Barnett in his review<sup>2</sup> of Ghoshal's Agrarian System in Ancient India as follows:

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1. I.A. XXXIX, p.193 ff.

2. J.R.A.S. 1931. p.694 ff.

(1) The dictum of Jaimini VI.VII.2, that the land is "unreserved for all", sarvān pratyaviśiṣṭatvāt, which a series of later writers - Śabara, Mādhava and Khandaḍaśekhara in loco, as well as Nīlakaṇṭha in his Vyavahāra-mayūkha - explain to mean that the king is not the owner of the soil, but only its guardian.

(2) References of Smṛtis and Kauṭilya to alienation of land.

(3) Records of such alienations in inscriptions.

Taking points (2) and (3) first, we may accept Dr. Barnett's explanation, following Dr. Breloer, that these alienations were of usufruct only, and were not a transference of legal ownership. These references to alienation of land found in the Smṛtis and Kauṭilya may also have been derived in principle from an early age when the Crown was not yet universally recognised as land-owner.<sup>1</sup>

Ghoshal accepts the passage from Jaimini's Pūrva-mīmāṃsā, which states that the land is not to be given because it is common to all (na bhūmiḥ syāt sarvān pratyaviśiṣṭatvāt)<sup>2</sup>, as a strong argument against the doctrine of complete State ownership of the soil. Kane in his recent work, the History of Dharmaśāstra<sup>3</sup> places Jaimini in his chronological table from 500 - 200 B.C. If we accept this date, we see that Jaimini belongs to a period considerably earlier than the one

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1. J.R.A.S. 1931. p.695.  
2. Mīmāṃsāsūtras, VI, 7.2.

3. Kane, Vol.III, p.17. 1946.

under consideration, whereas Kātyāyana, Manu, Brhaspati and Kautilya are taken to be roughly contemporaneous with our period. Our intention is to understand the question of ownership of the soil, as it existed in our period, rather than to discuss the theory of ownership as an ideological issue that was evolved in rival schools of thought. In the times in which Jaimini enunciated his famous maxim, the power of the kings was probably still in embryo. Later commentators developed this theory and enlarged it, and a school of political thought apparently developed round it. But in our period, when the power of the kings had reached its zenith, we have seen how Manu, Kautilya and Kātyāyana supported the opposite theory of the "divine right of kings", the king as being absolute unequivocal sovereign, ruler of the people, and lord of the soil. Their respective commentators have further amplified this doctrine and have formed a school of thought divergent from that of the above. In our consideration of the topic, we naturally accept as indicative of what was current in our period the theories that held the field without rival in the period under survey. As we have shown earlier, the ideological basis of ownership, as revealed in the writings of the contemporary law-givers, seems to leave no room for doubt that in this period the State was absolute owner of the soil. In the second place, our concern is not so much with rival schools of thought as with the particular theory which seems to have been widely applied in our period, as recorded



in our epigraphic and literary sources. The weight of evidence as quoted above seems to us to be overwhelmingly in favour of the verdict that in the period with which we are dealing, ownership of the soil was vested in the State.<sup>1</sup>

### 8. SOURCES OF LAND REVENUE

Importance of Treasury -- reasons for Taxation -- principles of Taxation -- Sources of Revenue. Land Revenue -- Classification of land on basis of revenue -- Sources of land revenue. Emergency revenue. Land grants -- Remission of taxes -- Effect on Treasury.

The importance to a kingdom of a well-filled treasury is obvious and cannot be over-estimated. The *kośa* or treasury, and the government of the realm, are regarded by Manu as the personal concern of the king,<sup>2</sup> and Yājñavalkya advises that the king should personally look into the daily income and expenditure and keep in his treasury buildings whatever is brought by those who are appointed to bring in gold and wealth.<sup>3</sup> The *Śāntiparva*<sup>4</sup> recommends that the king should guard his finances, since he is dependent upon *Kośa*, which forms the basis of his kingdom's prosperity; and Kautilya says Kośa that all undertakings depend upon the financial position

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1. In answer to Ghoshal's arguments in favour of the private ownership of soil in Ancient India (I.H.Q. VII, P. 658 ff) it may be said that whatever the conditions resulting from Mughal administration may be, in Indian India there is no absolute ownership by private persons. Even the *bhūmiā* of Rajputana, whose tenure is the nearest approach to allodial possession found in India, pays a small nominal quit-rent to the Rāj. showing that he recognises it as owner in principle.
  2. Manu. VII. 65.
  3. Yāj. I. 327-328.
  4. Śānti. 119. 16.

of the king, and so the king must pay the greatest heed to kośa,<sup>1</sup> for a king with a depleted treasury will eat into the very vitals of both citizens and country people.<sup>2</sup> The principal means of replenishing the treasury in normal times is taxation that is regarded by the populace as just and which does not overburden them. Several reasons have been forwarded to justify the king's taxation of the people. Taxes are to be paid in return for the protection afforded by the king;<sup>3</sup> they are the reward of the king for his responsible position over them;<sup>4</sup> and finally, Reasons for taxation the king has a lawful claim to a sixth part of the produce of the land and to a half of the ore dug out from mines, as he is the lord and owner of the soil.<sup>5</sup>

The king is thus entitled to taxes, but these must not be oppressive, otherwise he would be killing the goose that laid the golden eggs. Manu advises that the king should not through greed tax the subjects heavily, as he would thereby cut off the roots of the prosperity and contentment of the people. But neither should he cut off his own roots by levying no taxes.<sup>6</sup> A wise balance was to be maintained.

Principles of taxation He was to draw his sustenance in the form of taxes, little by little, so that the people

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1. Arth. II. 8.

2. Arth. II. 1.

3. Gaut. X. 28.

4. Nār. XVII. 48; Arth. I. 13.

5. Kāt. 16-17; Manu. VIII. 39; and Med. thereon.

6. Manu. VII. 139.

did not feel it. Various picturesque similes are given to suggest the king's relationship with the people as regards taxation. He was to be like the bee drawing honey but leaving the flowers uninjured, he should be like a garland-maker who did not destroy the roots of the trees and not like a coal-maker. The leech imbibing small quantities of blood, the calf drawing sustenance little by little, the tigress carrying her cubs carefully between her jaws, the rat gnawing cautiously at the feet of sleeping men, were to be emulated.<sup>1</sup> Neither could the king tax the people according to his pleasure. While the law-givers allow the king enhanced rates in times of distress or emergency, they also fix the normal rates which should be followed in order to have a contented people. Manu and others declare that the king may ordinarily take a sixth part of the grain crops or produce of the soil,<sup>2</sup> but Manu, Kautilya and Śukra allow the king to take one-third or one-fourth of the crops in times of distress.<sup>3</sup> Taxation must be considerate and vary according to the commodity, and take into account the skill, labour and cost involved. For instance, in taxing traders, the king was to consider the price, the sale-ability, the cost of guarding the merchandise, and the traders' personal expenditure in bringing the commodities;<sup>4</sup> and in the case of artisans the king was to make allowance for the labour and skill involved and the necessities of life required by the

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1. Manu. VII. 129; Udyoga. 37. 17-18; Śānti. 88, 4-6. 71. 20.

2. Manu. VII. 130; Viṣṇu. III. 22-23; Gaut. X. 24.

3. Manu. X. 118; Arth. V. 2; Śukra. IV. 2. 9-10. Also Śānti. 87.

4. Manu. VII. 127; Śānti. 87. 13-14.

workers.<sup>1</sup> But taxation was to be universal, and even the poorest were not to be exempt. Workers could have the option of paying their taxes in labour.<sup>2</sup> Taxes were to be recovered in their proper time and place,<sup>3</sup> and it was a wise principle to enhance rates gradually and imperceptibly.<sup>4</sup>

The various sources of revenue are enumerated in some of the law-books. By far the most comprehensive classification is to be found in the Arthaśāstra, which gives seven heads of revenue, further sub-divided to indicate the details of the income.<sup>5</sup> Revenue is derived from fortified cities (durga), the provinces (rāṣṭra), mines (khani), gardens (setu), forests (vana), herds of cattle (vraja) and trade routes (vanikpatha). Elsewhere Kautilya refers to the revenue derived from fines,<sup>6</sup> and he also gives various accidental receipts, such as whatever has been lost or forgotten by others; fines levied on government servants; the property of those who have fallen victims to epidemics, leaving no sons; and treasure trove.<sup>7</sup> Kāmandaka gives eight principal sources (astavarga), each under the jurisdiction of a state department, namely, agriculture, trade-routes (both land and water), the capital, water-embankments, Sources of catching of elephants, working mines and col-  
Revenue lecting gold and other metals, taxing the wealth of the rich and founding towns and villages in uninhabited

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1. Śānti. 87. 15.
  2. Manu. VII. 137-138. Śukra IV. 2. 121.
  3. Śānti. 88. 12 and Kām. V. 83-84.
  4. Śānti. 88. 7-8.
  5. Arth. II. 6.
  6. Arth. IV. 10.
  7. Arth. II. 6.

spots.<sup>1</sup> The Śukra-nīti gives nine such heads of revenue - rent from the land (bhāga), duties or śulka, fines (daṇḍa), products obtained without cultivation (akṛṣṭapacyā), income from forests (aranya-sambhava), mineral wealth (ākara), hidden deposits (nidhiprāpta), unclaimed property (asvāmika), and what is got back from thieves.<sup>2</sup> Our concern here is with the various sources of land-revenue, hence we shall take from these classifications those groups that directly or indirectly brought revenue to the king from the land. Much of the king's sources of income from the land is detailed under Kauṭilya's country parts which include various taxes on agricultural produce, such as sītā, bhāga, bali; taxes paid in money, taxes on merchants and on trade centres and waterways; charges for ferries, boats and ships; charges on towns, on pasture grounds, 'ropes', and 'corarajju', and road-cesses.<sup>3</sup> A detailed analysis of the various taxes imposed on the land and the products of the soil, and a discussion of the terms to be met with in this connection, will clearly reveal to us that the land formed the largest head of state revenue.

#### Land Revenue.

Land may be classified on a basis of the revenue it yielded, and also the kind of payment made. Kauṭilya distinguishes rent-free and rent-paying lands, two classes of each. The first two produce-paying classes together furnish revenue, and are what later was called aṣṭa-varga. Class I is land

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1. Kām. V. 78-79.

2. Śukra II. 207-14.

3. Arth. II. 6.

tilled by settled peasants paying from a quarter to a third  
Classification of lands of produce according to official valuation.

Class II is vanikpatho durgam setuh kuñjara-bandhanam khanyākaravanādānam śūnyānām ca niveśanam;<sup>1</sup> these pay various quotas of gains up to a maximum of half. Class III is frontier or border lands, paying nothing. Class IV is land held on agreement for betterment and colonisation, which instead of paying receive from the State help in cash, cattle, grain, and so on. Thus he suggests a graduated register of revenue-paying lands.<sup>2</sup> Villages are divided in the Arthaśāstra according to the mode of payment of rent. There are those that are exempted from taxation (parihāraka); those that supply soldiers (āyudhīya); those that pay taxes in the form of grains, cattle, money or raw materials; and those that supply viṣṭi or free labour, and dairy produce in lieu of taxes (karapratikara).<sup>3</sup> There are also differential rates according to the land and the amount of cultivation. The king's share of the produce was not necessarily a fixed share, but was determined by the quality of the soil and its productivity. Manu gives differential rents of 1/6, 1/8 or 1/12, according to the fertility of the soil,<sup>4</sup> and the Agni-Purāṇa mentions rates between 1/6 and 1/8 for different kinds of paddy crops.<sup>5</sup> Kauṭilya decrees different rates according to the irrigation carried out on the land,<sup>6</sup> and Śukra lays down similar rules,

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1. Kām. V. 77.  
2. Arth. V. 2.  
3. Arth. II. 35.

4. Manu. VII. 130.  
5. Agni. 223. 26 f.  
6. Arth. II. 24.

although the rates he gives are much enhanced and indicate that the rent charged for the land must have increased in the later period.<sup>1</sup> He also ordains that the king should assess the land-revenue after causing lands to be classified according to their fertility and measured according to their extent.<sup>2</sup> There seems to have been the regular practice of cadastral survey and classification of soil as a prelude to revenue assessment.

Classification  
of land  
revenue

We may classify revenue derived directly or indirectly from the land as follows, and discuss each item in turn:- Revenue from (1) Agricultural produce (a) grain and other crops (b) plant products; (2) Water-rates; (3) Cattle and herds - (a) animals, (b) animal products; (4) Pastures and boundaries; (5) Forests and forest products; (6) Village crafts; (7) Mines; (8) Treasure trove; (9) Police tax; (10) Cash payments; (11) Miscellaneous imposts.

Various terms are to be met with, both in our epigraphic and literary sources, whose elucidation will tell us what was the nature of the taxes imposed on these different items of land-revenue. Our inscriptions give us no direct evidence of taxation, but from their references to remission of various dues, to their transference to the donee, or to the granting of certain dues, while others were withheld, we may gather what these taxes were. Thus the Gayā plate of Samudragupta<sup>3</sup> states "sarve ca samucitā grāmapratyayā meya-

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1. Śukra. IV. 2. 227-230.

2. Ibid. 220.

3. G. I. p. 257



Indirect  
evidence from  
inscriptions

hiranyādayo-deyah". The inhabitants of the donated village were commanded to pay to the grantee all the customary tributes formerly yielded to the king. Some of these tributes were denoted by terms such as uparikara, meya, hiranya, and so on. In the Khoh copper-plate of Mahārāja Sarvanātha<sup>1</sup> also, the villagers were directed to pay to the donee such dues as the udraṅga and uparikara, bhāga, bhoga, kara and hiranya. The Chammak plate of Mahārāja Pravarasena II indicates that sometimes lands were granted free of taxes, but certain rights were reserved for the villagers against the grantees by specifying that some dues payable to the king were not to be taken by the grantee. These were dues such as cows and bulls in succession of production, flowers and milk, the rights over pasturage, hides, charcoal, and salt mines; while it carried with it full rights to hidden treasures and deposits and kṛpta and upkṛpta.<sup>2</sup> The Junāgaḍh rock inscription indicates certain royal dues, from the king's declaration that he had constructed the lake Sudarśana out of his own treasury, without burdening his people with taxes such as kara, viṣṭi and praṇaya.<sup>3</sup>

Agricultural Produce.

A large number of terms are used to indicate taxes on grain, food-crops and various agricultural products. At this distance of time, and with the insufficient evidence at our disposal, it is impossible to define these terms with any

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1. G. I. p. 128.

2. G. I. p. 242.

3. E. I. VIII, No. 6.

degree of accuracy. At most, we may assess their possible connotation. That a certain share of the produce of the soil was regarded as the king's legitimate due is obvious from the statements of all the ancient law-givers. This was probably by way of rent paid to the king for use of the crown lands, and the rate was fixed by custom, varying according to the extent of land, its fertility, the irrigation carried out on it, and also according to period and locality. Thus Vasiṣṭha and Viṣṇu fix a uniform rate of one-sixth of the produce,<sup>1</sup> while Gautama distinguishes three rates of one-sixth, one-eighth and one-tenth, no doubt according to the quality of the soil.<sup>2</sup> Manu also gives three rates, one-sixth, one-eighth and one-twelfth, according to crops.<sup>3</sup> The Agni-Purāṇa gives two distinct rates, one-sixth and one-eighth, for two different qualities of paddy.<sup>4</sup> In the Mahābhārata, the king's share is repeatedly fixed at one-sixth, but it also seems that the rate of one-tenth had originally been usual.<sup>5</sup> The generic term bhāga seems to be applied for this agricultural cess. Kauṭilya and Śukra both mention this term as sources of revenue, Kauṭilya giving it as one of the items of revenue drawn from the provinces,<sup>6</sup> and Śukra giving it as a separate head of revenue.<sup>7</sup> In our period one-sixth seems to have been the normal rate as indicated by

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1. Vas. I. 42; Viṣṇu. III. 22-23.

2. Gaut. X. 24.

3. Manu. VII. 130.

4. Agni. CCXXII, 26-27.

5. Mbh. XII. 69. 25; 71.10; 67.16-32.

6. Arth. II. 6.

7. Śukra. II. 207-14.

Kauṭilya's use of the term ṣaḍbhāga,<sup>1</sup> but enhanced rates of one-third and one-fourth from fertile lands Bhāga - Bhoga blessed with abundant rain are allowed in times of great financial stress..<sup>2</sup> The terms bhāga-bhoga-kara occur together in some of our inscriptions, such as the Kārītalāī copper-plate of the Mahārāja Jayanātha, and the Khoh copper plates of the Mahārājas Jayanātha and Sarvanātha.<sup>3</sup> Kara is often used as a general term to indicate tax<sup>4</sup> and may be left out here, the more so as bhāga-bhoga may occur without 'kara', as in the Bijayagaḍh stone pillar-inscription of Viṣṇuvardhana.<sup>5</sup> Fleet suggests that bhāgabhoga may perhaps be taken as one word, and may be interpreted as "enjoyment of taxes", from the literal meaning "enjoyment of shares".<sup>6</sup> He derives this meaning from Monier Williams' Sanskrit dictionary, which gives bhāgabhuja as enjoying taxes. The terms sometimes occur in the reverse order, as in the Alīnā copper-plate of Śīlāditya VII, the Āraṅg copper-plate of Jayarāja, the Rāipur copper-plate of Mahā-sudevarāja, and the Rājim copper-plate of Tīvaradeva<sup>7</sup>, which have "bhoga-bhāga". If, following Fleet, bhāga-bhoga is one word, then "bhoga-bhāga" should be taken as another word, whose meaning is suggested by Fleet as "share of the enjoyment".<sup>8</sup>

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1. Arth. II. 25.

2. Arth. V. 2.

3. G. I. pp. 118, 122, 127, 131.

4. Cf. Manu. VII, 128, 129, 133.

5. G. I. p. 254.

6. Vide footnotes G. I. pp. 120, 254.

7. G. I. pp. 179, 194, 198, 295.

8. Vide translations of plates quoted.

But these words have been used separately in our literature. The occurrence of bhāga has been indicated above. Bhoga also occurs separately in Manu.<sup>1</sup> Hence, if these words are taken as two distinct dues, the explanation will probably be most satisfactory. From the context in which they have been used, they seem to indicate agricultural taxes. Bhāga was the general tax on land, paid in kind, and bhoga has been explained by Sarvajña-nārāyaṇa as "daily presents in the form of fruits, flowers, vegetables, grass, etc.". The custom of bringing presents to the king, specially when seeking the royal favour, was very common and universally applied.<sup>2</sup> In Bāṇa's Harṣacarita we are told of villagers bringing presents of curds, molasses, sugar-candy and flowers to the king, and demanding his protection of their crops.<sup>3</sup> The right to cows and bulls in succession of production, to flowers, milk, hides, charcoal and salt mines mentioned in the Chammak copper-plate of Pravarasena II,<sup>4</sup> probably constituted bhoga, the perquisites due to the king. Pratibhāga has a similar meaning. It is given in Manu. Medhātithi explains it as Pratibhāga offerings of fruits and the like, and Kullūka says that it forms the daily dues from villages such as food, drink and fuel, which in another context in Manu are directed to be received by the village headman as perquisites.<sup>5</sup>

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1. Manu. VIII. 307.

2. See Fick: The Social Organisation, p.115.

3. Bāṇa. H.c. p.208.

4. G. I. p.242.

5. Manu. VIII, 307. VII, 118.

"Bali" occurs in the Junāgaḍh rock inscription of Rudradāman<sup>1</sup> and in the Rummindei pillar-inscription of Aśoka.<sup>2</sup> Ghoshal thinks that bali has been used in the ancient authorities to mean the king's grain-share,<sup>3</sup> and interprets it from the Arthaśāstra and its commentaries, as an undefined cess over and above the king's normal share of the produce (bhāga).<sup>4</sup> Bhaṭṭasvāmin, commenting on the term,<sup>5</sup> Bali says that it means the ten-fold, twenty-fold and the like charges in case of the sixth share as prevailed in specified tracts. A satisfactory explanation may be found if we take the term "bali" as one of the pañca-mahāyajña or five great sacrifices, which consist of bali, charu, vaiśva-deva, agnihotra, and atithi. All these sacrifices are enumerated in the Māliyā grant of Dharasena II,<sup>6</sup> while some of them are mentioned in many of our inscriptions. The sacrifice of bali consisted in offerings of clarified butter, grain, rice, and so on, to gods and all creatures of every description. The tax "bali" was probably imposed to carry out these religious observances. Even to-day, it is common in Indian religious festivals to make offerings of rice, fruits, flowers and many other things to the gods, which are provided by collecting general contributions.

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1. E. I. VIII. No. 6.  
2. C. I. I. Vol. I, p. 164.  
3. H. R. S. p. 58.

4. Ibid. p. 36.  
5. Arth. II. 6.  
6. G. I. p. 170.

Amongst the items of revenue from the provinces enumerated by Kauṭilya occurs the word "sītā",<sup>1</sup> which he defines elsewhere as "whatever in the shape of agricultural produce is brought in by the superintendent of agriculture"<sup>2</sup> to the royal granary. It was thus a tax in kind. That it is different from bhāga, the king's customary share, is obvious, as the two are mentioned as separate items derived from the provinces. Ghoshal interprets this term as the collective output of the royal farms,<sup>3</sup> while bhāga is the king's grain-share levied on the ordinary revenue-paying lands. In the same context he takes the work of the Sītā Superintendent of agriculture to be limited to the general management of the royal demesnes. Ardhasītikas, tenants paying half the produce, are thought by him to be tenants of royal domains, but there is no evidence of such restriction. We find ardheḷī in Bombay, ardha-mānyams in Madras, and ardha-siri in Bengal without such limitation. Kauṭilya says "vāpātirikṭam ardhasītikāḥ kuryuḥ; svavīryopajīvino vā caturtha-pañcabhāgikāḥ; yatheṣṭam anavasita-bhāgam dadyur anyatra kṛcchrebhyaḥ."<sup>4</sup> The ardhasītikas (who own seed-corn, cattle etc. of their own), should make a secondary sowing (i.e. cultivate fields other than those which were leased to them on condition of paying half produce), and so may those who earn a livelihood by their bodily strength

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1. Arth. II. 6.  
2. Arth. II. 15.

3. H.R.S. p. 29 ff.  
4. Arth. II. 24.



(i.e. labourer-tenants who have no stock of seed, cattle, etc. of their own, but borrow from the State), and who keep (or pay?) a quarter or a fifth of produce (according to the contract with the State): they may pay an undefined portion according to the will (of the State officials, i.e. the officials may raise the rents as they think fit), except in hard times. Both classes of farmers should cultivate fields outside their original contracts, on a betterment arrangement, and the officials will determine the rates of such according to conditions, except in hard times, when rates should be as far as possible remitted. These lands are not just the royal estates, but Crown lands leased out on a grain-share basis according to specified rates, and these rates, that varied according to the equipment of the cultivator, were denoted by the term "sītā". Under the imperial system of the Guptas, the king was regarded as the absolute owner of the soil, and all the lands belonged to the State, being leased out to his subjects. The various state departments under their superintendents formed the civil service that administered the country. There is no reason for supposing that the work of the superintendent of agriculture was limited to the royal estates. Rather, he was a state official whose duty it was to see that the state revenue was not decreased by allowing land to remain uncultivated, and to make arrangements for the forcible cultivation of lands where necessary, and to supply every aid to those who needed it to ensure the



cultivation of the land to its full capacity.<sup>1</sup>

Another term relating to agricultural taxes has raised a certain amount of difference of opinion. Several inscriptions mention the uparikara tax. The term occurs in the Gayā and Nālandā grants of Samudragupta.<sup>2</sup> Fleet derives uparikara from the Prākṛt word "upari" or "upri" and suggests that the term means "a tax levied on the cultivators who had no proprietary rights in the soil."<sup>3</sup> In some inscriptions two terms, udraṅga and uparikara, exist side by side, as in the Khoh copper-plates of Mahārāja Hastin,<sup>4</sup> the Majhgawām plate of the same king,<sup>5</sup> the Kārītalāī plate of Jayanātha,<sup>6</sup> the Khoh copper-plates of Sarvanātha,<sup>7</sup> the Māliyā plate of Dharasena II, and the Deo-Baranark inscription of Jīvitagupta II.<sup>8</sup> This has led Ghoshal to suggest that the two terms have been used antithetically, and he interprets udraṅga as a tax imposed on permanent tenants and uparikara as a tax imposed on temporary tenants.<sup>9</sup> He supports this contention by giving three arguments. He first of all derives "uparikara" from the Mārāṭhī "upari", meaning a cultivator not belonging originally to a village, but residing and occupying land in it either upon a lease for a stipulated period, or at the pleasure of the proprietor. Then he says that in most of the inscriptions the

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1. Arth. II. 24.

2. G. I. p. 257.

3. G. I. p. 98, ft. note.

4. G. I. pp. 97, 104-5.

5. G. I. p. 109.

6. G. I. p. 120.

7. G. I. pp. 128, 132, 138.

8. G. I. pp. 170, 218.

9. H. R. S. p. 210.

two words exist side by side and are obviously antithetical in meaning. And finally he says that in some of the States of Rajputana in later times permanent possessors existed in the royal demesne side by side with tenants without proprietary rights.<sup>1</sup> Now, the Mārāthī language cannot be traced back earlier than the 10th or 11th century A.D. and while it may be possible to trace a modern word back to an earlier word and note the variation both in the word and in its connotation, it is a process full of pitfalls to take a comparatively modern word and say that a similar word used long ago had the same meaning. That the terms *udraṅga* and *uparikara* exist side by side does not indicate conclusively that they have been used antithetically. In some of the plates, as in the *Gayā* plate of *Samudragupta*,<sup>2</sup> *uparikara* occurs alone, while in other plates, *udraṅga* is found by itself as in the *Nirmaṇḍ* copper-plate.<sup>3</sup> In the *Alīnā* copper-plate of *Śīlāditya VII*, in one place<sup>4</sup> *udraṅga* occurs alone, and in another<sup>5</sup>, *udraṅga* and *uparikara* are given side by side.<sup>6</sup> Any conclusions based on the mere fact of their juxtaposition is likely to be unsatisfactory. And finally, as regards the conditions that obtained in Rajputana in later times, the practice of later times cannot be quoted to indicate the existence of the same conditions in an earlier period. Besides, where there are different forms of land-

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1. H.R.S. p.210.  
2. G.I. p.257.  
3. G.I. p.290

4. line 46.  
5. line 67.  
6. G.I. pp.185, 189.

tenure, tenants with different relationships with the land and with the State must have lived side by side, so that to infer from this data that uparikara and udraṅga are connected and opposed terms, relating to taxes imposed on temporary and permanent tenants respectively, seems to be unjustified. Dr. Barnett's interpretation of uparikara as the Crown's share of the produce, on the lines of its Tamil counterpart "mel-vāram", seems more likely.<sup>1</sup> Ghoshal objects that there are various terms, bhāga-bhoga-kara-hiranya etc. which indicate the Crown's share of the produce of the soil. Where these definite terms exist, why should uparikara also mean the same? How often is the king to take a share?<sup>2</sup> But from the variety of terms denoting taxes on agricultural produce that we come across, there were apparently many such taxes, whose exact meaning is bound to remain largely a matter of conjecture. If we take "upari" to be a preposition, meaning over or above, the term "uparikara" may be explained as a super-charge, imposed over and above the usual share of the produce. Perhaps it was a tax on extra produce or income.

Other terms denoting agricultural taxes which occur in our inscriptions are dhānya, meya, tulāmeya, halikākara, dāradranaka and korāṭa. Dhānya occurs in the Alīnā copper-plate of Śīladitya VII<sup>3</sup> and is differentiated from Dhānya bhāga. It was probably a fixed contribution of grain, unlike bhāga, which consisted of a share of the

1. Vide also Saletore, p. 345.

2. I.H.Q. Vol. VII, p. 384.

3. G.I. p. 189.

produce. Meya is mentioned in the Gayā grant of Samudragupta<sup>1</sup> and tulāmeya in land-grants of Harṣavardhana.<sup>2</sup>

Me ya  
Tulāme ya These words mean "what is to be weighed" and "what is to be measured" and were probably not specific dues but general terms applied to contributions in kind. Halikākara, an unusual expression, seems to occur in one Halikākara case, viz. the Khoh copper-plate inscription of Mahārāja Sarvanātha.<sup>3</sup> Ghoshal suggests "the tax on ploughs" and "plough-tax" as its meaning,<sup>4</sup> but it was probably a tax on one plough (hala or hali) of land. This seems to indicate that taxes were imposed according to the area of the land. Dāradranaka is found in the Rājim copper-plate of Tivaradeva<sup>5</sup>. The dictionaries give dāra in the sense of a "cleft, gap, hole; a ploughed field, a wife". But dranaka is ~~not~~ not explained. It is therefore difficult to Dāradranaka give the meaning of this expression. Fleet suggests some agricultural cess or a marriage tax.<sup>6</sup> It is probably an agricultural cess of some sort. Korāṭa is to be found in the Siwanī plate of Pravarasena II,<sup>7</sup> where we are told that a village is given with libations of water together with the korāṭa and the fifty hamlets. Korāṭa Korāṭa may have some connection with the Kanarese korāḍu, korāṇḍu, korāṇṭu, which mean "a pollard, the trunk of a lopped tree, a log, stump, short stick".<sup>8</sup> In Mārāṭhī, korāṭ is

1. G. I. p. 257.

2. E. I. IV. No. 29 & VIII, No. 22.

3. G. I. p. 134.

4. H. R. S. pp. 213, 292.

5. G. I. p. 295.

6. G. I. p. 299, ft. nt.

7. G. I. p. 248.

8. Vide G. I. p. 248, ft. nt.

'spun silk, while still raw or unboiled'; korāṇṭā, korāṇṭā, 'Barleria or Ainaranth'; and korāḍā, 'dry, empty, yielding no returns or profit'.<sup>1</sup> These meanings seem to indicate something unfinished, left undone. Hence, it is possible that korāṇṭā may mean uncultivated fields, from which a due might be recoverable. Dues might be recovered from individuals, but sometimes taxes were recovered collectively from a village, as seems apparent from Kauṭilya's injunctions that the superintendent of the royal warehouse should, amongst his other duties, concern himself with the recovery of certain

agricultural taxes, including the pīṇḍakara, which Pīṇḍakara has been explained by Bhaṭṭasvāmin as a collective grain tax levied on the whole village. It is perhaps identical with the bhāga if the inscriptions, only gathered in collectively.

#### Water Rates.

That water rates of varying degrees according to the mode of irrigation were levied, is clear from the Arthaśāstra.<sup>2</sup> Kauṭilya says "Sva-setubhyaḥ hasta-prāvartimaṁ udaka-bhāgaṁ pañcamāṁ dadyuḥ skandha-prāvartimaṁ caturtham, srotoyantara-prāvartimaṁ ca tṛtīyam". Thus, farmers who generally drew water from their own dams, if the water was raised by hand (i.e. by hand pumps) should pay as water rate a fifth, if it was raised on the shoulders (perhaps by lifts worked by bullocks), a quarter, and if raised by water-lifts, a third. Thus, there were graded taxes for using State

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1. Vide G.I. p.248, ft. note. 2. Arth. II.24; III.9.

irrigational contrivances, according to the complexity of the device employed. He further says, "caturtham nadī-saras-taṭāka-kūpodghāṭam", Those who drew water from rivers, pools, ponds and wells were also to pay a quarter.<sup>1</sup> The king thus asserted his rights not only over land, but over the water as well. We are also told that out of crops grown by irrigation by means of wind-power or damming a river (vāta-prāvartima-nadī-nibandhāyatana), or below tanks, so much of the produce as would not entail hardship on the cultivators was to be yielded up to the State, and persons cultivating lands below the tanks of others at a stipulated rate or for an annual rent, or on a produce-sharing basis, or those who were allowed to enjoy such lands free of charge, were all obliged to keep the tanks in good repair, in lieu of the appropriate water rate.<sup>2</sup> The term "setu" in the Arthaśāstra<sup>3</sup> as an head of land revenue was perhaps applied to include these water rates, from setu, meaning an "embanked reservoir". That setu was used as a technical term to indicate the gardens and fields owned by the king as suggested by Ghoshal, does not seem feasible. More probably, setu was used to indicate vegetable,

flower, and fruit gardens, wet fields, fields where  
Setu crops are grown by vegetative reproduction (as with sugar-cane crops), the products of such fields flourishing through use of water from State reservoirs, and hence a portion of the produce being payable to the State for this use.<sup>4</sup>

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1. Arth. II. 24.

2. Arth. III. 9.

3. Arth. II. 6.

4. Ibid.



Śukra gives water rates of 1/2 the produce from river-irrigated lands, 1/3 from tank-irrigated lands, 1/4 from lands depending on rain-water; and barren lands "filled with stone and the like" were to pay the lowest rate of 1/6.<sup>1</sup> These differential rates on grain and water must have been paid on the nett produce of the land, i.e. with deduction of seed-corn purchased by the farmer or lent by Government and with some other possible deductions as hire of men and cattle, before the produce was brought to the State granaries. Only thus was it possible for the farmer to get a living. In practice, water rates would depend upon physical conditions. In the Gangetic area of the U.P. rivers could afford only limited irrigation; but in Madras there were anicuts from early times, and in some hilly districts, such as Bundelkhand, there were tanks.

The expression vata-bhuta is found in the Māliyā copper-plate of Dharasena II and bhuta-vata in the Alīnā copper-plate of Śīlāditya VII.<sup>2</sup> Fleet suggests that vāta is derived either from vā 'to blow' or from 'vai' 'to become dried or withered', while bhūta is the past participle of bhū 'to become', but he cannot elucidate the terms further.<sup>3</sup>

Ghoshal takes bhūtavāta as one word and translates Vāta-bhūta it a little hesitantly as "a revenue derived from the elements and the winds." In the two plates quoted above,

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1. Śukra. IV.2, 227-230.

2. G. I. pp.170, 189.

3. Ibid. p.170, ft. nt.



the two terms occur in interchangeable order. It will perhaps be most satisfactory to regard them separately as two different kinds of cess or āya for the rites respectively for the Winds and for the Goblins, similar in nature to caru. Rites to appease Winds are very important to agriculturists and are mentioned in the Āpastamba Dharmasūtra<sup>1</sup> and by Kātyāyana<sup>2</sup> as pañcavāṭīya; and Bhūta-yajña was a common standing ceremony<sup>3</sup> for appeasing spirits. Kauṭilya mentions it as part of the rites to be performed in the worship of horses.<sup>4</sup> Taxes were also imposed on cattle and livestock. Megasthenes noticed that the class of herdsmen paid their tax in cattle.<sup>5</sup> Manu prescribes a tax on cattle, 1/50 of the herd to go to the king.<sup>6</sup> The Agni-Purāṇa has the much higher rate of 1/5 or 1/6.<sup>7</sup> The Arthaśāstra in its list of heads of revenue mentions separately herds of cattle, buffaloes, goats, sheep, asses, camels, horses and mules.<sup>8</sup> In his division of villages, Kauṭilya says that some villages could pay their Taxes on cattle and livestock taxes in the form of grains, cattle, gold or raw materials,<sup>9</sup> and in suggesting methods for increased revenue in times of stress, he recommends that persons rearing cocks and pigs were to surrender 1/2 their

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1. Āp. XVIII. 9.10-11.

2. Kāt. XV. 1. 20-21.

3. Vide. Ap. II. 2. 3. 15.

4. Arth. II. 30.

5. Monahan: Early History, pp.142, 144, 148.

6. Manu. VII, 130-132.

7. Agni, CCXXIII, 27-29.

8. Arth. II. 6.

9. Ibid. 35.

stock, those rearing inferior animals were to give 1/6 and those who kept buffaloes, mules, asses and camels were to give 1/10.<sup>1</sup> Śukra mentions a tax on cattle: of increments of goats, sheep, cattle and horses, 1/8 was to go to the king.<sup>2</sup>

Under revenue derived from the provinces, Kauṭilya mentions pastures.<sup>3</sup> The superintendent of pastures is charged with examining passes of those using the grounds, both to ensure that known people were using the grounds so as to preclude the possibility of suspicious strangers entering the

Pastures village, and also perhaps because a charge was imposed on those using the pastures, and they were regularly checked to prevent unwarranted use of these lands.<sup>4</sup> Pasture lands belonged to the king, and it was his responsibility to make provision for them on uncultivable tracts,<sup>5</sup> and so he exacted dues from those using them.

Forests also belonged to the king, and formed an important head of revenue, largely on account of the elephants with the ivory they gave, and the timber. The forests were of three kinds, the king's reserved game-forests, the elephant-forests and the forests yielding valuable products.<sup>6</sup> The

Forests kings possessed a monopoly over elephants. There was a superintendent of forests to arrange for the collection of forest-products and their manufacture into useful commodities.<sup>7</sup> The proceeds of the sale of these

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1. Arth. V. 2.  
2. Śukra. IV. 2, 239-240.  
3. Arth. II. 6.  
4. Arth. II. 34.

5. Ibid. 2.  
6. Arth. II. 6.  
7. Ibid, 17.

goods and the fines imposed for breaking rules regarding forests with, of course, the profit in kind from them, thus formed an important source of State income. Then there are forest dues in the law-books which find no correspondence in the inscriptions, unless they may be taken as being included in bhoga and bali. Manu mentions a tax of  $1/6$  on forest products such as honey, medicinal herbs, scents, flowers, roots, fruits, flavouring substances, wood, leaves and grass, as a regular part of the king's income.<sup>1</sup> The Agni-Purāṇa imposes a due of  $1/6$  on honey, and  $1/5$  on the other products mentioned, including bamboo.<sup>2</sup> Kauṭilya allows villagers to pay taxes in raw materials, which must have consisted of forest products.<sup>3</sup> Śukra says that gatherers of dry grass and wood are to give between  $1/3$  and  $1/20$  of their collection.<sup>4</sup>

The three crafts that comprised the whole range of village industries were also taxed. No possible source of revenue was left untapped. Manu decrees that  $1/6$  of earthenware, stone-ware and wicker-work be given as royalties,<sup>5</sup> and the Agni-Purāṇa also mentions a tax of  $1/5$  or  $1/6$  on wicker-work and stone-ware.<sup>6</sup>

Mines were a State monopoly and formed a lucrative source of income. Kauṭilya realised their importance when he said: "Mines are the source of revenue; from the revenue

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1. Manu. VII. 130-32.  
2. Agni CCXXIII, 27-29.  
3. Arth. II. 35.

4. Śukra IV. 2. 239-40.  
5. Manu. VII. 130-32.  
6. Agni CCXXIII, 27-29.

comes the power of government, and the earth, whose ornament is the State income, is acquired by means of the treasury and the army.<sup>1</sup> In the same chapter, which deals with mining operations, he enumerates ten kinds of revenue from mines, namely, (1) mūlya or the price; (2) vibhāga or the State share of the output; (3) vyāji, a premium of 5 per cent; (4)

Revenue parigha, which may be the testing charge of coins, from mines or, as the commentator explains, the profit from the sale of commodities manufactured from minerals; (5) atyaya or prescribed fines; (6) śulka or toll; (7) vaidharāṇa or compensation for loss caused to the king's commerce; (8) dāṇḍa or unprescribed fines to be determined according to the gravity of the offence; (9) rūpa or silver and copper coins; and (10) rūpika, the premium of eight per cent.<sup>2</sup>

Treasure-trove also belonged to the king. Inscriptions mention right over hidden wealth, as in the Chammak copper-plate of Pravarasena II, which transfers this right to the donee.<sup>3</sup> The Smṛtis lay down rules regarding the disposal of treasure-trove. Manu mentions three possibilities:- a claimant to the treasure proving his title to it was to receive it after deducting 1/6 or 1/12 as the king's share; a Brāhmaṇa might take the whole amount if he found it; and when the king found

Rules it, he should give 1/2 to the upper classes regarding and keep the other half for his own treasury.<sup>4</sup> treasure-trove

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1. Arth. II. 12.

2. Ibid.

3. G. I. p. 242.

4. Manu VIII, 35-39.

Yājñavalkya also gives three cases. When the king found the treasure, he should share it equally with the twice-born classes; if a learned Brāhmaṇa found it, he could keep it; and any other person finding it should give it to the king, who should pay him 1/6 for his pains.<sup>1</sup> Nārada says that the finder must notify the king. Treasures found by Brāhmaṇas belonged to them but had to be formally received from the hands of the king. The 1/6 share in ordinary cases is not mentioned.<sup>2</sup> Kauṭilya lays down as a general rule that the finder of mines, precious stones and treasure was to get 1/6, which becomes 1/12 in the case of a labourer. When the treasure exceeded 100,000 paṇas, the whole amount should go to the king without deductions. If a virtuous person could prove his claim to a treasure he might take the whole of it, but he was to be fined 500 paṇas if he made a false claim, and 1,000 paṇas for taking it secretly.<sup>3</sup>

Udraṅga, mentioned earlier, has not been fully discussed. Ghoshal explains it as a tax levied on permanent tenants,<sup>4</sup> on grounds that are not very convincing. Udraṅga seems to be the same as draṅga, literally a watch-station,<sup>5</sup> perhaps a false Sanskritisation. It may be a sort of Udraṅga of police charge, imposed on a district for the maintenance of the local watch-station or police station. This may be compared with Tamil kāval, literally "watching",

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1. Yāj. II. 34-35.

2. Nār. VII, 6-7.

3. Arth. IV. 1.

4. H.R.S. p. 210.

5. Cf. Stein's translation of Rājatarāṅginī, II, p. 292.

used for the fee levied on villagers for the upkeep of watchers, etc. In this connection may also be mentioned some other terms occurring in our inscriptions, which also seem to indicate a police tax of some sort. The Khoh copper-plate of Hastin has "coravarjjam",<sup>1</sup> the Majhagawān copper-plate of the same king mentions "Cauravarjjam"<sup>2</sup> Coravarjjam and the Khoh copper-plate of Saṅkṣobha refers to coradrohakavarjjam<sup>3</sup>. Fleet explains it as "the right to fines imposed on thieves". But more probably it is an elliptical term denoting a fee levied for maintaining a sort of police force to provide protection against thieves, the term being derived from "corarajjū" ropes to bind thieves, mentioned as a source of revenue derived from the provinces in Kauṭilya's list.<sup>4</sup>

Payments of cash are denoted by terms such as kara, hiranya, suvarṇa and rājabhāga. Kara is one of the taxes mentioned by Kauṭilya,<sup>5</sup> as being under the special jurisdiction of the superintendent of the royal warehouse. Kara has been variously explained. Bhaṭṭasvāmin makes it an annual tax paid in particular months. Kṣīrasvāmin gives it as a Kara charge on movable and immovable articles. Shamasastri explains it as taxes or subsidies that are paid by vassal kings and others. It is found in the inscriptions, usually following upon bhāga and bhoga. Apart from its significance

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1. G. I. p. 98.  
2. G. I. p. 108.  
3. G. I. p. 115.

4. Arth. II. 6.  
5. Arth. II. 15.

as a tax in general, it was apparently a specific fiscal term also, implying periodical taxes on agricultural land, probably exacted in cash. Hiranya occurs in some inscriptions, as in the Gayā grant of Samudragupta,<sup>1</sup> the Khoh copper-plate of Sarvanātha<sup>2</sup> and the Māliyā copper-plate of Dharasena II.<sup>3</sup> It was probably a tax in gold or in cash. Manu mentions a cash tax to the extent of 1/50,<sup>4</sup> the Agni-Purāṇa makes it 1/5 or 1/6,<sup>5</sup> and Kauṭilya allows villages to pay taxes in gold.<sup>6</sup> It was probably a due to be paid in gold. There are not sufficient grounds for rejecting this view, as Ghoshal does.<sup>7</sup> In a country where gold has always been extensively used, especially as ornaments, it is only likely that the State, in leaving no avenue of wealth unexplored, should exact certain dues in gold. "Suvarṇa" occurs in a land-grant of Bhīmasena II,<sup>8</sup> and is probably a similar expression, a tax to be paid in gold, gold coins or cash. Śukra mentions "rājabhāga", a tax in cash of 100 silver karṣas, given to the king.<sup>9</sup>

Then there were various miscellaneous imposts, such as senābhakta, or provisions for the army, consisting of oil, rice, salt, and so on, which were exacted from the districts through which the army was marching or preparing for a campaign;<sup>10</sup> the utsaṅga or gifts collected on festive

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1. G. I. p. 257.
  2. G. I. p. 139.
  3. G. I. p. 170.
  4. Manu. VII. 130-132.
  5. Agni CCXXIII, 27-29.

6. Arth. II. 35.
7. H. R. S. p. 60 ff.
8. E. I. IX. 53.
9. Śukra IV. 2. 231-32.
10. Arth. II. 15. ft. nt.



Miscellaneous occasions such as the birth of a prince; pārśva  
imposts or marginal revenue levied by virtue of the king's  
sovereign authority. This was thought by many to be an  
oppressive charge and consequently frowned upon.<sup>1</sup> Pārihīnaka,  
or compensation levied in the shape of grain for any damage  
done by cattle to the royal crops; aupāyanika or voluntary  
presents taken to the king; and kaustheyaka or taxes levied on  
lands below tanks, lakes and other State irrigational works,  
were additional items of revenue from the provinces.<sup>2</sup>

Emergency Revenue.

Such were the usual taxes imposed on the agricultural  
population, and they represent every branch of revenue that  
could possibly be derived from the soil. In times of acute  
financial trouble, an emergency revenue could be collected by  
the imposition of special taxes or benevolences. The term  
'pranaya' is applied to this array of irregular taxes and is  
supposed to indicate their nature, namely, the king was not to  
extort these dues by virtue of his authority, but should rather  
request his subjects to contribute to the best of their ability,<sup>3</sup>  
and these demands were never to be made more than once. This  
emergency revenue was raised from cultivators, merchants and  
artisans, and animal breeders. Cultivators might be asked to  
contribute 1/4 of grain; 1/6 of forest-produce, and commodities  
such as cotton, wax, fabrics, bark of trees, hemp, wool, silk,

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1. Cf. pārśvika, Viṣṇu. LVIII, 11.

2. Arth. II. 15.

3. Ibid. V. 2.

from medicines, sandal, flowers, fruits, vegetables,  
Cultivators firewood, bamboos, flesh and dried flesh and  
1/2 of ivory and skins. Dealers in gold, silver, precious  
stones, horses and elephants were to pay 50 karas (a kara seems  
to mean 10 panas); those trading in cotton threads, clothes,  
base metals, sandal, medicines and liquor, should pay 40 karas;  
from those trading in grains, liquids, metals and carts,  
Merchants 30 karas; glass-workers and skilled craftsmen,  
and  
Artisans 20 karas; semi-skilled craftsmen, 10 karas;  
traders in firewood, bamboos, stones, earthen pots, cooked rice  
and vegetables, 5 karas. Actors and courtesans were to pay  
half their wages, and Kautilya, who seems to have a special  
grudge against goldsmiths, recommends that their entire pro-  
perty be confiscated. Animal-breeders were also to surrender  
from specified quotas of their stock, according to the  
Animal-  
breeders value placed on the animals.<sup>1</sup> Besides these, a  
whole series of diplomatic and fraudulent devices for lightening  
the pockets of the unwary and the credulous have been described  
by with a brazen-faced insouciance that does not lack a  
Tricks certain attractiveness. However questionable and  
reprehensible these suggested methods might be, the master  
brain that originated them possessed a very shrewd knowledge of  
men, singly and in the mass. The only contact with ethics  
that these proposals reveal is in the after thought at the  
end of the chapter detailing them, that "measures such as the

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1. Arth. V. 2.

above shall be taken only against the seditious and the wicked, and never against others".<sup>1</sup>

A considerable body of land-revenue must have been lost to the State in the land-grants to the Brāhmanas, with remission of taxes, that formed such a striking feature of our period. By making these grants the king acquired merit, and Land even when some of his subjects donated lands for grants religious purposes, he obtained 1/6 of the merit by relinquishing his claims on various dues in the grantee's favour. But it is a moot point whether this method of amassing spiritual wealth made up for the drainage on the royal exchequer. The result can be seen in the typically Kautīlyan methods for raising money described above, to fill the royal coffers that continual warfare and largesse to Brāhmanas were depleting faster than they could be replenished.

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1. Arth. V. 2.

## CHAPTER IV

### THE CITY

Antiquity -- References to Cities -- Science of Town-  
Planning. Growth of Cities. Description.  
Administration -- Town Council.

As rural economy is the natural result of the village as the socio-economic unit, the obvious corollary to the city is industrial economy. The purpose of the following chapters is to delineate some features of city life and the industrial economy it produced, as a parallel development to the rural organisation we attempted to portray in the earlier chapters, so that we may have a fairly complete picture of the social and economic life of our period as it existed in the twin units of human settlements, the rural and urban communities.

The cleavage between village and city was not as distinct and as sharply marked in our period as in the modern machine age, but between the larger cities and the villages there was quite a difference in standards in almost every respect. The wealth of the cities was much greater than that of the villages; there was a difference in culture, in manners and customs, in the moral values, and between the typical city-bred man, with his poise and polish and sophistication, and the simple, straightforward villager, there must have been a world of difference. Vātsyāyana<sup>1</sup> eulogises the town and the amenities and charms of city life.

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1. Kāmasūtra - 'Nāgaraka-vṛttam'.

Although the Aryans were a predominantly agricultural and pastoral people, it is probable that they knew of towns before coming to India, because in their wanderings they may have passed near to towns in the civilized regions on their route. The original inhabitants of India must have developed the building of cities and city life in a considerably earlier period, as is indicated by the remains at Mohenjo-daro and Harappa, with amenities like masonry drains, regular streets and baths, that testify to their skill and ingenuity.<sup>1</sup> The conquering Aryans, on their arrival in India, found the "Indus Valley" cities. In later Vedic literature, cities were well known; the Mānava Gr̥hyasūtra mentions the grāma, Antiquity of Cities the nagara and the nigama.<sup>2</sup> The compilers of the Dharmasūtras were well acquainted with cities, Baudhāyana regarding life in cities as detrimental to those interested in spiritual realisation.<sup>3</sup> The development of cities proceeded apace, so that by the time Megasthenes visited India, the number was so great that it could not be stated with precision.<sup>4</sup> According to Pliny the area conquered by Alexander in India seemed to contain as many as 5,000 towns.<sup>5</sup>

#### References to Cities.

The inscriptions of our period have many references to cities, the terms pura, nagara, puraka and draṅga being used

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1. Marshall. Vol. I.
  2. M. Gr. Ed. by Dr. Fr. Knauer, ii, 14. 2. 8, p. 56.
  3. Bau. Dh. ii. 353.
  4. Arr. X.
  5. Pliny. VI. 17.

to indicate towns. The Mandasore inscription of Kumāragupta and Bandhuvarman refers to a city named Daśapura, the modern Mandasor.<sup>1</sup> The Indore copper-plate inscription of Skandagupta mentions Indrapuraka.<sup>2</sup> In the Allāhābād pillar-inscriptions of Samudragupta as well, we have puraka in Paiṣṭapuraka and Kausthalapuraka.<sup>3</sup> In the Āraṅg copper-plate inscription of Mahā-Jayarāja, mention is made of the city of Śarabhapura.<sup>4</sup> Draṅga is found to indicate a city in our inscriptions from West India. A copper-plate of Guhasena refers to Maṇḍaladraṅga.<sup>5</sup>

Towns are mentioned in the Epics also, and the descriptions contained therein seem to indicate that town life was well developed. The Rāmāyaṇa mentions nagaras (towns), and describes Ayodhyā, the city of Janaka,<sup>6</sup> and Laṅkā, the city of Rāma's adversary Rāvaṇa.<sup>7</sup> The Mahābhārata has less detailed descriptions of towns. The Ādiparva gives us a description of the construction of Indraprastha, with its fortifications and defences.<sup>8</sup> Kālidāsa also refers to towns.<sup>9</sup> There are passages in the Buddhacarita<sup>10</sup> and Lalitavistara<sup>11</sup> describing splendid and prosperous towns. Kauṭilya gives detailed plans

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1. G. I, p. 84.
  2. G. I, p. 69. Mon. Wil. gives puraka as another form of pura, or city.
  3. G. I, p. 7.
  4. G. I, p. 191.
  5. E. I. Vol. VIII, p. 339.
  6. Bāla. Ch. 5.
  7. Aranya Ch. 50, 55; Laṅkā, 75; Sundara, 2 & 11.
  8. Ādi. Ch. 207.
  9. Śak. I, 10, p. 6; Vik. II, p. 33.
  10. Bu. C. Chs. I & X.
  11. Lalit. Ch. III.

of fortress towns,<sup>1</sup> and the duties of the superintendent of the city shows what elaborate provisions were made for civil administration.<sup>2</sup> Vātsyāyana's Kāmasūtra<sup>3</sup> tells us much about cities and city life. The Manu Samhitā also has references to the building of towns, and Manu impresses upon the king the necessity for carefully selecting the site for the towns and forts and for their adequate protection.<sup>4</sup> All these references in the literary sources at our disposal testify to the existence of numerous towns in ancient India. The Chinese travellers Fa-Hien and Hiuen Tsiang also bear similar testimony. The places visited by Fa-Hien<sup>5</sup> in Northern India include Khotan, Ladakh, Kandāhār, Mathurā, Kanauj, Śrāvastī, Kapila, Kusinārā, Vaiśālī, Pāṭaliputra, Gayā, Kāśī and Tāmralipti. The list of Hiuen Tsiang<sup>6</sup> includes more cities than are given in the account of Fa-Hien, as he travelled more extensively.

That the ancient Indians were alive to the importance of towns is sufficiently obvious from the fact that the science of town-planning developed from times too remote to be pinned down with any definiteness by a date. The ancient treatises Science of town-planning on Vāstuvidyā and Śilpasastra deal mainly with the planning and construction of cities, and show how high a standard had been reached by the experts on architecture and town-planning of the times. Mānasāra and

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1. Arth. II, 3. 4.  
2. Arth. II, 36.  
3. Ks. Nāgaraka-vṛttam.

4. S.B.E. XXV, pp. 70, 237, 289.  
5. Legge, Travels of Fa-Hien.  
6. Watters, I & II.



Mayamata and other technical treatises deal elaborately with the planning of towns and villages, buildings, construction of temples, palaces, and so on.<sup>1</sup> Besides these technical works on city building and architecture, we also get descriptions of town-planning and city building in the Arthaśāstras<sup>2</sup> and Dharmaśāstras,<sup>3</sup> as well as the Purāṇas.<sup>4</sup> These indicate that although a large number of towns, perhaps the majority, arose promiscuously by spontaneous growth, quite a number of them were carefully planned cities constructed according to detailed plans.

Factors leading to the Rise of Cities.

The factors leading to the rise of cities are numerous. In the first place, cities originally grew out of villages, by their expansion and increasing importance. Then again a number of hamlets may have clustered round a market place, and by expansion of each village, the diffuse

- a) Expansion of areas probably coalesced into a single  
a village:  
amalgamation town. The names of many modern towns  
of several  
villages seem to indicate some such origin.<sup>5</sup>

A village may have been blessed by some natural resource, such as a mine, a bed of flint, marble rocks, a layer of clay, precious stones, trees suitable to the

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1. Cf. Br. S. Chap. 53 on Vāstusāstra.
  2. Arth. II. 3, 4. Śukra IV. 3. 115-6; I, 260-67, 429 ff.
  3. Manu VII. 70 ff; Viṣṇu III, 6.
  4. Matsya 217. 9-87; Rjñp, pp. 214-19 on Devī; Vāyu 8. 108 ff.
  5. Cf. Saptagrama, Caturgrama, Pentapolis (Ptolemy, 2. 2.)  
Cox's Bazaar, Bagerhat, Narayanganj, Dariaganj,  
and so on.

- b) A natural advantage cultivation of silk-worms, cotton-growing areas, and so on. The men of the village were probably not long in discovering the value to themselves of the possible products from these raw materials. And industries such as gold, silver and metal work of various kinds, stone-masonry, pottery, cutting of precious stones, silk and cotton textile-weaving, and so on, developed. In some villages, with an agricultural bias, these crafts had to be content with the subordinate position of a subsidiary occupation. But in other cases, being blessed with an unusually rich supply of raw materials, or owing to the skill
- c) Industrial villages of some pioneer craftsmen, villages became famed for a particular craft, expanded and grew wealthy through trade, and developed into localised industrial centres and then into fully-fledged industrial towns, which acted not only as centres of production but also of distribution. Quite often these growing towns must have attracted craftsmen and artisans from neighbouring villages, who were drawn thither by the greater scope for their skill and for purveying their goods offered by these places. This drift of craftsmen to the town, and the strengthening and developing
- d) Drift to the town of craftsmen of trade and industries, was one of the major factors in the growth of towns and the consolidation of their power and importance.

Then, villages dotted along important overland trade

routes, at the junction of great land routes, built on the

e) Villages on convergence of cross-roads and bye-paths,  
trade-routes: or cities built on rivers and lakes and on  
sea-ports and the sea coast, came to achieve a position  
river-ports of prestige as they developed, with the increase in trade and  
communications, into important commercial towns. The cities  
on the land routes were centres of inland trade, and the river-  
ports and sea-port towns, denoted by the special term pattana,  
commanded the foreign trade of the country. Sometimes the

f) Capital cities; royal palace and its precincts, by  
administrative continual expansion, must have developed  
centres into a regular town, and the rājadhānī or metropolis may have  
arisen by such an expansion. Sometimes places that were  
central in position and commanded the whole area may have been  
chosen as seats of administration and developed into important  
cities, the centre of its viṣaya or administrative district.

The Vihāras and ṭapovanas, which were educational and  
religious centres, sometimes attracted by their reputation for  
learning, by the fame and personality of renowned scholars,  
large numbers of students and pilgrims from all over the

g) Centres of country. Rest-houses were built as a natural  
learning result, and shops and other accompaniments of  
a populous centre followed. These religious and educational  
retreats developed into sacred cities and famous centres of  
learning and University towns, that were sometimes taken over  
by later authorities as seats of temporal power. The holy

city of Benares and the ancient cities of Taxila, Nālandā and Sārnāth had such a history. During our period, Nālandā, though mainly a great educational centre, has been described as a rich and populous city.

But a large number of our northern Indian cities arose out of military necessity as fortress cities built at strategic points and strongly fortified, commanding a wide area and joining together the military roads maintained by the State.

These were the watch-dogs of the kingdom, and were active both

h) Military necessity: in resisting invasions and in consolidating fortress towns conquests. The warlike nature of the

people, and the continual belligerent activities of the times, the constant internecine strife, precluded the possibility of purely commercial towns being able to exist. Apart from regular fortified outposts, each town was strongly guarded against attack by being shut in by a city wall, accessible only through strongly guarded gates, fitted with watch-towers and made further secure by moats all round. 'Pura', which is used to indicate city in our inscriptions and the Vedic literature, literally means a fort or rampart. In the Arthaśāstra, the word sometimes used for cities is 'durga', which means 'difficult to penetrate', in other words, a fortified city. The city of Pāṭaliputra was built by Ajātaśatru to resist invasion, and he therefore transferred his capital from Rājagṛha to it.

#### Different kinds of cities.

Cities were of different kinds according to the

situation and emphasis on the work carried on in them. The Śilparatna<sup>1</sup> gives a large variety of towns, such as kharvāṭa, durga, nagara, rājadhānī, pattana, dronika, śibira, skandhāvāra, sthāniya, virambaka, nigama, śākhānagara. Mayamata also speaks of some of these and gives their extent.<sup>2</sup> Kautilya gives in detail the construction of a fort, and a palace within the fort.<sup>3</sup> Śukra gives a description of the situation and lay-out of the ideal capital city.<sup>4</sup> From the hints we receive from our inscriptions, the suggestions of our literary sources and the accounts of foreign travellers, we have a fairly clear general picture of the typical city of our times.

#### Description of a City.

As in the case of the village, a town situated on the bank of a river would be very fortunate in its choice of site, as it would naturally command the waterways and hence the trade. The Mandasore inscription of Kumāragupta I and Bandhuvarman<sup>5</sup> tells us of Daśapura, which was situated on two rivers, which

Fleet suggests may have been Śiwanā and Sunli. The Site Gaṅgdhār stone inscription of Viśvavarman<sup>6</sup> relates how the king adorned a city on the banks of the river Gargarā with various public works. Megasthenes, in his description of Pāṭaliputra, shows how it was situated at the confluence of two

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1. Śil. R. Ch. V.
  2. Mayamata, X. 92.
  3. Arth. II. 3. 4.
  4. Śukra I. 425 ff.
  5. G. I., p. 85.
  6. G. I., p. 77-78.

rivers, the Ganges and the Erannoboas.<sup>1</sup> Kautilya decrees that defensive fortifications against an enemy's attack should be constructed on all the four quarters of the boundaries of the kingdom on grounds best suited for such a purpose. Then he suggests as suitable sites an island in the midst of a river, a plain surrounded by low ground, a mountainous region, such as a rocky tract or a cave, a desert, such as a wild tract devoid of water and overgrown with thickets growing in barren soil, or a forest full of wagtails, water and thickets. Of these, he thinks that the hill and river situation are best to defend populous centres.<sup>2</sup> Śukra suggests as a suitable site for a capital city "a place that abounds in various trees, plants and shrubs, and is rich in cattle, birds and other animals, that is endowed with good sources of water and supplies of grains, and is happily provided with resources in grasses and woods, that is bestirred by the movements of boats up to the seas, and is not very far from the hills, and that is an even-grounded, picturesque plain".<sup>3</sup>

The cities naturally varied as to size and population. Puraka is derived from pura, and is obviously smaller in size.<sup>4</sup> Some attention was given to the shape of the city. Megasthenes' description of Pātaliputra suggests that it was in the shape of a parallelogram.<sup>5</sup> Śukra decrees that the capital city

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1. McCrindle. Meg, p. 67-68.

2. Arth. II. 3. 4.

3. Śukra I. 425-28.

4. Cf. Grāma, Grāmaka, dealt with when discussing the village.

5. McCrindle. Meg, p. 66.

Shape should be in the shape of a half-moon, a circle or square. In any case, it should be symmetrical and beautiful.<sup>1</sup> Kautilya says that the shape of the king's fortified capital should be circular, rectangular or square in form.<sup>2</sup>

The city was girdled by a strong wall, crowned with towers, provided with gates and surrounded by ditches, to make it inaccessible from outside. Megasthenes in his description of Pāṭaliputra informs us that the city was walled in, that the wall was crowned with 570 towers and had 64 gates, and that the ditch encompassing it all round was 600 feet in

breadth and 30 cubits in depth.<sup>3</sup> In Fortifications Kālidāsa's Śakuntalā we are told of huge gates with long bolts,<sup>4</sup> and in Raghuvamśa of ramparts.<sup>5</sup> The city of Ayodhyā, we learn, had four gates.<sup>6</sup> Kautilya gives minute details for the construction of ditches, ramparts, towers and turrets.<sup>7</sup> Kāmandaka says that the king's fortress should be environed by a wide ditch and secured with gates strengthened with high and massive walls.<sup>8</sup> Śukra also says that the king's capital is to be surrounded by walls and ditches and furnished with four gates in four directions.<sup>9</sup> Fa-Hien tells us of the walls and gates of the palace of Aśoka, and was charmed by the

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1. Śukra I. 429-30.

2. Arth. II. 3.

3. McCrindle. Meg. p. 67-68.

4. Śak. I, p. 6.

5. Raghu VI. 43, p. 129.

(nitambah-prākāra).

6. Raghu XV, 60, p. 318.

7. Arth. II. 3.

8. Kām. IV. 57.

9. Śukra I. 429-30.



delicate carving and inlaid sculpture he saw executed in the palace. He also refers to the gates of Shā-che (Sāñci)<sup>1</sup> Hiuen Tsiang says that the country being low and moist, most of the city walls were of brick.<sup>2</sup>

It was customary to leave an open space round each city to serve as pasture grounds. Manu decrees that the open space round a city should be three times the Pastures width of that round a village.<sup>3</sup> We are told of the open space round the city of Ayodhyā.<sup>4</sup>

The buildings were high, storeyed structures. The Mandasore inscription of Kumāragupta and Bandhuvarman tells us of houses that were very white and extremely lofty, of other long buildings on the roofs of the houses, of houses rising up, decorated with successions of storeys, in the city of Daśapura.<sup>5</sup> Hiuen Tsiang talks of buildings that were of extraordinary height, that to him looked like those of China.

Houses The walls of the houses and enclosures were of wattled bamboo or wood; the city halls and terraced belvederes had wooden flat-roofed rooms, were coated with chunam, and covered with tiles burnt or unburnt. The houses,

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1. Legge, p. 54, 77.

2. Watters, I, p. 147. Cf. Br. S. 53. 23. There has been a certain amount of difference of opinion regarding the material out of which the city walls were constructed. Hopkins thinks that they were made of mud, or wood, following Megasthenes (J. A. O. S. XII, pp. 174-176, Hopkins), while Marshall says that from the evidence of Mohenjodaro, stone and bricks seem to have been used (Marshall, I, pp. 15-26).

3. Manu. VIII, 237.

4. Raghu. XV. p. 60, 318.

5. G. I., p. 85.

thatched with coarse or common grass, were of bricks or boards; their walls were ornamented with chunam; the floor was purified with cow-dung and strewn with flowers of the season.<sup>1</sup>

There were also city halls, jails, vihāras, and in Other Buddhistic centres, there were monasteries. All buildings these have been described by Hiuen Tsang,<sup>2</sup> and both he and Fa-Hien<sup>3</sup> were wonder-struck by the remarkable architecture of the monasteries. Moreover, a city had irrigation works, pleasure gardens, orchards and public works of various kinds. In the Gaṅgadhār stone inscription we are told that Viśvavarman adorned the city on the banks of the Gargarā "with irrigation wells, tanks, temples and halls of the gods, drinking wells and pleasure gardens of various kinds, Public and causeways and long pools".<sup>4</sup> Kālidāsa considered works gardens (pramadāvana) to be ornaments of every household.<sup>5</sup> There were gardens of different kinds:- private gardens,<sup>6</sup> town or public gardens,<sup>7</sup> palace gardens,<sup>8</sup> which were colourful with flowers and fruits. The flower gardens were planned and beautifully laid out, provided with Gardens tanks, arbours of creepers having seats and swings

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1. Watters, I, p.147.
  2. Ibid. II, pp.88-89; 164-170.
  3. Legge, pp.55-56.
  4. G.I., pp.77-78.
  5. Mal. III, p.55.
  6. Gr̥hopavana, Raghu VIII, 32, p.166.
  7. Nagaropavana, Sak. I. 10, p.6.
  8. Pramadāvana. Vik. II, p.33.

either in bowers or in the open.<sup>1</sup> There were mounds and crystalline posts for peacocks to disport themselves,<sup>2</sup> and raised seats under large shady trees.<sup>3</sup> Kauṭilya decrees that every ten houses were to have their own water well, that there should be shops, hospitals, cremation and burial grounds, and shrines for the guardian deities of the city.<sup>4</sup> Śukra advises that the capital city be adequately provided with wells, tanks and pools,<sup>5</sup> that there be rest-houses for travellers, and that in the market-place stalls or shops are to be placed, according to the classes of commodities.<sup>6</sup> Hiuen Tsang's account tells us that shops were on the highways, and booths (inns) lined the roads. Butchers, fishermen, public performers, executioners and scavengers had their habitations marked by a distinguishing sign. They were forced to live outside the city and their social position was very low.<sup>7</sup> Kauṭilya allocates different parts of the city to different sections of the people, of all castes, positions and occupations, the various crafts and trades being localised in different quarters of the city, and being placed with the different castes.

Distribution according to the social esteem in which the  
of  
population particular profession or trade was held at that time. Thus, in the north, with the Brāhmaṇas, were placed ironsmiths and artisans working on precious stones; on the

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1. Raghu XIX, 9, p.378; 23, p.382; IX, 46, p.194.
  2. Megh. I. 60, p.47.
  3. Kum. III, 44, p. 55.
  4. Arth. II. 4.
  5. Śukra I, 431-33.
  6. Śukra I, 513, 516.
  7. Watters, I, p.147.

eastern side, merchants trading in scents and garlands, expert artisans, and others congregated with the Kṣatriyas; to the south, superintendents of various state departments, traders in liquor, flesh and cooked rice, musicians and courtesans, lived in the same region as the people of the Vaiśya caste; and in the west dwelt the artisans carrying on the humbler trades of manufacturing cotton and worsted threads, bamboo-mats, skins, weapons, armour and gloves, with the people of Śūdra caste.<sup>1</sup>

#### City Administration.

There were certain state officials who were in charge of the affairs of the city. These were the city superintendent or nāgaraka, the accountants, sthānika and kopa, and superintendents in charge of various state departments, such as the state goldsmith in charge of the mint, the superintendents of passports, of ships, of military departments, of the arsenal, of tolls, and so on. Their functions have been copiously and comprehensively described by Kauṭilya.<sup>2</sup> We may here touch upon the duties of those officials directly concerned with the maintenance of law and order in the city, and who were in charge of the upkeep of public health, the sanitary arrangements and other public duties. There were other municipal bodies or corporations which were composed of representatives of different elements of city life, and they were called upon to assist the state officials in the discharge of their duties.

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1. Arth. II. 4.

2. Arth. II.

In the chapter on Nagarādhyakṣa, Kauṭilya discusses in detail the general administration of the city. The city superintendent was the nāgaraka, who was City Superintendent responsible to the king, and he was to report to the king on all aspects of the administration of the city. He was to make a personal inspection of the reservoirs of water, of roads, hidden passes, forts, fort-walls and other defensive works. He was also to keep in custody all articles lost or left behind by their owners. In cases of negligence he was to be punished according to the gravity of his offence.<sup>1</sup>

Under him were his assistants, the sthānika and gopa, who were placed in charge of different quarters or wards, into which the city was apparently divided. The gopa was to keep the accounts of ten, twenty or forty households. He Gopa was not only to know the caste, gotra, name and occupation of both the men and women in those households, but also to ascertain their income and expenditure. The sthānika was Sthānika to attend to the accounts of the four quarters of the capital. These officers were also in charge of maintaining law and order, for which watchmen and spies were engaged to exercise the greatest possible control, and to detect and report the movements and activities of suspicious characters likely to prove a source of trouble. These people, if found guilty of breaking rules, were to be arrested and punished.<sup>2</sup>

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1. Arth. II. 36.

2. Ibid.

Kautilya lays down several laws for the upkeep of public health. Throwing dirt in the street, causing water to collect in the street, spoiling the reservoirs of water, desecrating the places of worship and pilgrimage, throwing on the roads the carcasses of dead animals, carrying corpses through gates and along paths other than those prescribed, cremating the dead in spots other than the grounds reserved for such purposes, and similar offences, were to receive stringent punishment. Public Health Manu also enjoins that the streets should be kept clean. Dropping filth on the king's highroad was fined, and the dirt was to be removed immediately.<sup>1</sup> For checking the work of medical practitioners, it was decreed that they were to report to the civic authorities any cases of infectious disease coming to their notice that might affect public health. Special measures were also adopted to check and prevent the outbreak of epidemics. Provision against fires, Provision against fires and the quenching of fires when they did break out, were regarded as public duties, and obligatory on every individual. Water-pots and other apparatus were to be kept handy in the streets and in every house, so that fires could be quickly and effectively controlled. Failure to assist in quenching a fire in the neighbourhood was punishable by fines.<sup>2</sup>

Other duties The officers had other multifarious duties to perform, such as the keeping of a census of the inhabitants,

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1. Manu. IX. 282.

2. Arth. II. 36.

their income and expenditure; the entertaining and guiding of foreigners, and so on. In times of emergency, curfew order was proclaimed by sounding trumpets, prohibiting the movement of people within certain hours, except in very special cases.<sup>1</sup>

Megasthenes gives a description of similar municipal administration in Ancient India. There were certain state officers placed in charge of the city, as has been recorded in the fragment of Strabo, which says: "Of the great officers of the states, some had the charge of the market, others of the city, others of the soldiers". Some also superintended the river, measured lands, and so on. But those who were in charge of the city were divided into six bodies of five each. Thus altogether there were 30 members. As to the duties of these boards, the account says, "the members of the first look after everything relating to the industrial arts. Those of the second attend to the entertainments of the foreigners.

Greek  
observations  
on city  
administration

To these they assign lodging and they keep watch over the modes of life by means of those persons whom they give to them for assistance. They escort them on the way when they leave the country, or in the event of their dying, forward their property to their relatives. They take care of them when they are sick, and if they die, they bury them. The third board consists of those who enquire when and how births and deaths occur with a view not only to levying a tax, but also in order that births

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1. Arth. II. 36.



and deaths among both high and low may not escape the cognizance of the government. The fourth class superintends trade and commerce. Its members have the charge of weights and measures, and see that the products in their seasons are sold by public notice. The fifth class supervises manufactured articles which they sell by public notice. The sixth and last class consists of those who collect the tenth of the prices of the articles sold.<sup>1</sup> These bodies discharged all these functions, working separately. But they also used to work conjointly to fulfil some duties. We have been told that "in their collective capacity they have charge of these special departments and also of matters affecting the general interest, as the keeping of the public buildings in proper repair, the regulation of the prices, the care of the markets, harbours and temples".<sup>2</sup> Besides these, there was also another body which directed military affairs and which consisted of six boards with five members each.

Some of these functions of the elaborate governmental machinery have been described by Kauṭilya as coming under the jurisdiction of the nāgaraka, the śopa and the sthānika. The rest of the functions are covered by the chapters in the Arthaśāstra relating to the duties of the superintendents in charge of various departments.<sup>3</sup>

These officials were assisted in their work by the advisory board or town council, consisting of prominent citizens representing powerful interests within the city. Archaeological

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1. McGrindle. Meg., p. 87.

2. Ibid, p. 87-88.

3. Vide Arth. Bk. II.

evidence gives us some indication of the composition of these town councils. From the Dāmodarpur copper-plate The Town Council inscription<sup>1</sup> we see that in the case of a land transaction an advisory board, consisting of four important members of the community, participated actively in the duties devolving on those who took charge of the matter. These were the nagara-śreṣṭhin, the prathama-sārthavāha, the prathama-kulika and the prathama-kāyastha, whom R. G. Basak makes out to be the president of the guild, the chief merchant, the chief artisan and the chief scribe. The Basārḥ seals also corroborate these indications as to the municipal development in our period. These corporations sometimes issued coins and used seals, bearing the names of the different members of the board, indicating their office.<sup>2</sup> The Nāsik Cave inscription<sup>3</sup> further shows that the terms of a royal or private endowment were publicly announced in the town-hall (nigamasabhā) and then duly registered (nibaddha).

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1. E. I. XV, p. 113 ff.

2. A. S. I. R. 1903-4.

3. E. I. VIII. 12, v; 15, viii.

## CHAPTER V

### TRADE AND INDUSTRY

#### 1. CRAFTS AND INDUSTRIES

Natural resources of India. Mineral resources -- animal products -- plant produce. Industrial products from them. Crafts and Industries.

"Ancient industry is merely an extension of the exploitation of the soil". Village life is based on the livelihood wrested from the soil. But a country has other natural resources and raw materials that the ingenuity of man has turned to his benefit from time immemorial. Artisans, craftsmen and traders arose as a class which based its prosperity on turning these materials into products for human use, and trading them with people of other places. India has ever been rich in a variety of natural resources, and in ancient times her wares found a ready and appreciative market in foreign lands. Ancient industry was built up from the raw materials derived from the soil, or else growing on, or otherwise connected with it. Early classical writers have India rich in natural resources testified to India's mineral wealth, and the skill and ingenuity of her craftsmen. Dionysius, writing probably towards the third Christian century,<sup>1</sup> says: "They (the Indians on the other side of the Indus) are variously occupied - some by mining seek for the matrix of

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1. McCrindle - Classical Literature, p.187.

of gold, digging the soil with well-curved pickaxes; others ply the loom to weave textures of linen; others saw the tusks of elephants and varnish them to the brightness of silver; and others along the courses of mountain torrents search for precious stones - the green beryl or the sparkling diamond, or the pale green translucent jasper, or the yellow stone or the pure topaz, or the sweet amethyst which with a milder glow imitates the hue of purple".<sup>1</sup> Megasthenes describes the people as well-skilled in arts, and says that the artisans formed a separate caste, being fourth in the list of seven castes into which he divides the people of India. He says of them: "Of these some are armourers while others make the implements which husbandmen and others find useful in their different callings. This class is not only exempted from paying taxes, but even receives maintenance from the royal exchequer".<sup>2</sup> These accounts indicate that the ancient Indians followed various industrial pursuits, and that the State used to encourage the artisans, who formed a separate class.

#### Mineral Resources.

The natural resources that gave rise to these industrial pursuits may conveniently be divided into (a) mineral resources, (b) animal products, and (c) plant produce. An inscription of Prabhāvatī-gupta indicates the existence of mines by granting a village with its hidden treasures and

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1. McCrindle: Class. Lit., p.188.

2. McCrindle: Ancient India, pp.30, 40.

deposits but not yielding the king's right to mines.<sup>1</sup> The potential wealth of mines was recognised by converting them into a state monopoly. The mineral wealth consisted of metals, precious and semi-precious stones, stone and marble, clay and salt. The metals occurred in the form of ores, or as compounds; from them the pure metals, gold, silver, copper, lead, tin, iron and mercury were obtained, while alloys Metals such as brass and bronze were formed. The allied sciences of metallurgy and minerology were developed to a high degree for the ancient Indians to have separated the metals, and used them for various purposes. The Arthaśāstra devotes a whole chapter to mining operations, and details the functions of various officials in charge of the raw materials, the manufactured goods derived from them, and commerce in these Knowledge of commodities. Śulbadhātusāstra, the science of Metallurgy extracting minerals; rasapāka, the process for and the distillation and condensation of mercury; Minerology and gemmology, were some of the branches of knowledge that had to be mastered in order to convert the products of the mines to manufactured goods.<sup>2</sup> Kauṭilya gives detailed instructions for recognising different ores, extracting metals from the ore, and chemical treatment of the metals.<sup>3</sup> A superintendent of mines was to be in charge of mining operations, while a separate official should handle the extraction of metals and

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1. E. I. Vol. XV. p. 43.

2. Arth. II. 12.

3. Ibid.

Superintendents the manufacture of commodities from them.<sup>1</sup>  
of mines  
and metals Of these metals, gold, being the most  
valuable, was the most sought after, and from very remote  
times the Indians were experts in digging for gold. Herodotus  
says of India, "There is abundance of gold there, partly dug,  
partly brought down by the rivers, and partly seized by the  
manner I have described,"<sup>2</sup> and Megasthenes confirms this by  
stating that "the ground is impregnated with gold and the  
Indians thence obtain their gold".<sup>3</sup> We are further told that  
Gold "the inhabitants on the other side of this mountain  
(Mount Abu) work extensive mines of gold and silver".<sup>4</sup>  
Strabo, quoting Megasthenes, gives an account of ant-gold;<sup>5</sup>  
Periplus mentions gold mines near the Gangetic plain and the  
region beyond,<sup>6</sup> which Schoff thinks was probably the gold of the  
Chotanagpur plateau, the rivers flowing north and east of this  
high land bringing down considerable quantities of alluvial  
gold.<sup>7</sup> Silver mines were noted by Pliny along with gold, near  
Silver Abu. According to Ptolemy, Ceylon had mines of gold,  
silver and other metals.<sup>8</sup> Sugrīva's search party in  
the east came across the land of silver mines, and further east  
the island of Rūpakadvīpa.<sup>9</sup> Kauṭilya mentions ores of gold,

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1. Arth. II. 12.

2. Hero. III. 106.

3. McCrindle: Ancient India, p. 222.

4. Ibid, p. 148.

5. McCrindle, p. 94-95.

6. Schoff: Periplus. 63, p. 47-48.

7. Ibid, p. 258 - Names like Hiranyavāha, changed by the classical  
writers to Erannoboas, and Suvarṇabhūmi and Suvarṇadvīpa  
(Rām. IV. 40, 30) suggest association with gold deposits.

8. Ptolemy. 4. 1.

9. Rām. IV. 40. 23.

Other Metals silver, copper, lead, tin, iron and mercury and various amalgams of these metals;<sup>1</sup> and Brhaspati refers to workers in gold, silver and base metals.<sup>2</sup>

These metals were converted into various essential articles, as well as articles of luxury, and skilled crafts and flourishing industries developed from them. Gold, silver, tin Industrial Products from metals and copper were used to make coins, and a superintendent was appointed to be in charge of the mint,<sup>3</sup> and many artisans were employed in the office of the state goldsmith.<sup>4</sup> Beautiful and intricate jewellery of gold set with precious stones has ever been popular with the women of India, and even to-day is as much in vogue as ever, so that the art of the goldsmith in India has a long history behind it. Our inscriptions have many references to ornaments. The Mandasore inscription of Kumāragupta tells us of ear-ornaments and hāra or necklaces.<sup>5</sup> In the Aphsā stone inscription of Ādityasena we read that King Dāmodaragupta gave away in marriage a hundred daughters of Brāhmanas endowed with ornaments.<sup>6</sup> The Māliyā copper-plate of Dharasena speaks of the kings and princes of the opposing sides wearing jewels in their hair.<sup>7</sup>

Ornaments Similar references to jewels worn in the locks of of hair are found in the Alīnā copper-plate,<sup>8</sup>

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1. Arth. II. 12.
  2. Br. XIV. 27. XVI, 6.
  3. Arth. II. 12.
  4. Ibid. II. 14.
  5. G. I. p. 85.
  6. G. I. p. 206.
  7. G. I. p. 168.
  8. G. I. p. 182-83.



and Dharasena III has been described as wearing great jewelled bands on his arms.<sup>1</sup> In many later inscriptions, we get numerous references to ornaments and jewellery, to "flowers made of precious stones, necklaces, earrings, anklets, garlands and golden bracelets", worn by the wives of the king's servants.<sup>2</sup> The same inscription mentions temple-girls wearing jewellery.<sup>3</sup> In the Ayodhyā-kāṇḍa<sup>4</sup> we are told of the gift of jewels made by sea-going merchants and other traders. Hiuen Tsiang also comments on the wearing of jewellery: thus, "The dress and ornaments of the kings and the grandees are very extraordinary. Garlands and tiaras with precious stones are their head ornaments and their bodies are adorned with rings, bracelets and necklaces".<sup>5</sup> The extensive use of ornaments indicates the high degree of craftsmanship reached by the gold and silversmiths and jewellers. Kautilya gives a detailed description of the different kinds of ornaments - Kāñcana, made of pure gold, prṣita, which were hollow ornaments, and tvaṣṭṛ, gems set in gold. Goldsmiths were skilled in three kinds of ornamental work - kṣepaṇa or setting jewels in gold, filigree work which was called guṇa, and kṣudra or work that was less fine, being work in solid gold, making hollow ornaments, and making globules with rounded orifices. Then there was

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1. G. I. p. 184.

2. Inscriptions of Bengal, Majumdar, p. 52.

3. Ibid. p. 55.

4. Ayodhyā. Ch. 82.

5. Watters, Vol. I, p. 151.

enamelling in various colours, blue, red, white, yellow, parrot and pigeon colours. Touchstones were used to test gold, and the proportion of gold and silver to be used for different kinds of ornaments should be well known by the goldsmith.<sup>1</sup> Those employed in the lower branches of the craft had to know various kinds of kārūkarma or artisan work, namely compact and hollow work, soldering, amalgamation, enclosing and gilding.<sup>2</sup>

Gold and silver were used for making articles of luxury. Perhaps the most essential and widely used of the metals then, as now, was iron. It was used in making agricultural implements, vessels, utensils and instruments for various purposes, as well as weapons, armour, parts of chariots and other accoutrements of war. The continual warfare, and hence the need for battle-equipment, must have given a considerable impetus to the development of knowledge relating to metals, and particularly to iron and steel. The crafts of the blacksmith, the armourer and the maker of utensils developed, and their skill was no doubt put to the test and received further incentive to attaining higher degrees of excellence with the rivalry between the kings. The Allāhābād pillar-inscriptions of Samudragupta bear reference to battle-axes, arrows, spears, swords, lances, iron arrows and many other weapons.<sup>3</sup> Kaṭilya mentions innumerable weapons, the

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1. Arth. II. 13.

2. Arth. II. 14.

3. G. I. p. 12.

manufacture of which seems to have been quite extensive.

The superintendent of the armoury should employ experienced workmen to manufacture wheels, weapons, mail armour and other

accessory instruments for use in battles, in the  
Weapons construction and defence of forts or in destroying cities and strongholds of enemies. Then he gives a list of many mechanical devices, immovable and movable machines, weapons with edges, razor-like weapons, such as scimitars, axes and discs, swords, and goads for driving elephants.<sup>1</sup> Iron

was largely used in their construction. Hiuen Tsiang, in describing the army, says that "they bear large shields and carry a long spear; some are armed with a sword .... they are perfect experts with all implements of war, such as spear, shield, bow and arrow, sword, sabre, etc.". He also mentions the coat-of-mail covering the war-elephant and the sharp barbs attached to the tusks.<sup>2</sup> Some arrow-heads and spear-heads have been found among the antiquities discovered by archaeological excavations at Pāhādpur and other places, and it is interesting to note that the Agni-Purāṇa describes Aṅga and Vaṅga as important centres of sword manufacture.<sup>3</sup> Iron was widely used for making vessels. A later inscription of Bengal mentions water-pots

of iron.<sup>4</sup> And many of the instruments like the  
Vessels balance, weights, measures, pestle and mortar which are mentioned as necessary for the work in Kauṭilya's storehouse<sup>5</sup>

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1. Arth. V. 18.

2. Watters I, p.171.

3. P. Chakravarty: The Art of War in Ancient India, p.163-64.

4. Ins. of Beng., Majumdar, p.128.

5. Arth. II. 15.

and a wide variety of kitchen utensils and other vessels, must have been made of iron.

Bronze, copper and brass were used for making casts and images, and vessels and utensils also. Copper was also used Other metal for coins, and for the copper-plates on which goods and the various inscriptions were inscribed. metal-workers Various metal-workers, makers of utensils, makers of casts and images, and engravers flourished by working on these materials. The Mandasore stone pillar-inscription of Yaśodharman mentions one Govinda, who engraved the inscription.<sup>1</sup>

Then there were the precious and semi-precious stones. Kauṭilya places these in the charge of the superintendent of Precious and of ocean mines, whose duty it was to attend semi-precious to the collection of diamonds, pearls, precious stones stones, corals, conch-shells and salt. He was also to regulate the commerce in these commodities.<sup>2</sup> In the Śānti-parva, delving down into the ocean for hidden wealth is one of the vārttās.<sup>3</sup> Pearl-fishery was a flourishing industry in Pearl-fishery Ceylon and in the Tamil countries. Pliny describes it, and says that like bees, swarms of oysters were led by clever and flitting ones. If these were caught, the others were soon netted. "They are then put into earthen pots where they are buried deep in salt. By this process the flesh is all eaten away, and the hard

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1. G.I. p.148.

2. Arth. II. 12.

3. Śānti. 167. 33.

concretions, which are the pearls, drop down to the bottom".<sup>1</sup> The tortoise-shell which figures in the Periplus,<sup>2</sup> as an important export from India, may be a southern product, so also the beaded pearls of Sitāstīara which were claimed to have been raised from the sea.<sup>3</sup> Mother of pearl must have been used for various fancy articles, while diamonds, pearls and the host of precious and semi-precious stones mentioned by Kauṭilya and Dionysius were used for jewellery, either by themselves, or set in gold. Several varieties of pearl necklaces, in various combinations with gems, with different names according to design and the number of strings of pearls comprising them, are given by Kauṭilya. Strings of pearls were used as Pearl necklaces, tiaras, bracelets, anklets waist-bands,<sup>4</sup> ornaments and a later inscription from Bengal refers to necklaces of pearls.<sup>5</sup> Kauṭilya gives the sources of diamonds as mines, streams and other miscellaneous places, and describes the colour and lustre that would mark the best Diamonds quality of stones.<sup>6</sup> He also mentions coral of two varieties of ruby colour.<sup>7</sup> Conch-shells have ever been used in religious ritual and social ceremonies. The crafts and callings of the pearl-fisher, the vendor of conch-shells and articles of shell and mother-of-pearl, and the jeweller arose

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1. Pliny. IX. 55.

2. Peri. 17.

3. Rām. V. 40. 8.

4. Arth. II. 12 - The Bilsad stone pillar-inscription of Kumāragupta compares a stair-case leading to heaven to a pearl necklace of the kind called kauvera-cchanda (G. I. p. 45.)

5. Ins. of Beng., Majumdar, p. 77.

6. Arth. II. 12.

7. Ibid.

in turning these resources to human use.

Salt was also obtained from the ocean, and after its crystallization the state superintendent of salt collected the money and the quantity due to the State. It was obviously a flourishing industry, and a state monopoly, providing the State with much revenue. Kautilya says "Men learned in the Vedas, persons engaged in penance, as well as labourers may take with them salt for food; salt and alkalis for purposes other than this shall be subject to the payment of tolls".<sup>1</sup> From our inscriptions, it is clear that salt mines and salt deposits were state monopolies. The Chammak and Siwanī copper-plates of Pravarasena II, in granting lands, say that the right to the mines for the purchase of salt in a moist state was not included.<sup>2</sup> In later inscriptions from Bengal

villages with pits and salt lands are granted.<sup>3</sup> In Salt the Irdā copper-plate a village is granted along with lavanā-karāḥ (salt pits)<sup>4</sup> and in the Rāmpāl and Belāva copper-plates reference is made to the granting of villages along with salt (salavanah).<sup>5</sup> Manufacture of salt by evaporation of sea-water is also obvious from the Arthaśāstra.<sup>6</sup>

Then there were the stone-quarries, the marble deposits and the clay-pits that gave work to the sculptors, the architects, the stone-cutters, masons, engravers and

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1. Arth. II. 12. Cf. Mbh. XII. 269. 29.

2. G. I. pp. 242, 249.

3. Barrackpur grant of Vijayasena. E. I. XV, p. 286.

4. E. I. XXII. pp. 155, 158.

5. Ins. of Beng., p. 21.

6. Arth. II. 12.

potters. Stone was much used for architectural and building purposes in the construction of palaces, Stone and stone-workers temples and other edifices, pillars, columns, flights of steps, irrigation works, and for making images and carved stone objects like crystal bowls and stone coffers with exquisite chiselling done on them, such as the specimens discovered in the Sakiya tope. The Junāgadh rock-inscription of Rudradāman tells us of the tank being lined with stone and fitted with steps and balustrade.<sup>1</sup> The Kahāum stone pillar-inscription of Skandagupta tells us that he set up five excellent images made of stone.<sup>2</sup> Many inscriptions called praśastis were inscribed on stone pillars,<sup>3</sup> and there were also numerous stone image inscriptions, such as the Mankuwār stone image inscription of Kumāragupta, the Shāhpur stone image inscription of Ādityasena, the Mathurā, Kosam, Deoriā, Kasiā and Gayā stone image inscriptions.<sup>4</sup> A high degree of craftsmanship is revealed in the sculptured work in stone, in images and bas-reliefs on columns and pillars adorning palaces, monasteries and temples. The Chinese travellers Fa-Hien and Hiuen Tszang were both charmed by the architectural skill and the exquisite carvings they saw in the Buddhist monasteries and in Aśoka's palace.<sup>5</sup>

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1. E. I. VIII. 6.

2. G. I. p. 68.

3. G. I. pp. 1, 18, 42, 47, 65, 87, 88, 110, 142, 149, 251, 252, 279, 281,

4. G. I. pp. 45, 208, 262, 271, 272, 273, 278, 280, 281.

5. Legge, p. 55-56; Watters I, p. 165.



Pottery arose as a craft in making use of beds of clay. Archaeological discoveries have included much pottery ~~in the~~ Clay in the form of storage jars, vases or lotās, <sup>o</sup>oking and Pottery utensils, dishes, saucers, ink-pots and lamps of various designs, found at Pāhādpur, Ahicchatra, Nālandā and other places. The clay modellers' art is best expressed in the terra-cotta plaques and figurines discovered in several places in northern India. From Bāna's account, we learn that moulded clay figures were much used on festive occasions. At the time of Rājyasrī's marriage, numerous modellers moulded clay figures of fishes, tortoise, crocodiles, coconuts, plantains and betel trees,<sup>1</sup> and also human clay figures. The pottery industry was largely rural and the potters made their earthen pots with clay and the wheel<sup>2</sup>, just as they still do in the villages of India. But for exhibition and sale of his wares the potter probably had to trudge to the nearest urban settlement.

#### Animal Products

Animal products of commercial importance were ivory, wool, silk from the silk-worm, and the skins, bones, teeth, gut, bile, fats, horns, hoofs and the tail of the lizard, leopard, porpoise, lion, tiger, elephant, buffalo, yak, rhinoceros and gavial, as well as other animals, birds and reptiles.<sup>3</sup> Honey was also used, and bee-keeping must have

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1. Cowell and Thomas, p.124.

2. Mbh. 3. 11. ff.

3. Arth. II. 17. 29.

been known.<sup>1</sup> These products gave rise to crafts such as that of the ivory-worker, the silk-weaver, blanket-maker, tailor, tanner, cobbler and leather-worker. Ivory is the most valuable of these products. Kautilya says that whoever brought Ivory in the tusks of an elephant, dead from natural causes, was to receive a reward,<sup>2</sup> and the tusks of living elephants were cut off at some distance from the roots, once in  $2\frac{1}{2}$  years in the case of river elephants, and once in five years for mountain elephants.<sup>3</sup> The Periplus mentions "the region of Dosarene yielding the ivory known as Dosarenic",<sup>4</sup> The Rāmāyana refers to ivory-workers,<sup>5</sup> and later inscriptions allude to "dantakaras"<sup>6</sup> and "plan-staffs made of elephants' tusks."<sup>7</sup>

Ivory Many fancy articles must have been made of ivory, and workers sword handles were often of horn or ivory.<sup>8</sup> That tanning and leather-work were important industries and formed a Hides and a valuable source of revenue is clear from the fact leather that in some grants of lands rights over hides were workers reserved. Thus in the Chammak and Siwanī copper-plates of Pravarasena II it is stated that the grant of the village "does not carry with it (the right to) cows ... to the pasturage, hides, etc."<sup>9</sup> Manu asks the Brāhmana to desist from wearing

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1. Arth. II. 15.
  2. Arth. II. 2.
  3. Arth. II. 32.
  4. Schoff, p. 47.
  5. Rām. II. 83. 12 ff.
  6. Bhāṭerā plate. E. I. XIX, p. 286.
  7. Ins. of Beng., Majumdar, p. 127.
  8. Arth. II. 18.
  9. G. I. pp. 242. 249.

leather shoes,<sup>1</sup> and describes the leather-cutter as impure.<sup>2</sup> Kaṭilya describes different kinds and qualities of skins from different places,<sup>3</sup> the soft, smooth and hairy variety being the best. The furs were made into rugs and coverlets, and that leather shoes were worn from early times is clear from the account of Megasthenes, who says, "The Indians wore shoes made of white leather and these are elaborately trimmed while the soles are variegated and made of great thickness to make the wearer seem so much taller".<sup>4</sup> Wool was made into warm clothing and blankets. Kaṭilya mentions ten kinds of woollen blankets, Wool according to texture and use, and woven from the wool of sheep or wild animals, of uniform colour, of various colours, or made up of different coloured pieces.<sup>5</sup> Kambalas are mentioned in the Mahābhārata. Janaka's gift included Blankets kambalas.<sup>6</sup> Yudhājit is also described as making a present of kambalas and cloth with designs.<sup>7</sup> Pliny speaks of silk-worm cocoons bred on mulberry trees.<sup>8</sup> Periplus mentions raw silk, silk yarn, and silk found at the mouth of the Indus and Ganges, at the Gulf of Cambay and in Travancore, whither it had been brought by various Silk routes from north-west China<sup>9</sup>, and also silk cloth brought by the people as presents to the king and as market

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1. S. B. E. Vol. XXV, pp. 62, 63

2. Ibid. p. 163.

3. Arth. II. 11.

4. McCrindle. Meg. (Arr. XVI.)  
p. 220.

5. Arth. II. 11.

6. Bāla. Ch. 74. 5; Mbh. I. 30. 27.

7. Uttar. Ch. 114.

8. Schoff, p. 76.

9. Schoff, pp. 38, 48, 172.

commodities for export to the western world.<sup>1</sup> Silk was produced in India, and also imported from China. Kautilya mentions cīnapaṭṭaka, Chinese silk, and kauśeya, silk from Kāśī or Benares, which is still noted for its silk industry. Silk-

Silk-weavers weavers are mentioned in the Mandasore inscription<sup>2</sup>, which also refers to silken clothes.

These products gave rise to the occupations of spinning and carding of wool and silk, their weaving into fabrics and their tailoring into garments. Many people must have been employed in these pursuits.<sup>3</sup>

#### Plant Produce.

Forest produce that yielded manufactured goods were timber, bamboo, cane, bark, leaves, flowers, seeds, cotton, flax, hemp, jute, fibrous plants. The Arthaśāstra recommends that manufactories be set up to prepare commodities from forest produce.<sup>4</sup> Timber was used for buildings of all kinds, for ships,

furniture, and carved wooden articles of all sorts. The wood-

Timber cutter, the carpenter, the furniture-maker, the chariot maker, the shipbuilder, the wood-carver, the architect,

all derived their pursuits from this forest product. The Karle

Cave inscription mentions a carpenter.<sup>5</sup> That there was a considerable ship-building industry is apparent from Kautilya's recommendations about ships and shipping, in detailing the duties of the superintendent of ships.<sup>6</sup> Bamboo and cane

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1. Schoff, pp. 42, 45, 48.

2. G. I. p. 85.

3. Arth. II. 11. 23.

4. Arth. II. 2. 17.

5. E. I. VII. p. 53.

6. Arth. II. 28.

Bamboo  
and cane:  
bamboo  
workers

produced the bamboo-workers mentioned in an inscription at Junnār,<sup>1</sup> who made mats and other articles. Basket-work and wicker-work was carried

on. Perfumery was a calling derived from plant products, and the distillation of scents and ointments was a highly specialised industry in ancient India. A Jaina

Perfumery inscription from Mathurā,<sup>2</sup> and a Karle Cave inscription,<sup>3</sup> mention dealers in perfumes. In the Periplus different varieties of perfume are mentioned as exports from India to the Roman world<sup>4</sup>. Of all scents, sandalwood is the most important. It has been known in India from very early times, and the two varieties naktacandana and śvetacandana are both essential in Hindu religious rites. Its mention in the Periplus<sup>5</sup> seems to be the earliest Roman reference to it.<sup>6</sup> The wood was rubbed into a

Sandalwood paste, or oil was extracted from it and mixed with

aloe and used as a beauty aid. The Arthasāstra enumerates many varieties of sandalwood<sup>7</sup>, and Vātsyāyana in his Kāmasūtra refers to a fragrant ointment, anulepana, made of sandalwood paste, used by the Nāgaraka.<sup>8</sup> Amongst a variety of fragrant substances, Kautilya also mentions agaru or aloe.

Aromatic gums and unguents from India were among the most sought-for exports to the Roman world. In classical works India has

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1. Ibid. No. 1165.

2. E.I. I, plate 7, p. 386.

3. E.I. VII, p. 52.

4. Schoff, pp. 113, 114, 124, 190, 217.

5. Peri. 36.

6. Schoff, p. 152.

7. Arth. II. 11.

8. A.M.J.C. Vol. III, pt. I, p. 339.

been noted as the chief producer of aromatic herbs, roots and Aromatic gums and unguents resinous gums. Nard, which "holds the first place among unguents"<sup>1</sup> myrrh, cardamum, spikenard, macri, are all mentioned by Pliny<sup>2</sup> and were aromatic or medicinal herbs. Embalming and preserving dead bodies with the help of these ointments and balms was also known.<sup>3</sup> Perfumes were distilled from flowers and mixed with crude sesamum oil.<sup>4</sup> In Flower perfumes the Kuru war, the fighters from Andhra are said to have rubbed powdered scent on their bodies.<sup>5</sup>

Another important industry derived from plant products was dyeing. Among Indian exports to Roman markets are mentioned "Sashes tipped with different colours, Dyeing purpled cloth, and muslins of the colour of mallow". Indian indigo is also mentioned as being exported from the port of Barbaricum<sup>6</sup>. Indigo was an industrial product highly prized in Rome and Egypt. Pliny says: "We have indicum, a substance imported from India with the composition of which I am unacquainted. When broken small it is of a black appearance, but when diluted it exhibits a wondrous combination of purple and deep azure. There is another kind of it which floats in the cauldrons in the purple dye houses, and is the scum of the purple dye .... it is used as a medicine, indicum acts as a sedative for ague and other shivering fits, and

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1. Pliny, XII, 26.
  2. Pliny, XII, 16.
  3. Rām. VII. 88. 2-4.
  4. Mbh. VII, 279, 14 f; 299. 14.
  5. Mbh. VIII. 12. 16.
  6. Peri. 39.

desiccates sores."<sup>1</sup> We also have references to other dyes, such as lac, and colours obtained from the hibiscus, kusumbha, kimsuka and kurikuma flowers were well known.<sup>2</sup> The washer-mān (rajaka) combined in his occupation the processes of both dyeing and cleaning, but the dyes were manufactured by the raṅgakāra.<sup>3</sup> Coloured clothes are frequently mentioned in our literature. Kauṭilya refers to white, dark, yellow as the colour of cotton and silken garments.<sup>4</sup> Vātsyāyana refers to the dyer as rañjaka, who belonged to the privileged class of workers, as he had access to the inner apartments of the Nāgaraka's house,

and took orders from the women of the house. The Dyer Nāgaraka's wife was expected to be an expert in washing and dyeing, and we find her getting her husband's rejected clothes cleaned and re-dyed and then giving them away to the servants.<sup>5</sup> The washerman could wash clothes without destroying the colour.<sup>6</sup> Kauṭilya lays down the law as to how long the washerman should keep different kinds of clothes. Those

Washerman merely to be cleaned were to be returned within one to four nights, clothes that were to be given light colours in five nights, those to be dyed blue in six nights, and those to be made red as a flower, lac or saffron, and those requiring much skill and care, could be kept for seven nights, otherwise charges were to be forfeited. He was

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1. Schoff, p.172-173.

2. Arth. II. 17. Pliny XXXIII. 4.

3. Rām. II. 38. 14. Manu. IV. 216.

4. Arth. II. 11.

5. K. S. 34, p. 230.

6. Mbh. XII. 91. 2.



to be fined for selling, mortgaging or hiring out other people's clothes, and experts were to arbitrate in any disputes regarding colour.<sup>1</sup>

That a liquor-industry was in existence is obvious from Kauṭilya's restrictions and regulations imposed on the liquor trade,<sup>2</sup> and his account of the various kinds of liquor and the processes for brewing them. The various kinds of liquor include medaka, prasannā, āsava, arisṭa, maireya and madhu, but perhaps the best was the wine that the grapes of Afghanistan yielded<sup>3</sup>. The liquor-trade provided both brewers and tavern-keepers with livelihoods.

Sugar, jaggery and sugar candy were other products derived from plants.<sup>4</sup> From the Periplus we learn that sugar was exported from parts of western India to Egypt and other places.<sup>5</sup>

Sugar Industry It has been described as "honey from the reed called sacchari", and was also known to Pliny as a medicine.<sup>6</sup> Hiuen Ts'ang says that Gandhāra had much sugar-cane and produced sugar candy.<sup>7</sup>

Then there were fibrous plants yielding material for ropes, and plants whose leaves provided writing material.<sup>8</sup>

Astringents were prepared from fruit juices and essences, mixed with honey and jaggery, and liquid acids from acid fruits. Seeds yielding oil gave work to oil-pressers

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1. Arth. IV. 1.

2. Arth. II. 25.

3. Pāṇini IV. 2.99; Arth. II. 25.

4. Arth. II. 15.

5. Peri. 14.

6. Schoff. p. 90.

7. Watters I, p. 201.

8. Arth. II. 17.

and oil-makers, and other seeds such as pepper, ginger, coriander, mustard were used as condiments, which are still extensively used to give its peculiar flavour to the Indian cuisine.<sup>1</sup>

Cotton But by far the most important plant product was cotton, giving rise to the cotton textile industry. Indian textiles have been famous for their fineness of texture and exquisiteness of colouring for centuries, and were a highly valued export.

Textile industry Periplus speaks of the export of cotton cloth from Barbaricum<sup>2</sup>, and tells us of Roman imports of different varieties of cotton textiles, "Likewise from the district of Ariaca across this sea there are imported Indian iron and steel and Indian cotton cloth; the broad cloth called monache and that called Sagmatogene, and girdles and coats of skin, and mallow-coloured cloth and a few muslins and coloured lac."<sup>3</sup> He also mentions "muslins of the finest sort which are called Gangetic".<sup>4</sup> Monache or broad cloth was used for various garments. Malochine or mallow cloth was a coarse cotton cloth dyed with a preparation of a variety of Hibiscus native to India.<sup>5</sup> Sagmatogene has been translated as un-spun cotton used for stuffing,<sup>6</sup> while the fine Gangetic muslin was the famous Dacca muslin which the Romans called Ventus textilis or nebula because of its fineness. The Rāmāyaṇa mentions cotton and linen garments.<sup>7</sup> The importance of the textile industry is

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1. Arth. II. 15.

2. Peri. 39.

3. Peri. 6.

4. Ibid. p.47.

5. Schoff, p.73.

6. Ibid. p.179.

7. Bāla. Ch.73, Kiṣ.  
Ch.50.

shown by the fact that a state official was in charge of it, Superintendent and Kauṭilya says that the superintendent of of Weaving weaving was to employ qualified persons to manufacture threads, cotton and other fabrics, and curtains, coats and other garments from them.<sup>1</sup> He mentions among cotton fabrics the varieties from Maḍura, Aparānta, (Northern Konkan), Kalinga (Orissa), Kāśī (Benares), Vaṅga (Eastern Bengal), Vatsa (the city of Kauśāmbī) and Mahiṣa (the country called Mahiṣmati), as the best. The Vaṅga textiles were white, those from Pāṇḍya were black and the product of Suvarṇakudya was red, and of uniform or mixed texture. All were soft fabrics.<sup>2</sup> Among the presents received by Bhīma from the Mlecchas on the coast of Bengal were fine cloths and blankets.<sup>3</sup> The wages of the workers were to be proportionate to the quality and quantity of the threads spun, and women were largely employed in the various processes involved in the industry.<sup>4</sup> Arrangements were made to take and bring back work from them, if they were women who did not stir out of their houses.<sup>5</sup> Spinning and weaving were separate industries.<sup>6</sup> Vātsyāyana tells us of the Nāgaraka wearing vāsas or vastra and uttarīya, highly scented with perfumes, and soft and fine clothes have been mentioned in the Lalitavistara.<sup>7</sup>

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1. Arth. II. 23.

2. Arth. II. 11.

3. Mbh. II. 30. 27.

4. Arth. II. 28.

5. Ibid.

6. Rām. II. 83. 12 ff.

7. A.M.J.C.Vol.III, pt.I, p.339-40.

### Encouragement of Industries.

These industries received a certain amount of encouragement especially when conducted by state agencies. Some mines were worked under state officials, but some were leased out to individuals.<sup>1</sup> Kautilya says that manufacturers of fibrous cloths, raiments, silk, woollen and cotton fabrics should be rewarded with prizes such as scents, garlands of flowers and such marks of recognition of their efficiency.<sup>2</sup> Fines and punishments should be imposed if work was not properly done. When wages were paid and work was not completed in the state

Protection department of weaving, fines should be imposed, and if work was not done at all, Kautilya goes so far as to suggest that the workers be threatened that their thumbs might be cut off.<sup>3</sup> Fines were to be levied for stealing mineral products, to the extent of eight times the value of the stuff stolen, and the theft of precious stones should be punished with death. Mining operations could not be carried on without a licence. Those caught in such an act were to be imprisoned, and forced to do work in the state mines.<sup>4</sup> Fines and punishment, such as cutting off the fingers, according to the enormity of the offence, were to be imposed for manufacturing gold and silver articles and coins in places other than the state workshops, while various false practices were to be penalised, and the gold given to

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1. Arth. II. 12

2. Ibid. 23.

3. Arth. II. 23.

4. Ibid. 12.

workers, and the finished articles, were to be carefully examined and checked when the artisans arrived at, and when they left, the workshop.<sup>1</sup> The State liquor trade was protected by fines for the unlicensed selling of liquor and for taking liquor out of villages. Liquor shops were not to <sup>be</sup> close to each other, to ensure a proper distribution.<sup>2</sup>

## 2. TRADE AND TRADE ROUTES

Internal trade -- small traders -- big merchants -- Sale of goods -- State control -- malpractices -- State measures -- Land routes -- water-ways. Overland trade. Overseas trade -- References -- Southern trade -- Far Eastern trade -- Middle East and Rome -- Ports. Encouragement of Trade.

Trade followed on the heels of industry, and the industrial products that were manufactured found ready markets both at home and abroad. The tentacles of Indian trade spread far and wide, extending southwards to the Tamil country and Ceylon, eastwards to China, and westwards to Greece and Rome. The State claimed its share of profit in the form of tolls and duties, apart from initiating commercial enterprises itself, and regulation was soon found necessary to check malpractices.

### Internal Trade.

Trade was conducted in various ways. Kautilya refers to hawkers and peddlars vending their wares from door to door.<sup>3</sup> Itinerant dealers in various goods are also frequently

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1. Arth. II. 13. 14.

2. Arth. II. 25.

3. Arth. II. 16.

mentioned in the Jātaka stories.<sup>1</sup> Some inscriptions mention markets. The Dāmodarpur copper-plate records the grant of land together with haṭṭa and paṇaka,<sup>2</sup> haṭṭa being the village Small market. In a later inscription, too, a village is traders granted along with the market place (sa-haṭṭa);<sup>3</sup> haṭṭa-mārgga is mentioned in the Āhār stone inscription<sup>4</sup>, while the Bhāṭerā plate<sup>5</sup> refers to haṭṭa-vāra, which implies a periodical fair. The Kathā-sarit-sāgara mentions market-place and streets lined with shops<sup>6</sup>. The shops and stalls were stocked with commodities of various kinds. The Mahābhārata tells us of a tulādhara, or trader, who lived by selling juices, scents, barks and timber, herbs, fruits and roots.<sup>7</sup> Kauṭilya mentions merchants trading in scents, garlands, grains and liquids and traders in cooked rice, liquor and flesh.<sup>8</sup>

Besides these small traders there were big merchants (pradhāna-vyāpārīṇaḥ)<sup>9</sup>. The Jātakas tell us of merchants Big moving in caravans under a leader or sārthavāha, merchants in a straggling line of as many as 500 wagons sometimes.<sup>10</sup> The dangers of travel on the insecure, robber-infested trade-routes<sup>11</sup> necessitated this form of corporate

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1. Jāt. II. 109 ff; I. 205; III. 21; I. 111.
  2. E. I. XV. p. 134.
  3. Irdā copper-plate E. I. XXII, pp. 155-8.
  4. E. I. XIX, p. 57.
  5. E. I. XIX. p. 232.
  6. Tawney. II. p. 86.
  7. Mbh. XII. 261. 2.
  8. Arth. II. 4.
  9. I. A. XXXIX. p. 204.
  10. Jāt. I. 98. 368. 377.
  11. Mbh. IX. 3. 13.

enterprise, and traders protected by armed bands of forest-guards took to the road together. The sārthavāha held an important position in the life of the city, as is clear from the Dāmodarpur plates,<sup>1</sup> and the Basārḥ seals,<sup>2</sup> where he is mentioned as a member of the advisory board guiding the administration of the town.

Business partnerships were also not uncommon. Both Nārada and Br̥haspati mention trade partnerships and describe the conditions under which they were carried on.<sup>3</sup> Moreover,

Guilds guilds of traders and dealers in various goods are mentioned both in inscriptions and in the law-books. They shall be dealt with later on.

From the Arthasāstra it appears that goods were usually sold by public auction.<sup>4</sup> The merchants, after Sale of goods going through the formalities of the custom-house, declared the quantity and price of their merchandise and thrice demanded who should purchase the goods for the Auction. specified price. In case of bidding the amount obtained above the price fixed, together with duties on the merchandise, were to be paid into the State treasury.<sup>5</sup>

In earlier times prices were often determined by haggling and free bargain. Mrs. Rhys Davids, referring to the Buddhist period says, "The act of exchange between producer or dealer, and customer was, both before and during the Jātaka age,

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1. E. I. XV. p. 128, 130, 131, n. 5, 133, 142.

2. A. S. I. R. 1903-4, p. 103 ff.

3. Nār. III; Br. XIV.

4. Arth. II. 21.

5. Ibid.



Free  
bargain

a "free" bargain, a transaction unregulated by any system of Statute-fixed prices".<sup>1</sup> In our period, we find a large degree of State control of prices, as enjoined in Manu and the Arthasāstra. Manu orders that the king should settle prices publicly with the merchants every fifth or fourteenth day, fixing rates for the purchase and sale of all marketable goods after consideration of their expenses of production.<sup>2</sup> Kautilya allows the usual profit of five per cent over and above the fixed price of local commodities and of ten per cent on foreign goods<sup>3</sup>, the price being fixed by the superintendent of commerce, taking into consideration the outlay, the quantity manufactured, the amount of toll, the interest on outlay, hire and other expenses, and with due regard to whether the merchandise had been manufactured long ago, or imported from a distant country.<sup>4</sup>

Kautilya prescribes a series of balances, beginning with one having an arm 6 āṅgulas long and a weight of 1 pala, followed by ten others with arms increasing successively by 8 āṅgulas in length and 1 pala in weight. Two special Balances called samavṛtta and parimāṇī are also described. The former should have an arm 72 āṅgulas long and 53 palas in weight, and a scale-pan 5 palas in weight, while the latter should be twice this weight with a length of 96 āṅgulas. Except for flesh, metals, precious stones and salt, an over-plus

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1. Mrs. Rhys Davids: J.R.A.S. 1901, p. 875.

2. Manu. VIII. 401 ff.

3. Arth. IV. 2.

4. Ibid.

of five per cent of all other commodities weighed in these two balances should be given to the State.

In spite of this regulation of prices, weights and measures, and standard balances, malpractices of various kinds were common enough. The good old days when merchants did not cheat the public with false weights and measures are wistfully recalled<sup>1</sup> and these dealings condemned as practices character-

Malpractices istic of the accursed Kali age.<sup>2</sup> Because of various malpractices, we find mention in the Arthasāstra that "traders unite in causing rise and fall in the value of articles, and live by making profits cent per cent in panas or kumbhas".<sup>3</sup> Heavy fines are prescribed by the law-givers on merchants causing inflation. Viṣṇu and Yājñavalkya decree the highest amercement "for traders combining to maintain prices to the prejudice of labour and artisans, although knowing the rise and fall of prices" or "to obstruct the sale of a commodity by demanding a wrong price, or for selling it".<sup>4</sup>

The State attempted to control dishonesty in trade by fines supported by stern denunciations in the Statutes. Megasthenes, in describing the work of the fourth board that controlled trade and commerce, says that its members had charge of weights and measures, and saw that products in their season State were sold by public notice. No one was allowed to measures deal in more than one kind of commodity unless he

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1. Mbh. I. 64. 22.

2. Mbh. III. 187. 53;  
XII. 228. 70.

3. Arth. VIII. 4.

4. Yāj. II. 249 f: Viṣṇu. V. 125 f.

paid a double tax. Another board supervised manufactured goods. The old stuff was sold separately from the new and fines were levied for mixing the two together.<sup>1</sup> Deception in balance or weights was punishable with the highest amercement in Kautilya.<sup>2</sup> Passing bad articles as good ones was condemned. "The sale or mortgage of articles such as timber, iron, jewels, robes, skins, earthen-ware, threads, fibrous garments, woollen clothes, as superior, though they are really inferior, shall be punished with a fine eight times the value of the articles!"<sup>3</sup> And again, "when a trader sells or mortgages inferior as superior commodities, articles of some other locality, adulterated things or deceitful mixtures, or when he dexterously substitutes other articles for those just sold, he shall not only be punished with a fine of 54 panas, but also be compelled to make good the loss".<sup>4</sup> Use of false weights, measures and balances are also fined.<sup>5</sup> Adulteration is condemned. Manu censures adulteration of grain,<sup>6</sup> and Kautilya says that adulteration of grains, oils, alkalis, scents and medicinal articles with similar articles of no quality Adulteration should be punished with a fine of 12 panas.<sup>7</sup> Yājñavalkya supports this condemnation of adulteration, and Brhaspati ordains that "a merchant who conceals the blemish of

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1. McCrindle. Meg. p. 87; Str. Xv. l. 50-52.

2. Arth. II. 14.

3. Arth. IV. 2; cf. Yāj. II. 245-46.

4. Ibid.

5. Ibid.

6. Manu. XI. 50.

7. Arth. IV. 2.

an article which he is selling or mixes bad and good articles together, or sells (old articles) after repairing them, shall be compelled to give the double quantity (to the purchaser) and pay a fine (equal) (in amount) to the value of the article"<sup>1</sup>.

### Trade Routes

Active inland trade linked together the different states of ancient India by land-routes and water-ways, along which extensive commerce was carried on. Pali literature as well as the Periplus gives us much information as to these routes.

The inland routes resolve themselves into a number of arteries

of trade, with capillaries branching off and  
Land routes bringing further areas into the road-system.<sup>2</sup>

Kauṭilya discusses the merits of different trade-routes. He says that a cart-track was better than a foot-path, as it afforded facilities for preparations on a large scale, and that roads that could be traversed by asses or camels, irrespective of countries and seasons, were also good.<sup>3</sup> He also adds that trade-routes to the south were better than those leading to the Himālayas, for except for a few articles like blankets, skins and horses, other merchandise such as conch-shells, diamonds, precious stones, pearls and gold were available in plenty in the south. And of these southern routes, those crossing mines frequented by many people were less troublesome and expensive, and those along which plenty of merchandise could be obtained were the best.<sup>4</sup>

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1. Br. XXII. 7. 13.

2. Suttanipāṭa Vv. 1011-13; Jāt. I. 92, 348; II. 248; 336, 370; III. 365; IV. 32, 419, 463; Peri. 47, 48, 51.

3. Arth. VII. 12.

4. Ibid.

The construction of roads was regarded as a State responsibility.<sup>1</sup> Kautilya describes different kinds of roads leading outwards from a fortified city, and prescribes Roads the widths of each.<sup>2</sup> Roads had fingerposts marking turnings and distances at intervals.<sup>3</sup> Graded fines were imposed for obstruction of roads according to the use of the road.<sup>4</sup>

There can be no doubt that good use was made of the numerous navigable rivers with which India has been lavishly supplied. Kautilya places the superintendent of navigation in control of the navigation not only of oceans and mouths of rivers, but also on lakes and along the rivers.<sup>5</sup> Small boats were to be launched on small rivers that overflowed in the rainy season, and large rivers which could Water-ways not be forded even during the winter and summer seasons were to be navigated by large boats boarded by a captain, a steersman and servants to hold the tackle and ropes and to pour out water.<sup>6</sup> Kautilya discusses the respective merits of land and water-routes and prefers the land-routes, as he says that the water-ways are liable to obstruction, not permanent, a source of imminent dangers and incapable of defence.<sup>7</sup>

#### Foreign Trade.

This intensive internal trade was extended to a considerable foreign trade carried on over both overland and

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1. Arth. II. 1.  
2. Arth. II. 4.  
3. Str. XV. i. 53.  
4. Arth. III. 10.

5. Arth. III. 28.  
6. Ibid.  
7. Ibid. VII. 12.

and sea-routes, extending to the south, to the Middle and Far East and to the western world. Routes from the east and the west in the north-west direction converged at Puṣkalāvati and continued through the Pamirs to Bactria. Down this road, raw silk, silk yarn and silk fabrics were brought ~~down~~ from China, through Bactria to Bharukaccha,<sup>1</sup> in exchange for frankincense.<sup>2</sup> From Bactria, the road continued through Central Asia to the west, and Pliny describes how "people have been conveyed from the Oxus through the Caspian into the Cyrus, and Indian merchandise can be brought by land to Phasis in Pontus in five days at most".<sup>3</sup> Silk from China entered India by another overland route, by way of the river Ganges to the Tamil country. This was the route across the Tibetan plateau, which later became Overland trade the great highway of Buddhist pilgrim-travel between Mongolia and Lhasa.<sup>4</sup> Trade and cultural relations with China go back to very ancient days, and became closer with the introduction of Buddhism into China, but China was difficult of access. "Few men can come from there and seldom".<sup>5</sup> Until Turkestan was subjugated by China, these overland trade routes were very hazardous. The routes through Tibet and Burma were never as popular as those traversing the Pamirs, and with the rise of the Kusanas in the north-west of India it was only natural that trade via Turkestan should increase, in view of their relations towards the place of their origin on the Chinese border.<sup>6</sup>

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1. Peri. 64.

2. Schoff, p. 270.

3. Pliny, VI. 17.

4. Schoff, p. 272.

5. Peri. 64

6. Schoff, pp. 273, 275.

The accounts of the Chinese pilgrims, Fa-Hien and Hiuen Tsiang, give us much information as to the overland routes by which they travelled from India to China. Fa-Hien started from Ch'ank-gan, thence he came to Khotan, then to Tse-hoh, through the Onion mountains, across the Indus into the Udayana country, which was part of the "middle kingdom" of the Chinese accounts. He then travelled to Gandhāra and east to Taxila and to other places in the north-west.<sup>1</sup> Hiuen Tsiang, travelling westwards from China, eventually came to Samarkand, and proceeding along the banks of the Oxus, came to Tokhara and Termed, then pushing south across the Oxus, he reached Balkh, went southwards to Gachi and Gaz, then south-east through the great snowy mountains to Bamian, next east to Kafiristan, and finally arrived at the frontiers of Yin-tu (India), whence he travelled to different places.<sup>2</sup> Both these pilgrims thus came to India through the north-west gate.

There are many references to sea-voyages and sea-borne trade in the sources at our disposal. The earliest evidence is supplied by the Rg-Veda. One passage represents Varuna as Overseas having full knowledge of the ocean routes along which trade vessels sailed;<sup>3</sup> another refers to merchants, who under the influence of greed send ships to foreign countries.<sup>4</sup> Vasiṣṭha and Varuna are described as undertaking a voyage in a well-equipped ship.<sup>5</sup> The Epics also supply us with evidence of

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1. Legge, pp. 16-65.

2. Watters I and II.

3. R. V. I. 25. 7.

4. Ibid. II. 48. 3.

5. Ibid. VII. 88. 324.



sea-journeys.<sup>1</sup> Manu discountenances sea-voyages, but also fixes boat-hires for such journeys and the rules regarding marine insurance.<sup>2</sup> Hiuen Tsiang refers to the people of Surāṣṭra as living by commerce on the seas.<sup>3</sup> Ships are mentioned in some of our inscriptions. The Deo-baranark inscription of Jīvita-gupta II refers to 'great ships' as one of the three

References

constituents of power.<sup>4</sup> The Dharmāditya grants refer to ships and dockyards and customs officers called 'vyāpārakāraṇḍaya', and Pargiter thinks that these officers must have been in charge of trade carried on in ships on the seas.<sup>5</sup> Navigation and commerce formed part of the education of the princes of Kalinga, which shows that Kalinga was at that time a great trade centre.<sup>6</sup> Some inscriptions from Kalinga prove her maritime relations with Java and other places.<sup>7</sup> Representations of ships and shipping are also found in ancient sculptures and paintings. The Sāñci sculptures represent canoes and large boats.<sup>8</sup> Representations of ships in the Ajantā caves have been described by Griffiths. In one we have a sea-going vessel "with high stem and stern, with three oblong sails attached to as many upright masts, each mast being surmounted by a truck and carrying a lug-sail. The jib is well-filled with wind. A sort of bowsprit projecting from a kind of gallows on deck, is

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1. Kiskindhyā. 40. 23. 25; Mbh. I. 151. 5.

2. Manu. III. 158; VIII. 409.

3. Beal: Buddhist Records II, p. 269.

4. G. I. p. 217.

5. I. A. 1910. p. 212.

6. Hunter, Orissa. Vol. I, p. 197.

7. I. A. Vol. V. 314; VI. 356.

8. Maisley: Sāñci and its Remains, pp. 42, 59.

indicated with the outflying jib, square in form".<sup>1</sup>

An Alexandrian monk, Kosmas Indikopleustes, writing in the sixth century<sup>2</sup> bears testimony to the busy commerce that existed between eastern and western India and Ceylon and the

Southern  
trade Tamil country.<sup>3</sup> Ceylon, being in a central position, was 'a great resort of ships from all parts of India ...

and in like manner it despatches many of its own to foreign parts'.<sup>4</sup> The accounts of the voyages of the Chinese pilgrims reveal to us the sea-routes and the trade that existed between India and China, including all the regions in between.<sup>5</sup>

Eastern  
trade Kosmas has borne witness to the trade-relations between India and Persia. Persian and Ethiopian vessels were

found in Indian waters carrying on a regular commerce;<sup>6</sup> the Totius Orbis Descriptio, composed between A.D. 350-353,

Persia mentions Indian exports to Persia of elephants;<sup>7</sup> and Appian, writing about the second century, refers to Indian commodities brought by traders from Palmyra and from Persia to Arabia for disposal in Roman markets.<sup>8</sup> Arabia also carried on exten-

Arabia sive trade with India. Barygaza was linked by sea-route to the busy marts of Muza, Cana and Moscha, on the southern

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1. Griffiths: The Paintings in Buddhist Cave Temples at Ajanta, p.17.

2. McCrindle: Class. Litt., p.156.

3. Ibid, p.160 ff. Cf. Peri. 59. 60.

4. Ibid. p.162.

5. Legge. p.111; Shamans Hwui Li and Yen Tsung, Life; p.188; Takakusu, Records of Buddhist Religion, pp.30-34; Beal: Buddhist Record II, p.169.

6. McCrindle. Class. Litt. p.161.

7. Ibid. p.212.

8. Ibid. p.214.

coast of Arabia, Arab ship-owners often sending their own vessels to Barygaza in competition with the Egyptian Greeks.<sup>1</sup> Myos

Hormos was the emporium of Egyptian trade with India, and

Strabo when he visited Egypt says, "I found that 120 ships sail

from Myos Hormos to India, although in the time of the Egypt

Ptolemies scarcely any one would venture on this voyage and the commerce with the Indies".<sup>2</sup> There was a con-

siderable export of Indian articles of luxury to Roman markets,

so much so as to make Pliny bewail that "at the lowest compu-

tation India, the Seres, and the Arabian peninsula drain our

empire yearly of 100 million sesterces, so dearly we pay for our

luxury and our women".<sup>3</sup> Dion Cassius mentions an Rome

Indian embassy to Augustus, bringing with them as presents tigers, elephants, pearls and precious stones,<sup>4</sup> and

Trajan is described as seeing a vessel setting sail for India.<sup>5</sup>

This description of the extensive maritime activities of ancient India throws into bold relief the great prosperity

and renown of the key-ports through which this foreign trade

was conducted. Tāmrālipti stands out as the great port

controlling the Far Eastern trade, from which I-Tsing left for China.<sup>6</sup> Kosmas Indikopleustes mentions several ports that

carried on trade with Ceylon. He speaks of Mala or Ports

Malabar as having five pepper-exporting marts, namely

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1. Peri. 21. 27.

2. McCrindle. Class.Litt. p.6.

3. Pliny XII. 18.

4. Dion Cassius His.Rom. IX. 58..

5. Ibid. LXVII. 28. Both quoted in McCrindle, Class.Litt. pp.212-213.

6. Takakusu, Records of Buddhist Religion, pp.30-34.

'Parti, Mangarouth, Salopatana, Nalopatana, Poudopatana'.

'Patana' is a port. He also gives as the most famous commercial marts of India Sind, Gujrat, Kalyana and Caul on the west coast.<sup>1</sup>

'Barygaza' and 'Barbaricum' monopolised the western trade.<sup>2</sup>

#### Encouragement of Trade

The State encouraged trade in various ways. Taxes were to be fixed after considering receipts and expenditure,<sup>3</sup> the rates of purchase and sale, the distance the merchandise had travelled and expenses incurred on the way.<sup>4</sup> The superintendent of commerce in the Arthasāstra was to consider the type of merchandise, whether it was the product of land or water and whether it had been brought by land or water routes; and he was to show special favour to those who imported foreign merchandise; mariners and merchants importing foreign goods were to be given concessions in the form of remission of trade-taxes so that they might derive some profit to make up for the risk and difficulty involved in their trade. And foreigners importing merchandise should not be sued for debt unless they belonged to local associations and partnerships.<sup>5</sup> This official was also responsible for bartering state goods in foreign lands after calculating the margin of possible profit to see if it was worth while.<sup>6</sup> Śukra ordains that duties should only be imposed on a trader where he was making a clear profit.<sup>7</sup> Merchants

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1. McCrindle. Class. Litt, p.161.

2. Peri. 36. 39.

3. Mbh. XII. 71. 10.

4. S.B.E. XXV. pp.127-236.

5. Arth. II. 16.

6. Ibid.

7. Sukra IV. 2. 218.

were not to suffer if any of their goods were lost, unless the fault was their own. The superintendent of commerce should make good any loss incurred in the part of the country under his charge,<sup>1</sup> and vessels bringing in merchandise spoiled by water were to be exempted from toll, or this might be reduced to half.<sup>2</sup> Foreign merchants who frequently entered the country, as well as those well-known to local merchants, were allowed free access to the ports.<sup>3</sup> State ships were hired out to merchants to encourage trade.<sup>4</sup>

Ancient India thus carried on in our period a considerable international trade that won her a prominent position as a commercial, colonial and maritime power. Economic and cultural links were forged on the one hand with her eastern neighbours and extended to China; and on the other with the great civilisations of Persia, Egypt, Greece and Rome; while Ceylon was drawn in on the south into her economic sphere of influence. She was thus the veritable queen of the eastern seas, and the mistress of Oriental trade in the Old World.

### 3. TOLLS AND DUTIES

Sulka -- its collection -- remission -- evasion -- gate dues -- road-cesses -- ferry-dues. Other dues -- Klpta and Upaklpta.

The State that left no stone unturned in its search for revenue would no doubt exploit to the full the wealth offered by trade. Quite a considerable State trade was conducted and

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1. Arth. II. 21.  
2. Ibid. 28.

3. Ibid.  
4. Ibid.

certain valuable commodities such as salt and the products of mines were state trade monopolies. These and the sale of goods manufactured at the instance of the State helped to fill the royal treasury, which was further replenished by taxes and tolls imposed on merchants and merchandise. Such taxes were in the form of customs duties on both local and imported merchandise, tolls for use of trade-routes, such as road-cesses, gate-dues, ferry-dues, taxes on river-ports and other miscellaneous dues.

Śulka was the tax imposed on merchandise. The Gīrnār rock-inscription of Rudradāman<sup>1</sup> and the Khoh copper-plate of Jayanātha<sup>2</sup> mention sulka as a customary State levy. An officer, śaulkika, is mentioned in the Bihār stone pillar-inscription<sup>3</sup> and was obviously deputed to collect the śulka or customs duties.

His office probably corresponded to that of the Śulka Śulkādhyakṣa or superintendent of tolls whose functions are detailed in the Arthaśāstra.<sup>4</sup> Manu and Yājñavalkya both decree a uniform rate of 1/20 of the value of merchandise as assessed by the royal officers,<sup>5</sup> to be taken by the State as śulka; while the Agni-Purāṇa<sup>6</sup> differentiates between internal and foreign merchandise, the former to pay 1/20 and the latter as much as would leave the trader a profit of 1/20. Kauṭilya says, "Merchandise, external (bāhyam, imported from the provinces) internal (ābhyantaram, manufactured locally), or foreign (ātithyam imported from foreign countries, shall be liable to the payment

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1. E. I. VIII, No. 6  
2. G. I. P. 122.  
3. G. I. p. 52

4. Arth. II. 21.  
5. Manu. VIII. 398; Yāj. II. 266.  
6. Agni. CCXXIII, 23-24.

of toll alike when exported and imported".<sup>1</sup> Then he proceeds to specify different duties on goods according to whether they were perishable goods, ordinary goods or valuable commodities. Imported stuff was to pay a duty of  $1/5$  of the value of the particular commodity. Perishable goods such as flowers, fruit, vegetables, roots, seeds and dried flesh and fish were charged  $1/6$  of their value; ordinary stuff such as linen, cotton and silk cloth, mail armour, metals, chemical substances, vermilion and colouring substances, sandal-wood, ferments, pungent substances, wine, ivory, skins and raw materials for making garments, carpets, curtains and products yielded by worms, wool and other products from goats and sheep, were to pay  $1/10$  or  $1/15$  as toll; and a duty of  $1/20$  or  $1/25$  was charged on clothes, quadrupeds, bipeds, threads, cotton, scents, medicines, wood, bamboo, fibres, skins and clay pots; on grains, oils, sugar, salt, liquor, cooked rice, and so on; while valuable goods like conch-shells, diamonds, precious stones, pearls, corals and necklaces, were to be assessed by experts who would estimate the time, cost and finish when fixing the duty to be levied.<sup>2</sup> This *śulka* was supplemented on occasion. When purchasers happened to bid for the merchandise, the enhanced amount over and above the price fixed by the State officials, together with the toll, were to be paid to the State.<sup>3</sup> The *śulka* was increased when merchants attempted to decrease the amount by tricks. Thus, when for fear of having to pay a heavy toll, merchants gave a false evaluation of the

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1. Arth. II. 22.

2. Arth. II. 22.

3. Arth. II. 21.



quantity and the price, and were detected, the excess above the declared stuff was to go to the State, or else they were to pay eight times the toll, as also when the price of merchandise packed in bags was lowered by showing as its sample an inferior sort, or when valuable merchandise was covered with an upper layer of inferior stuff. When traders increased the price beyond its proper value, to evade bidding, the extra value was to go to the State, or twice the toll on those goods. The superintendent of tolls was to be punished similarly, or would have to pay eight times the toll if he concealed any merchandise.<sup>1</sup>

On certain goods the toll was lowered or remitted altogether. With regard to inferior commodities, as well as those which were to be made duty-free, the issue was to be decided after careful consideration. And commodities for specified purposes such as those meant for a wedding or taken by a bride to her husband's home, or gifts, or for sacrificial purposes, for the confinement of women, for the investiture of the sacred thread, a betrothal gift of cows, goods for any Remission religious rites, consecration ceremonies or special of duties ceremonials, were let off free of toll.<sup>2</sup> Attempted evasion of these duties and smuggling were severely punished. Manu and Yājñavalkya prescribe a fine of eight times the amount of the duty upon persons evading the *śulka* or understating the value of their merchandise;<sup>3</sup> and forbid, on pain of confiscation of the whole merchandise, the export of what is useful

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1. Arth. II. 21.

2. Ibid.

3. Manu. VIII. 400; Yāj. II. 262.

to the king and goods whose export is prohibited.<sup>1</sup> Evasion of toll and smuggling engages the more detailed attention of Kauṭilya, who is here, as elsewhere, alive to all possible tricks. Merchants passing the flag of the customs-house without paying duty were to pay eight times the toll. Officials going to and from the city were to ascertain whether all merchandise going

Evasion of duties punished along the road had been checked. Those uttering lies were to be punished like thieves. Those trying to clear part of the merchandise with that on which the duty had been paid, and also those trying to smuggle two lots on one pass by placing it with the stamped merchandise before breaking open the bag, were to forfeit the smuggled quantity, and pay its equivalent value as a fine. He who falsely swore by cow-dung and attempted to smuggle goods should be punished by the highest amercement; and import of forbidden articles, such as weapons, mail armour, metals, chariots, precious stones, grains and cattle, was to be adequately punished, and the goods also confiscated.<sup>2</sup> In addition to these duties, gate-dues or

Gate-dues dvāra-deya were levied at the rate of 1/5 of the customs duties; but this tax was remitted according to circumstances.<sup>3</sup> The procedure followed in collecting these dues was as follows: The superintendent of customs was to erect near the large gate of the city a customs-house, facing north or east, and marked by a flag. Merchants arriving at the toll-gate were to be met by four or five customs officers, who were to

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1. Manu. VIII. 399; Yāj. II. 262.  
2. Arth. II. 21.

3. Ibid. 22.

Collection of duties take down their names, the places whence/they had come, the amount of merchandise, and where it had previously been sealed. Unstamped merchandise was to pay twice the toll, for forged seals, eight times the toll; and seal-marks that were torn or effaced would cause the merchants to be confined for a period in the lock-up, or else to wait for a day in the toll-house. The merchandise, after being checked, was to be placed near the flag. The merchants should declare the price, and the goods should be sold then by public auction, after being carefully weighed, measured or numbered.<sup>1</sup>

Road-cesses or varttanī were exacted by the superintendent of frontiers.<sup>2</sup> Kauṭilya specifies rates for this toll.

Road-cesses and ferry-dues A cart-load of merchandise should pay 1/4 pana, a single-hoofed animal, 1 pana, a large animal, 1/2 pana, a small animal, 1/4 pana, and a shoulder-load of merchandise, 1 māṣa. Ferry-dues are prescribed by Manu and Kauṭilya as follows:

|                                       |          |
|---------------------------------------|----------|
| An empty cart                         | 1 pana   |
| A man's load                          | 1/2 pana |
| An animal and a woman                 | 1/4 pana |
| A man without load                    | 1/8 pana |
| Empty vessels and men without luggage | 1 trifle |

-- Manu. VIII. 404-6.

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|--|--------|
| Small animals and men carrying small loads | 1 māṣa |
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1. Arth. II. 21.

2. Arth. II. 21.

Loads carried on the head  
or shoulders, cattle  
and horses

2 māṣas

Camels and buffaloes

4 māṣas

carts of small, medium  
and high speed

5, 6, 7, māṣas respectively

-- Arth. II. 28.

Hsuen Tsang mentions these dues: "Tradesmen go to and fro bartering their merchandise after paying light duties at ferries and barrier stations".<sup>1</sup>

Other dues were charges for hiring state boats, port-dues levied on merchants arriving at port-towns, tolls on ships touching at harbours on their way, sailing fees from those boarding state vessels, fees for fishing licences exacted from fishermen in the form of 1/6 of their haul.<sup>2</sup>

Other dues

Villages on sea-shores or on the banks of rivers and lakes should pay a special collective tax or *klpta*,<sup>3</sup> obviously by virtue of their advantageous position, commanding the waterways and hence the inland trade. The terms '*klpta*' and '*upaklpta*' occur in the Chammak and Siwanī copper-plate grants of Pravarasena II<sup>4</sup>. The former is obviously the same

Klpta as the tax mentioned in the Arthaśāstra, for the  
and  
Upaklpta village Carmāṅka, which is granted together with these dues, was situated on the bank of the river Madhunadī.<sup>5</sup> Elsewhere Kauṭilya mentions *klpta* as one of the seven forms of revenue.<sup>6</sup> By comparing the two contexts in which the term

1. Watters I, p. 178

2. Arth. II. 28.

3. Ibid.

4. G. I. pp. 242, 249.

5. Ibid. p. 241.

6. Arth. II. 6.

appears in the Arthaśāstra, it seems to have been a fixed tax levied on port-towns, and the above inscriptions confirm this view. Upakṣipta was perhaps an allied charge, including the above mentioned harbour dues on merchants and ships which the superintendent of navigation is charged with collecting in the Arthaśāstra.<sup>1</sup> Saletore makes out the two terms to be taxes on finished goods and kindred or unfinished goods.<sup>2</sup> But if this is the meaning, there seems to be no reason why port-towns alone should pay this goods-tax, as appears to be the case. It will be better to interpret the terms as port-dues payable by the villagers for the site of the village, and by ships and merchants using the harbour.

Other dues mentioned by Kauṭilya<sup>3</sup> are fees for assessing weights and measures, fees for manufacture of oil and clarified butter, salt-dues, and fees for licences paid by certain trades. A fee was apparently charged for weighing and measuring goods before sale, and a special fee was charged at the rate of one kākaṇī per day for stamping weights and measures.<sup>4</sup> Later inscriptions substantiate the imposition of such tolls and customs duties. Thus the Khālimpur copper-plate of Dharmapāla mentions haṭṭikā or market-dues,<sup>5</sup> and an inscription of Mathanadeva mentions several dues on merchandise, as follows:- (a) three viṃśopakas (20th part of particular coin) on every sack of agricultural produce brought for sale to the

1. Arth. II. 28.

2. Saletore, p. 353.

3. Arth. II. 6.

4. Ibid, 19.

5. E. I. Vol. IV, p. 254.

market-place or the customs house; (b) two pallikās from every ghataka-kūpaka of clarified butter or oil; (c) two vimśopakas per mensem on every shop; (d) fifty leaves from every collikā brought from outside the town.<sup>1</sup> The Bijāpur inscription of

Dhavalā of Hastikundī gives a long list of such dues<sup>1a</sup>

The officer in charge of collecting these dues is mentioned in an inscription as "haṭṭapati".<sup>2</sup> He was probably the same as Kauṭilya's samsthādhyakṣa or superintendent of markets.<sup>3</sup>

#### 4. EXCHANGE AND CURRENCY

Barter -- standard media of exchange -- cowries -- monetary weights -- privately punch-marked -- official stamp. Coins.

The development of trade necessitated a certain medium of exchange. The most primitive mode of exchange was barter, and proceeded side by side with the evolution of a metallic currency, so that in our period, although there was an extensive use of coinage, barter seemed to be still the most common method of exchange. The Arthasāstra mentions the bartering of local goods for foreign wares.<sup>4</sup> Pausanias, writing as late as in the age of the Antonines, refers to barter as being

widely practised: "Traders to India tell us that the  
Barter Indians give their own wares in exchange for those

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1. E.I. III. No. 36.

2. Ins. from Beng. p. 149.

1a. E.I. X. p. 20ff.

3. Arth. IV. 2.

4. Arth. II. 16.

of the Greeks without employing money, even though they have gold and copper in abundance".<sup>1</sup> The Chinese pilgrim Hiuen Tsang alludes to barter as a common practice. He says, "rare precious substances of various kinds from the sea-ports are bartered for merchandise".<sup>2</sup>

A greater regularisation of exchange is achieved when the medium is limited to certain commodities that have a wide demand and a standard value. This would, of course, vary with the locality and stage of social evolution. Thus amongst those tribes whose main occupation was hunting, skins of wild animals would naturally be exchanged for other goods, whereas with more settled communities staple grains like rice and other food crops and useful animals like cows and horses would form the exchange medium. Pāṇini mentions *kaṃsa*, *śūrpa* and *khārī*, which are measures of grain, and also gives as standard articles of exchange *go-puccha* or cow's tail,<sup>3</sup> and of *vasana* or pieces of cloth of a definite value.<sup>4</sup> In the *Mahābhārata*, the tribute proceeds of a day are estimated at above the value of a thousand horses,<sup>5</sup> and a teacher's fee is assessed at 800 steeds of the best breed,<sup>6</sup> The payment of wages and taxes Barter of in kind instead of cash was extensively employed.  
standard  
goods The *Arthasāstra* specifies the wages in kind for

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1. Pausanias III. xii. 3. McCrindle. *Class. Lit.*, p. 211.

2. Watters. I. p. 178

3. Pāṇini. V. 1. 9.

4. *Ibid.* 27.

5. *Mbh.* III. 195. 9.

6. *Ibid.* V. 106. 11.



for agricultural and pastoral labourers.<sup>1</sup> Yājñavalkya, Nārada and Brhaspati give similar rules.<sup>2</sup> Kautilya suggests the division of villages according to the mode of payment of taxes, whether they supplied soldiers or forced labour; or grains, dairy-produce, money or raw materials.<sup>3</sup>

The use of 'cowries' or shells as currency was apparently very common, so much so that Fa-Hien says of the ancient Indians that "in buying and selling commodities they use cowries",<sup>4</sup> and does not seem to have noticed the use of coinage,

'Cowries' in spite of the fact that a well-developed system of currency was in existence. Apparently the use of coins was limited, and the common methods of exchange were still barter and the use of cowries. Hiuen Tsang, writing later, also mentions cowries.<sup>5</sup>

But a crude metallic currency, restricted in use, in the form of metal of various shapes, without any official stamp, seems to have emerged quite early. "There was a time in India before coins ..... were struck when mere pieces of bullion without a stamp at all, or merely with some private stamp, were used as money - that is, as a medium of exchange, and the word *kārṣāṇa* ..... may mean either coins proper of the weight of a *karṣa* or only such pieces of metal of that weight. The latter was almost certainly its original

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1. Arth. III. 13.

2. Yāj. II. 194; Nār. VI. 3. 10; Br. XVI. 13. 19.

3. Arth. II. 35.

4. Legge, p. 43.

5. Watters. I. p. 178.

meaning both in Sanskrit and Pali".<sup>1</sup> Proper coins do not seem to occur in any Indian work that is definitely pre-Buddhistic, but these circulating monetary weights seem to have been in use long before.<sup>2</sup> Pieces of metal had to be weighed each time a purchase was made; hence the need for metallic pieces of fixed weight according to different standards for the different metals gold, silver and copper must have been felt very early. These standards are specified in the Law Books. Manu, Viṣṇu, Brhaspati and Nārada give the following tables, the unit from which they start being a fixed weight, namely that of the raktikā or red seed or of the kṛṣṇala or black seed of the guñja berry, approximately about 1.8 grains.

| <u>Gold</u>         | <u>Silver</u>                   | <u>Copper</u>                     |
|---------------------|---------------------------------|-----------------------------------|
| 5 guñjas = 1 māṣa   | 2 kṛṣṇala = 1 māṣaka            | 80 kṛṣṇala or raktikā or kākāṇī = |
| 16 māṣa = 1 suvarṇa | 16 māṣaka = 1 dharana or pūrana |                                   |
| 4 suvarṇa = 1 pala  | 10 dharana = 1 śatamāna         | 1 kārṣāpana                       |
| 10 pala = 1 dharana |                                 |                                   |

-- Manu VIII. 137-8; Viṣ. IV. 7-13; Br. X. 14f

Nārada App. 58.

Kautilya's table is:

| <u>Gold</u>                |                      |
|----------------------------|----------------------|
| 10 māṣa grains or 5 guñjas | = 1 māṣaka           |
| 16 māṣakas                 | = 1 suvarṇa or karṣa |
| 4 karṣas                   | = 1 pala             |

1. Rhys Davids: Numismata Orientalia: Ancient Coins and Measures of Ceylon, p.3.

2. Ibid. p.13.

Kautilya's table contd.:

Silver

|                               |           |
|-------------------------------|-----------|
| 88 gaura-sarsapas             | 1 māṣaka  |
| 16 māṣakas or 20 śaibya seeds | 1 dharana |

These monetary weights were pieces of metal "of a roughly rectangular shape, the silver ones being generally cut out of sheets of the metal and the copper ones from bars"<sup>1</sup> The European coinage, derived through Greece from Lydia, consisted in its earliest stages of thick globules or buttons of electrum, an alloy of gold and silver, with small punches or stamps impressed on them. But "the Indian moneyers started, not from a globule or button of fused metal, but from a hammered sheet, which was then cut into strips, and sub-divided into lengths of approximately the desired weight, which was adjusted by clipping the corners when necessary. Nobody can examine a handful of rectangular silver punch-marked coins without seeing that this was the method of manufacture. The cutting of circular blanks from a metal sheet being a more troublesome process than snipping strips into short lengths, the circular coins are presumably a later invention than the rectangular ones".<sup>2</sup> The merchants or money-changers through whose hands these pieces passed affixed punch-marks to them attesting their weight and purity, obviously to save labour,

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1. Barnett: Antiquities of India, p. 211.

2. V.A. Smith; Catalogue of the Coins in the Indian Museum, Calcutta, I. p. 134.

so that they need not be tested each time. Cunningham was the first to interpret these marks on extant coins: "... several of the Private Punch Marks symbols may have been the private marks of ancient money-changers. At the present day these men are still in the habit of placing their own particular stamps on the rupees that pass through their hands, so that when any of the coins come back to them again, they know their value without making a second testing".<sup>1</sup>

With growing trade and the increased circulation of these monetary weights, private punch-marks were no longer sufficient, and an official evaluation became necessary, and so the punching of the weights became the responsibility not of private dealers but of local administrative authorities. All that was necessary was to submit these privately-stamped weights to the local office to be assessed and stamped with a universally recognised official mark to make them valid as official currency. "The merchants or Official money-changers to whom we have attributed obverse stamp punching marks, had simply to submit their coins to the chief authority in the district, who rejected such as were deficient in weight or quality of metal and sanctioned such as were approved by marking them with his official stamp, which may perhaps be identified with the solitary punch-mark so often found in the centre of the reverse. The occasional occurrence of more than one of these reverse punch-marks on a coin is naturally explained by supposing the coin to have passed current

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1. Cunningham: Coins of Ancient India, p.58.

in more than one district, and consequently to have been officially tested more than once".<sup>1</sup>

Thus a regular metallic currency emerged including these punch-marked metal pieces and officially-issued coins. Coins are mentioned in many inscriptions, from which we get the names *dināra*, *kārsāpana* and *kāhāpanas*, *pūraṇa*, *suvarṇa* and *rūpaka*. *Dināra* occurs in the Sāñci stone inscription of Candragupta II, the Gaḍhwā stone inscriptions of Candragupta II and Kumāragupta and other Sāñci and Gaḍhwā stone inscriptions.<sup>2</sup> A Nāsik cave inscription<sup>3</sup> mentions 1,000, 2,000 and 500 *kārsāpanas* vested with different guilds, and another such inscription<sup>4</sup> records a perpetual endowment of 100 *kāhāpanas*, from the interest on which cloth-money to the value of 12 *kāhāpanas* was to be supplied to the ascetic keeping the retreat in the cave. *Pūraṇa* is given in a Mathurā inscription<sup>5</sup>, *suvarṇa* in a Gaḍhwā stone inscription<sup>6</sup> and *rūpaka* in the Baigrām plate.<sup>7</sup>

Various metals were used for these coins, mostly gold, silver and copper, and some lead, nickel and potin. Kauṭilya gives the functions of the superintendent of the mint as manufacturing silver and copper standard and token coins.<sup>8</sup> The State goldsmith should employ workmen to manufacture gold

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1. Rapson: J.R.A.S. 1895, pp. 872 and 874.

2. Vide G.I. pp. 33, 38, 39, 40, 41, 262, 265.

3. E.I. VIII, 15. VII.

4. Ibid. 17. VIII.

5. E.I. XXI. 10.

6. G.I. p. 268.

7. E.I. XXI. p. 81-82.

8. Arth. II. 12.

and silver coins from the bullion brought in by ordinary people,<sup>1</sup> and the examiner of coins should regulate currency, both as a medium of exchange and as legal tender admissible into the royal exchequer.<sup>2</sup> Kauṭilya decrees that silver coins or rūpyarūpa should be made of silver alloyed with four parts of copper and 1/16 part of any one of the metals tīkṣṇa, trapu, sisā and añjana, while copper coins or tāmra-rūpa should be minted out of copper mixed with four parts of an alloy.<sup>3</sup>

The coins mentioned in the Arthaśāstra are rūpya-rūpa, which the commentator explains as kārṣāpaṇa, and its token coins of half, a quarter and one-eighth paṇa. He also gives copper māśakas (1/16 paṇa), ardha-māśakas (1/32 paṇa), kākaṇī (1/80 paṇa) and ardha-kākaṇī (1/160 paṇa).<sup>4</sup> Śukra mentions silver kārṣāpaṇas.<sup>5</sup>

Hsien Tsang noted the use of gold and silver coins on his visit to India.<sup>6</sup> The dināras mentioned in the inscriptions are gold coins, apparently the same as the suvarṇa referred to in one inscription<sup>7</sup> together with dināra. Allan says with reference to Gupta gold coins, "The gold coins of the Guptas are mentioned in a number of inscriptions as dināras (quoted above); in one inscription,<sup>8</sup> both dināras and suvarṇas are mentioned; as the inscription is probably of the reign of Kumāragupta I, of which coins of the suvarṇa standard are not known, it is most probable that the same coins are referred to in the first case, by their

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1. Arth. II. 14.

2. Ibid. 12.

3. Arth. II. 12.

4. Ibid.

5. Śukra. IV. 2. 231-2.

6. Watters. I. p. 178.

7. G. I. p. 265.

8. Ibid.

foreign name, while in the latter case they are given the Indian name *suvarṇa*, although not actually of that standard, unless, perhaps, *suvarṇa* here is a money of account."<sup>1</sup> The Baigrām plate<sup>2</sup> suggests the value of eight silver *rūpakas* as half a *dināra*. One gold *dināra* was thus equivalent to sixteen silver *rūpakas*. Silver coins of the period varied considerably in weight, although there seems to be more uniformity in their central than in their western coinages. "The standard, like the types, was that of the Western Kṣatrapas, a *kārsāpana* of about 32 to 34 grains in the west, and about 36 grains in the Central Provinces, although the latter does not assert itself till the reign of Skandagupta."<sup>3</sup> *Pūraṇa*, *dharāṇa* and *kārsāpanas* are terms used to denote silver coins.

Coinage was sufficiently developed for a definite branch of knowledge, called '*rūpa-sūtra*' or the science of coinage and currency, to have emerged. The science was largely empirical, as is obvious from Buddhaghosa's comment on the '*rūpa-sutta*',<sup>4</sup> that the learner must turn over and over many *kārsāpanas*. The local officials who by looking at the punch-marks could at once place the coin in the locality whence it originated and the Arthaśāstra's *rūpa-darśaka*, must have been well acquainted with this science. The absorbing subject of ancient Indian

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1. Allan: C.I.C, Gupta Dynasties, p.cxxxiv.

2. E.I. XXI, p.81-82.

3. Allan: C.I.C, Gupta Dynasties, p.cxxxiv.

4. Mv. I. 49. 2.



numismatics has called forth many erudite works. Hence a description of the types, legends and symbolism of the coins will be a mere recapitulation of the ground covered, and need not be entered upon here. The earliest Gupta coins are attributed by Allan to the reign of Samudragupta,<sup>1</sup> and the available coins of the period have been comprehensively and minutely classified and described by him.<sup>2</sup>

### 5. BANKING AND CREDIT

Hoarding -- treasure trove. Money deposited with individuals -- with associations -- with guilds. Guild banks -- execution of trust -- rates of interest. Money lending -- rates of interest -- different kinds of interest.

It is a natural human tendency, among those whose material lot is fairly comfortable, to save for the future, and against the lean years. One way of saving is to hoard the money, to dig a hole in the earth, and leave it there until required. That this practice of hoarding was quite common, and that frequently these hoards were left lying until discovered, is revealed by our inscriptions, which refer to hidden treasure, and by the dicta of the law-givers regarding the disposal of nidhi or treasure-trove. The Rāipur copper-plate Hoarding: of Mahā-sudevarāja<sup>3</sup> records the grant of a village treasure- together with its hidden treasures and deposits, as trove rights over such buried treasure belonged to the king. Gautama

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1. C. I. C, Gupta Dynasties, p. xxxiv.

2. Ibid.

3. G. I. p. 199.

Vasiṣṭha, Manu, Kauṭilya, Yājñavalkya and Nārada all give rules for the disposal of wealth of this kind, the king being regarded as the rightful owner of unclaimed treasure, the finder receiving a share for his reward.<sup>1</sup>

Obviously, this method of putting by money, though readily available, was not the most satisfactory, nor always very safe from the vigilance of kings and robbers. A more Individual reliable depository was an honest and trustworthy depositories person who agreed to keep the money, to be surrendered in times of emergency.<sup>2</sup> Here, in the depositing of money and property for safety, was the origin of banking. Next, safe deposits and fixed deposits were left in the charge of reliable corporate organisations. Endowments were made to Deposits and them, with the stipulation that the interest endowments accruing from the fixed deposit was to be used with corporate for specific purposes. Thus in the Sāñci organisations inscription of Candragupta II we are told of Amrakārdava's grant of the village Īśvaravāsaka, and of 25 dināras to the Ārya-Saṃgha in the vihāra of Kākanādabota, with the stipulation that the money was to be regarded as a fixed deposit, the interest on which was to be used for feeding Bhikṣus and for the provision of an oil-lamp for the shrine.<sup>3</sup> Another Sāñci inscription records the donation of twelve, three and one dināras to the same religious community, as a permanent

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1. Gaut. X.43-45; Vas. III, 13-14; Manu VIII, 35-39;  
Arth. Yāj. II.34-35; Nār. VII, 6-7.
  2. Manu VIII. 179.
  3. G.I. p.32.

endowment, the interest to be used for the feeding of Bhiksus and for the provision of lamps in particular spots.<sup>1</sup> The Gadhwā stone inscription of Candragupta II records the gift of ten dināras, apparently as a contribution to the perpetual maintenance of a Sattrā, or charitable hall or almshouse.<sup>2</sup> Similarly, two inscriptions of Kumāragupta from the same place<sup>3</sup> record two gifts in the first case, one of ten dināras, and another of an uncertain number, and a gift of twelve dināras in the second place, the interest to be used for the same purpose. A Nāsik cave inscription tells of a perpetual endowment of 100 kāhāpanas placed in the hands of a Saṅgha by a pious merchant, the interest on which was to supply cloth-money of 12 Kāhāpanas to the ascetic who kept the 'vassa' there.<sup>4</sup> The capital given to these bodies was not to be returned, and could not be used. Apparently they invested or used the money so that they received an interest on it which could be used as stipulated.

With the increase in trade and industry, and the growth of guilds, these organisations needed money to increase their trade and prosperity. The important position achieved by them in the life of the times, by virtue of their great wealth and stability, inspired public confidence to such an extent that they soon came to operate as public banks, and almost to monopolise the banking business. Not only was

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1. G.I. p. 262

2. G.I. p. 38.

3. G.I. pp. 40 & 41.

4. Nāsik C.I. 17. VIII.

money invested with them, but property also at regular rates of interest. Thus, an inscription at Junnār records the investment of money with guilds of bamboo-workers and braziers.<sup>1</sup>

Guild  
banks

Another inscription at Junnār tells us of the investment of the income of two fields with the guild at Koṇācika for planting karañja and banyan trees.<sup>2</sup>

These guilds were also entrusted with the execution of charitable endowments. A fixed capital was invested with them and they were given instructions as to the use of the interest, so that the beneficiaries were paid in kind. An inscription at Nāsik<sup>3</sup> records the investment by a lay devotee of 1,000 kārśāpaṇas with a guild of potters, 2,000 with workers of mechanical contrivances, another sum with a guild of oil-millers, and a further 500 kārśāpaṇas with another guild, the interest to be used to provide medicines for the sick of the Saṃgha of monks dwelling in the monastery on Mount Trirāśmi. In a Mathurā inscription a lord makes an endowment depositing with the 'rāka' (?) guild 550 pūraṇas and to the flour-makers' guild 550 pūraṇas, out of the monthly interest whereof 100 Brāhmaṇas should be served daily, and the destitute and hungry according to the instructions given.<sup>4</sup> The Indore copper-plate<sup>5</sup> tells

Execution us of an endowment placed with a guild of oil-men,  
of trusts of which Jivanta was the head, from the interest

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1. E. I. X. p. 132. Lüd. No. 1165.

2. A. S. W. I. IV, p. 96. Lüders, No. 1162. E. I. X. p. 132.

3. E. I. VIII. 15. vii, p. 88 ff.

4. E. I. XXI. 10.

5. G. I. p. 71.

on which they were to maintain perpetually a lamp in the temple of the Sun by giving daily "two palas of oil by weight". The Vaillabhaṭṭa-svāmin Temple inscription from Gwalior, belonging to a later period, records endowments made with guilds of oil-millers and gardeners.<sup>1</sup> The guilds themselves used to deposit or invest money with other trustworthy bodies or individuals, which they could use, but refund in times of distress.<sup>2</sup>

Some of these inscriptions specify the rates of interest on fixed deposits given by the guilds. Thus the Nāsik cave inscription<sup>3</sup> says that 2,000 kāhāpanas were invested with a weaver's guild at Govardhana at the rate of 1 per cent Rates of monthly, while another weaver's guild at the same interest place gave  $\frac{3}{4}$  per cent per month on 1,000 kāhāpanas, given by guilds where "those kāhāpanas are not to be repaid, their interest only to be enjoyed". These rates of interest work out to 12 per cent and 9 per cent per annum respectively. The guilds were not to pay the interest to the donee, but use it to provide cloth-money and 'kusana' to each one of the twenty Buddhist monks who kept the retreat in the cave.

These are the ways in which excess money was stored. We must now consider that other transaction with money, where a scarcity of it involves the processes of borrowing and lending. That the wealthy traders and merchants

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1. E. I. I. p. 159 ff.

2. Arth. IV. 1.

3. 12. V.

probably carried on these money-transactions as well seems to be indicated in the Arthasāstra.<sup>1</sup> Money-lending was regulated by certain rules laid down in the law-books, and although there is no doubt that there must have been grasping/rapacious and usurers whose sole livelihood was derived from this blood-money, yet the existence of commonly-known rules regulating their

Money- business must have acted as a check to the avaricious.  
lending Loans, whether secured or unsecured, had to be confirmed by means of a written bond or agreement of debt,<sup>2</sup> which the creditor had to present to the debtor when demanding payment, and for every payment the creditor was always to give a receipt, and an acquittance on clearance.<sup>3</sup> Personal labour in payment of both principal and interest was well-known, and the creditor could exact such payment as a right if the debtor could not pay his debt.<sup>4</sup> Pledges were given to secure against accumulated interest, but were to be returned with the repayment of the debt.<sup>5</sup> A productive pledge (such as a usufructuary mortgage) was never lost to the debtor, even in the case of default,<sup>6</sup> and it could not be given away or sold under any circumstances. Kauṭilya decrees that in the absence of the creditor or mediator the amount of the debt might be deposited with the village elders, and the debtor might have the pledged property redeemed, or with its value fixed at the time and with

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1. Arth. VII. 11.

2. Manu. VIII. 154; Br. VII.

11.

Nār. I. 114. f; Br. XI. 66.

4. Mbh. XII. 109. 18.

5. Arth. III. 12; Yāj. II. 58 f.

6. Arth. III. 12.

no interest chargeable for the future, the pledge could be left as it was. In certain specified cases, when there was a possibility of the rise in value of the pledge, or there was apprehension of its being lost or depreciated in the near future, the pledge could be sold.<sup>1</sup>

Our law-givers all agree that a rate of interest of a pana and a quarter per month per cent, or 15 per cent per annum, was usual and just.<sup>2</sup> Manu, Nārada and Yājñavalkya<sup>3</sup>

specify that this rate held good in the case of a debt secured by a pledge, but a higher rate was charged for

unsecured loans. Manu and Nārada both prescribe a caste

Rates of discrimination in the case of such loans. A  
interest

Brāhmaṇa debtor is to be charged 2 per cent per month, a Kṣatriya 3, a Vaiśya 4, and a Śūdra 5. This works out to 24, 36, 48 and 60 per cent per annum respectively.<sup>4</sup>

But both of them recommend that an honest and virtuous person, irrespective of caste, be charged the lowest rate for unsecured loans, namely 24 per cent per annum.<sup>5</sup> The Arthaśāstra also gives differential rates according to varying usage, but not on a basis of caste discrimination. He says: "Five panas per month per cent is commercial interest, ten panas per month per cent prevails among forests. Twenty panas per month per cent prevails among sea-traders".<sup>6</sup> This gives 60, 120 and 240 per cent per annum respectively.

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1. Arth. III. 12.

2. Manu. VIII. 140; Arth. III. 11; Nār. I. 99; Br. XI. 3.

3. Yāj. II. 37.

4. Manu. VIII. 142 f; Nār. I. 100.

5. Manu. VIII. 141; Nār. I. 101.

6. Arth. III. 11.



Interest has been variously classified by the law-givers. Manu and Nārada<sup>1</sup> give four kinds of interest, namely, periodical, stipulated, bodily and compound interest; while Brhaspati defines six kinds, which are bodily, compound, stipulated, periodical, hair-interest, interest by enjoyment.<sup>2</sup> Kāyikā or corporal interest is paid by doing bodily labour; Different kinds of interest the commentator explains that the milk of a pledged cow or the strength of a pledged animal may be used by the creditor, being the interest on his loan;<sup>3</sup> śikhāvṛddhi or hair-interest, as it has been called, "because it grows constantly like hair and does not cease growing except on the loss of the head, that is to say, on payment of the principal", is interest paid daily; kālīkā is periodical interest, which falls due every month; cakravṛddhi is compound interest; kārītā is interest exceeding the legal rate promised by the borrower in times of distress, and has to be paid accordingly; and bhogalābha is interest by enjoyment of a pledged object, where no further interest is claimed.<sup>4</sup> These were the general rules for interest to be paid on loans. There were also rules according to local usage and the objects on which the interest was charged.<sup>5</sup>

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1. Manu. VIII.153; Nār. I.102.

2. Br. XI. 5.

3. Vīram on Br. XI. 6.

4. Manu. VIII.153; Br. XI.4-11; Nār. I.102-4.

5. Nār. I. 105-107.

## CHAPTER VI

### LABOUR ORGANISATION

#### 1. LABOUR

Classification of Labour -- Slave Labour -- Forced Labour --  
Hired Labour -- Specialised Labour.

We have so far discussed various aspects of the city, and the trade and industries that gave to the city its wealth and importance. We have yet to consider the men who carried on these crafts and callings and the way in which the labour necessary to the existence of the community was distributed and classified. To do so, we must go into the different kinds of work, the categories of workers by whom the various essential tasks were performed, the conditions under which they worked, the remuneration they received, their legal and social status and the importance to the community of their labour.

#### Classification of Labour.

Labour has been classified by the ancient law-givers in various ways. Kauṭilya speaks of three kinds of labour - slave labour,<sup>1</sup> forced labour<sup>2</sup> and hired labour.<sup>3</sup> Nārada mentions two kinds of work, 'impure' and 'pure'. Impure work was to be done by slaves, while pure work was to be done by labourers. He divides labourers into four classes - students, apprentices, hired servants and officials.<sup>4</sup> Kauṭilya's

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1. Arth. III. 13

2. Ibid. II. 15.

3. Ibid. III. 13.

4. Nār. V. 3.5.

differentiation is according to the basis on which these labourers were taken on, and their terms of service. Nārada divides workers according to the kind of work done by them. Brhaspati gives another classification altogether. He divides labourers into four kinds of servants according to the motives that led them to seek that particular service. There are those who work for science, or "a knowledge of (one of) the three Vedas, called Rg-veda, Sām-veda and Yajur-veda".<sup>1</sup> These are the students, corresponding to Nārada's first group of labourers, who study and serve at the house of their teacher. Then come those who serve for the sake of human knowledge in the arts, which, he says, consists of "work in gold, base metals, and the like, and the art of dancing and the rest".<sup>2</sup> The apprentices, placed by Nārada in his second category of labour, come under this class. Next is mentioned one who works for love of a female slave in the household of his paramour.<sup>3</sup> He is obliged to work for her master like another hired servant. Brhaspati's last category of labourers work for gain,<sup>4</sup> and corresponds to the hired servants of both Kauṭilya and Nārada.

From the classifications of these law-givers, we may divide work into 'impure' and 'pure' work. The 'impure' work was left to slaves, and the 'pure' work performed by other classes of labourers. Labour may thus be classed into four groups - slave, forced, hired and specialised labour. Hired

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1. Br. XVI. 5.  
2. Ibid. 6.

3. Ibid. 7.  
4. Ibid. 8.

labour has been further sub-divided by the three law-givers quoted. We shall go into the sub-classes when we deal with hired labour.

### Slave Labour.

Slavery as an institution seems to have existed everywhere, and was not absent from the socio-economic life of ancient India. 'Dāsa', the Indian word for slave, is used in the Rg-veda synonymously with 'dasyu' in the sense of an enemy of the Aryans.<sup>1</sup> The conquered aboriginals and their descendants

Origin were often reduced to serfdom by the victorious Aryans, and the word dāsa was used in a new application to denote them. In the Atharvaveda, 'dāsī' is used in the sense of a female slave.<sup>2</sup> "Aboriginal women no doubt were the usual slaves, for on their husbands being slain in battle they would naturally have been taken as servants".<sup>3</sup> Breloer suggests, however, that 'dāsa' meant a servant and not a slave in ancient India.<sup>4</sup>

The law-givers tell us of different kinds of slaves, according to their manner of being reduced to serfdom. In the Vinayapiṭaka of the Buddhist canons, three kinds of slaves are mentioned.<sup>5</sup> Manu, Kauṭilya and Nārada mention seven, eight and fifteen kinds respectively. The original slaves were captives in war. The Mahābhārata approves this custom of enslaving

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1. R.V. V. 34. 6; VI. 22. 10. etc.

2. A.V. V. 22. 6; XII. 3. 13.

3. Macdonell & Keith:  
V. Ind. I. p. 357.

4. Vide Breloer: Kauṭaliya-  
Studien II, p. 31.

(The most recent work on  
slaves in ancient India)

5. Ibid. p. 30.

prisoners of war - "The vanquished is the victor's slave - Different kinds of slaves such is the law of war".<sup>1</sup> Captives under a standard made slaves are mentioned by Manu,<sup>2</sup> Kauṭilya<sup>3</sup> and Nārada<sup>4</sup>. If these slaves survived their master, they were inherited by the next of kin along with the other goods and chattels. Slaves acquired by inheritance have also been observed by the law-givers.<sup>5</sup> Offspring born to a female slave in the house of her master automatically became slaves in the same house. This is alluded to as grhaja in Manu, the Arthasāstra and Nārada.<sup>6</sup> A comparatively later development is represented by the purchase of slaves for money, given by all these three in the same context. Gifts of slaves were also known, and Manu and Nārada recognise this as a definite method of obtaining slaves. Kauṭilya and Nārada also state that a slave could be pledged or mortgaged, and this state continued until the debt was cleared. The right of sale, gift or mortgage, naturally belonged to the owner of the person thus reduced to slavery - either the master of a slave, or the husband, or the father, or the guardian in the case of a minor. Voluntary enslavement was also known. Nārada speaks of one coming forward and declaring "I am thine", and thus becoming a slave,<sup>7</sup> Kauṭilya also gives rules relating to the holding

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1. Mbh. IV. 33. 59 f.  
2. Manu VII. 415.  
3. Arth. III. 13.  
4. Nār. V. 27.

5. Manu VIII. 415; Arth. III. 13;  
Nār. V. 27.  
6. Ibid.  
7. Nār. V. 27.

of voluntary slaves.<sup>1</sup> The Arthasāstra and Nārada further mention those who have sold themselves into slavery.<sup>2</sup> Slaves were also acquired by wager. A gambler may pledge his all, wife, son, possessions, slaves and finally himself, in the course of a game of dice. There is a classic example in the Mahābhārata<sup>3</sup> of Draupadī being pledged in such a game. Slavery as a result of judicial punishment is mentioned by Manu as 'daṇḍadāsa' and by Kauṭilya as 'daṇḍapranīta'. The commentators on Manu explain this as one who serves a term of enslavement in lieu of a fine which he is unable to pay, while the Arthasāstra decrees that a person enslaved in this manner should earn that amount by work and so pay his fine (daṇḍapranītaḥ karmanā daṇḍam upanayet). Manu and Nārada recognise serfdom arising out of maintenance. One may have been rescued from starvation during a famine, and serves in the house of his benefactor. This form of slavery ceases when the person is no longer maintained. A debtor might be made to serve his creditor until the debt was cleared, or else the service might be exacted in lieu of the debt.<sup>4</sup> Then there were those enslaved for a stipulated period, those who served because of connection with a female slave in the house of her master, and those who were sentenced to slavery for apostasy, all given by Nārada. Viṣṇu emphatically decrees that "an apostate from religious mendicancy shall become the king's slave",<sup>5</sup>

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1. Arth. III. 13.

2. Ibid.

3. Cf. Mbh. I. 16. 20.

4. Cf. commentator's note on 'daṇḍadāsa' in Manu. VIII. 415, and also Mbh. XII. 109. 18.

5. Viṣṇu. V. 152.

and Yājñavalkya and Nārada both agree that such a renegade was never to be freed.<sup>1</sup> But it is doubtful how far these measures could be practically enforced, and they were probably an attempt to check a growing tendency.

Obviously the motley crowd of slaves represented by this list could not possibly have had the same origin, or be treated alike. There was the regular class of slaves, of aboriginal stock, consisting of those subjugated by the Aryans and their descendants. These were the permanent slaves, those captured, inherited, born, purchased, acquired as a gift, released from debt, won in a wager, and so on. Then there was the group of temporary slaves, those working out a court decree, those mortgaged, those enslaved for a period, those being given maintenance. The temporary slaves became free when the term of enslavement was over, whereas the permanent slaves were not automatically emancipated but had to be manumitted in order to be free. Quite often, Aryans reduced to desperate straits became voluntary slaves, or sold themselves into slavery, or mortgaged themselves or their family until they could be redeemed. But the Arthasāstra says that an Aryan does not lose his birthright (āryabhāva), even if enslaved, and the reduction of an Ārya to slavery was frowned upon. Kauṭilya places the Śūdras amongst Aryans, and selling or mortgaging by kinsmen of the life of a Śūdra who was not a born slave, and had not attained majority, was fined. Higher fines were imposed and graded according to

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1. Yāj. II. 183. V. 35.



caste in the case of similar sale or mortgage of the other three castes, whereas it was regarded as no crime for Mlecchas to sell or mortgage their own offspring. If these offences were committed by persons other than kinsmen, they were more severely punished. Manu gives a different status to the Sūdras, and says that even when set free, a Sūdra was not released from servitude, "for who can take away that which is inborn in him?"<sup>1</sup> The treatment accorded to these slaves and the tasks imposed on them must have differed with their birth. Breloer says that there was not much difference between the temporary slaves and wage-earners.<sup>2</sup>

The institution of slavery did not presuppose that these slaves remained slaves for ever. Provisions were made for manumission. The temporary slaves became free when the conditions under which they were enslaved had been fulfilled. Those paying off a debt or working out a sentence became free when the required period of work had been done. Those pledged or mortgaged were redeemed on the debt being cleared.<sup>3</sup> One enslaved for subsistence or for a stipulated period became free when this condition no longer applied. The Arthasāstra shows that a slave could be released for a ransom equal to the price paid for him, and in the case of an Ārya captured in war for a sum proportional to the danger entailed in capturing him, or perhaps for half the amount.<sup>4</sup> A prisoner of war and a highwayman caught redhanded.

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1. Manu. VIII. 4-14.  
2. Breloer, pp. 30 ff.

3. Arth. Nār.  
4. Arth. III. 13; Manu. VIII. 415.

were allowed one chance to escape, if they failed they were to be made permanent slaves.<sup>1</sup> An Ārya repaying the sum for which he was enslaved, could regain his Āryahood, and the same rule held in the case of born or pledged slaves.<sup>2</sup> Nārada makes provisions for the liberation of one who saves his master's life in peril.<sup>3</sup> One acquired by a wager or as a captive in war and one submitting to voluntary enslavement might become free by giving a suitable substitute,<sup>4</sup> and the paramour of a female slave by giving up his connection with her.<sup>5</sup> Violation of the chastity of female slaves in capacities such as nurses, cooks or servants of the class of joint cultivators, or of any other description, entitled them to their liberty. A debtor could leave his daughter as slave in payment of his debt, but if she was in any way molested, she was to become free.<sup>6</sup> And when a child was begotten on a female slave by her master, both the child and its mother were at once to be recognised as free. If the mother had to remain in bondage for the sake of subsistence, her brother and sister were to be liberated.<sup>7</sup> But perhaps the most usual method of release in the case of permanent hereditary slaves was through an act of favour on the part of the master.<sup>8</sup> Such voluntary manumission must have been granted in recognition of faithful service, or perhaps in a fit of joy at some good news brought by the slave. There was a regular custom observed in

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1. Breloer, pp. 30 ff.

2. Arth. III. 13.

3. Nār. V. 30.

4. Nār. V. 34.

5. Nār. V. 36.

6. Vide Breloer, p. 30 ff.

7. Arth. III. 13.

8. Nār. V. 29.

manumitting a slave. His freedom was symbolised by taking from his shoulders a pot of water, pouring over his head the water containing unhusked grain and flowers, and thrice declaring him to be free, after which the pot was thrown upon the ground and broken, and the slave dismissed with his face eastwards.<sup>1</sup>

Servile labour of all kinds was performed by slaves. Nārada defines as impure work, to be done by slaves, such tasks as sweeping, massaging the limbs of the master, clearing up after meals, removing dirt and rubbish, and so on.<sup>2</sup>

Work of slaves Apart from the lowest forms of menial work, the functions of the slaves must have varied with their intelligence, their characters, the length of time for which they had remained in the household, their faithfulness, trustworthiness, and capability, the position they had won by these qualities in the confidence of their masters, and so on. "The work which the slaves had to do was naturally extremely manifold and differed with the social position of the master and the intelligence of the slave."<sup>3</sup> Personal attendance on the master was one of the commonest uses to which the domestic slave must have been put. Nārada speaks of rubbing the master's limbs when desired.<sup>4</sup> They were also kept as bathing attendants.<sup>5</sup> Then they performed various domestic tasks and were employed about the household. They cleared the leavings of food, swept the yards and stables<sup>6</sup>, acted as cooks and nurses.<sup>7</sup> It was mostly women who were

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1. Nār. 42. 43.

2. Nār. V. 6. 7.

3. Fick: trans. Maitra, p. 311.

4. Nār. V. 7.

5. Arth. III. 13.

6. Nār. V. 6.

7. Arth. III. 13.

employed about the house. The men doubtless had to valet their masters, and were employed in outdoor work. The king's slaves were used for industrial and agricultural work,<sup>1</sup> fought in his armies,<sup>2</sup> and private slaves must have been used for similar work.

Because of their position in society the slave laboured under certain legal and social disabilities. Legally Legal and social disabilities he had no separate being; he was as much part of his master's property as the rest of his goods and chattels. Slaves could be pursued and recovered if they ran away, and temporary slaves became permanent if they attempted to escape.<sup>3</sup> He could not dispose of himself to another master,<sup>4</sup> and his master could sell, mortgage or otherwise dispose of him as though he was a piece of furniture, as the methods of acquiring slaves by purchase, mortgage, gift and wager seem to indicate. Kautilya allows a slave to enjoy whatever he has earned without prejudicing his master's work, to own and to inherit property. In the event of his death, if he had no offspring, the property was to go to his kinsmen, failing which, if there was no one else with a just claim on it, his master could take it.<sup>5</sup> But he could not enter into an agreement unless authorised by his master.<sup>6</sup> But this liberal attitude is not adopted by the other law-givers. Manu does not allow a slave to own property;<sup>7</sup> he cannot earn money by working for others. Whatever he earns belongs to his master.<sup>8</sup>

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1. Arth. II. 24.  
2. Rām. II. 84. 7.  
3. Arth. III. 13.  
4. Nār. V. 40.

5. Arth. III. 13.  
6. Arth. III. 1.  
7. Manu. XII. 60. 37. XIII. 416 f.  
8. Mbh. I, 82, 22 ff; V. 33. 68;  
Nār. V. 41.

He could not give evidence, except in the absence of qualified witnesses.<sup>1</sup>

In an ideal relationship between master and slave, these legal disabilities would not have counted, neither would his inferior social status, for he was regarded as an integral part of his master's family, to be treated as a member of the household.<sup>2</sup> If slaves were classed with domestic animals, such as cows, mares, camels, goats and sheep,<sup>3</sup> we Position of slaves must also remember that these animals were to be given kind and humane treatment, and some were even deified; so perhaps this classification is not as contemptuous as might appear at first sight. In the hands of a kind master, the slave's lot in life was perhaps a contented and happy one, often better than the destitute or impoverished freeman who had little means of subsistence. But as with every institution, the ideal condition did not always obtain. Just as there were kind and considerate masters, there must have been harsh and ill-humoured ones, and a slave was totally at the mercy of the whims, the caprices, and sometimes the sadism of such. And apart from all ethical considerations, they had no legal or social status whatsoever, and to have to be a slave was regarded as a great humiliation by those of more fortunate birth, while 'slave' and 'child of a slave' were common forms of abuse.<sup>4</sup> The children of slave-girls by their masters laboured under a severe handicap,

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1. Manu. VIII. 66. 70.  
2. Sânti. 242.30.

3. Manu. IX. 48.  
4. Mbh. I. 16. 19 ff.

receiving no social recognition. The Mahābhārata speaks of men acquiring other men, and "by beating, binding and by otherwise subjugating them, make them work day and night. These people are not ignorant of the pain that is caused by beating and chains".<sup>1</sup>

The slave's unenviable lot is made clear from the injunctions that masters should give their slaves used articles and torn clothes no longer fit for wear.<sup>2</sup> Broken rice and sour gruel was the habitual slaves' fare, and what consideration was shown them may be imagined from Kautilya's suggestion that "bad liquor fit for selling at lower than standard price, may conveniently go into the ration of slaves, hirelings or hogs and draught-animals".<sup>3</sup> The runaway slave, if caught and brought back, forfeits the right to redemption.<sup>4</sup>

Perhaps the most evil aspect of this institution of slavery was the prostitution of female slaves that naturally resulted. With all the Arthasāstra's safeguards for the protection of female slaves,<sup>5</sup> there was both avowed and surreptitious violation of such rules. The dividing line between courtesans and concubines is difficult to draw. The wives and daughters of

Evils of  
system:  
Prostitution  
of female  
slaves

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1. Mānuṣā mānuṣān eva dāsabhāvena bhuñjati  
Vadhabandhanirodhena kārayanti divānīsam  
Ātmanaścāpi jānāti yad duḥkhaṃ vadhabandhane  
Mbh. XII. 361. 38 f.
  2. Mbh. XII. 60. 33.
  3. Arth. II. 25.
  4. Arth. III. 13.
  5. Ibid.

those slain in battle were regarded as lawful prizes of war in earlier social concepts.<sup>1</sup> Instances of slave-women bearing children to their masters are to be found from the later Vedic literature down to the Arthasāstra.<sup>2</sup> The king's female slaves served as bathroom and bedroom attendants, shampooers, washer-women and flower and garland makers,<sup>3</sup> and when they were incapable of satisfying the king (bhagna-bhogā) were relegated to the duties of the storeroom or kitchen.<sup>4</sup>

There is a reference to the condition of slavery in two of our inscriptions. The Udayagiri Cave inscription of Candragupta II says "vikram-āvakraya-kṛitā dāsya-nyagbhūta pārtthiv(ā) ... (bought by the purchase-money of (whose) References to slavery prowess, (the earth), in which (all other) princes are humiliated by the slavery (imposed on them by him)...)"<sup>5</sup> Considering the extravagant phrases in which the king's prowess is acclaimed, the slavery imposed on all other princes was probably the humiliation of being subjugated, and there is no reason to believe that it has any connection with actual enslavement, as Saletore takes it to mean.<sup>6</sup> Again, in the Allāhābād stone pillar-inscription of Samudragupta,<sup>7</sup> Hariṣena, who held a high position in the emperor's court, has been styled the slave at the feet of the emperor, out of

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1. Cf. Aeschylus' Agamemnon and Euripides, The Trojan Women.
  2. Br. II. 19; Arth. III. 13.
  3. Arth. I. 21.
  4. Ibid. II. 27.
  5. G. I. p. 35.
  6. Saletore, p. 363.
  7. G. I. p. 16.



extravagant compliment to him.<sup>1</sup>

With all the evils of the system, the lot of the slaves on the whole was perhaps not very miserable, and they were neither so numerous nor commercially exploited to the same extent as in Greece and Rome. Breloer says the lot of the slaves was far better than that of the slaves of the Romans, Greeks and Jews, and that they should be regarded as servants rather than slaves.<sup>2</sup> Perhaps this was what made Megasthenes observe that " .. all the Indians are free and not one of them is a slave ..... the Indians do not even use aliens as slaves, and much less a countryman of their own".<sup>3</sup> And Fa-Hien, commenting on the lack of restrictions imposed on the slaves, says: "If they want to go, they go; if they want to stay on, they stay".<sup>4</sup> That this was not a true picture is clear from the above account of slavery; but these observations certainly seem to suggest that slavery was not very widely applied and the treatment accorded to the slaves was on the whole considerate and kindly.

#### Forced Labour.

Another form of unpaid labour current in our period was *viṣṭi* or forced labour. Kauṭilya says that a knowledge of *vārttā* helps to bring in grains, cattle, gold, forest-produce and free labour or *viṣṭi*.<sup>5</sup> *Viṣṭi* was regarded as so essential

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1. Saletore's conclusions (p. 363) as to the state of slavery in India from this particular inscription do not seem justified from the hyperbolical use of the term in its context.
  2. Breloer, p. 30 ff.
  3. McCrindle. Meg. p. 68.
  4. Legge, P. 43.
  5. Arth. I. 4.

to the functioning of society that the village and city accountants were required to keep an account of the number of labourers engaged in forced labour.<sup>1</sup>

Our inscriptions supply us with much evidence as to it. In the Junāgaḍh rock inscription of Rudradāman, we are told that the lake Sudarśana was constructed from his own treasury Epigraphic without burdening the people with any fresh evidence taxation and viṣṭi.<sup>2</sup> Forced labour appears to have been felt by the people as a burden. Some inscriptions indicate that lands were often granted with exemption from it. Thus in the Chammak copper-plate of Pravarasena II the land was granted "entirely free from (all obligation of) forced labour".<sup>3</sup> Similarly in the Gaṇeśgaḍh plate of Dhruvasena I<sup>4</sup> and the Surāt plates of Vigrahasena<sup>5</sup> the grant was made with exemption from all taxes and forced labour. The land-grants of Traikūṭa kings also give exemption from it.<sup>6</sup> An inscription from Nepāl records the dedication of a village to a Buddhist establishment "with immunity from all compulsory work in the form of manual labour and exemption of the householders from all kinds of forced labour, such as being sent to foreign countries".<sup>7</sup> Some other inscriptions record the grant of lands together with the right

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1. Arth. II. 7. 35.

2. E. I. VIII. No. 6.

3. G. I. p. 242.

4. E. I. III. No. 46, p. 323.

5. E. I. XI. p. 222.

6. E. I. X. No. 13; XI, No. 21.

7. Syl. Lévi, Le Népal, III. No. XX.

to forced labour, as in the Valabhī grant of Dhruvasena III.<sup>1</sup> Other inscriptions, while not directly mentioning it, seem to hint at it, as in the Khoh copper-plate of Jayanātha, where the people were asked to render to the donees all the customary duties, and taxes, and also to be obedient to their commands.<sup>2</sup> Similar instructions have been given in the Gayā plate of Samudragupta.<sup>3</sup> In some plates it is specified that this forced labour was to be exacted as occasion for it arose, or only when it fell due. Thus, in the Palitānā plates of Dharasena II, the land was granted with the right of eventual forced labour.<sup>4</sup> In the Navalākhi plate of Śīlāditya I we have the statement "with the right to forced labour as occasion for it occurs".<sup>5</sup> The Māliyā copper-plate of Dharasena also grants lands with a similar stipulation.<sup>6</sup> Later inscriptions refer to forced labour also. Inscriptions from Kāthiāwād belonging to the ninth century A.D. bear references to "the forced labour as it falls due".<sup>7</sup> Some grants of the Rāṣṭrakūṭas of the Gujerat branch mention land granted "together with unpaid labour as it falls due".<sup>8</sup>

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1. E. I. I. p. 92.

2. G. I. p. 124.

3. G. I. p. 25.

4. E. I. XI. p. 81

5. E. I. XI. p. 176.

6. G. I. p. 170-171.

7. E. I. IX. No. 1. A & B.

8. E. I. VI. No. 28.

The Udayagiri Cave inscription of Candragupta II, referred to earlier, bears the words "bought by the purchase-money of (whose) prowess (the earth .....)" (G. I. p. 35), which has been construed by Saleore to indicate that labourers were purchased with money, connecting "purchase-money" with forced labour. This supposition seems entirely unfounded, as purchase-money in this context is a metaphorical expression, denoting the puissance of the king, which was sufficient to conquer the earth.

The Arthasāstra gives different kinds of unpaid work. It was employed in the various state departments and workshops. Kauṭilya, recording the functions of storehouse attendants, Work included under forced labour says that 'sweepers, preservers, those who weigh things, those who measure grains, etc., those who supervise the work of measuring grains; those who supply commodities; those who are employed to receive compensation for any real or supposed error in measuring grains etc.; slaves, and labourers - all these are called viṣṭi'.<sup>1</sup> Forced labour was also exacted for military purposes, and the men were used for all the manual and menial labour involved. Their work consisted in cleansing the camps, roads, bridges, wells and landing stages used by the army, carrying machines, weapons, armour, instruments and provisions, and bearing away from the battle-field soldiers who had been disabled, with their weapons and armour.<sup>2</sup> The inscription from Nepāl, quoted above,<sup>3</sup> seems to indicate that a regular part of forced labour consisted in services in foreign countries. The commentator on Kauṭilya suggests that forced labour should be imposed on those from whom taxes were due, by setting them to build forts and other government buildings.<sup>4</sup> According to Manu, various classes of artisans and workers were also expected to render prescribed services once a month. He says "Mechanics and artisans, as

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1. Arth. II. 15.

2. Arth. X. 4.

3. Lévi, Le Népal, II, No. XX.

4. Arth. II. 35.

well as Śūdras who subsist by manual labour, he (the king) may cause to work (for himself) one (day) in each month".<sup>1</sup> Śukra would enforce this same rule twice a month.<sup>2</sup> Megasthenes observed that the workmen, handicraftsmen, artisans and traders had to pay tribute and also render prescribed services to the State.<sup>3</sup> Hiuen Tsang however says, that "families are not registered, and individuals are not subject to forced labour contributions ..... Taxation being light, forced service being sparingly used, every one keeps to his hereditary occupation and attends to his patrimony".<sup>4</sup> Our inscriptions indicate that forced labour was to be used only when occasion arose.<sup>5</sup> Kauṭilya has also enjoined that free labour should not be oppressively imposed.<sup>6</sup> In spite of occasional tyrannical exactions, forced labour must have been sparingly used on the whole, for Hiuen Tsang to have formed such an impression.

#### Hired Labour.

The next category is hired labour. Kauṭilya divides hired servants into (a) agricultural and industrial labour, consisting of cultivators, herdsmen, and those working under traders, for a share in the gain or for pay; and (b) various professional people, such as artisans, musicians, physicians, buffoons, cooks, and other workmen who serve of their own accord.<sup>7</sup> Nārada differentiates hired labour into three classes,

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1. Manu. VII. 138: also X. 120.

2. Śukra IV. 2. 121.

3. McCrindle. Meg., pp. 83-84.

4. Watters. I. p. 176.

5. E. I. XI, p. 176; G. I. p. 170-71

6. Arth. II. 1.

7. Arth. III. 13.

of which soldiers are the highest, then come agricultural labourers, and finally port<sup>er</sup>s and domestic servants.<sup>1</sup> Brhaspati gives the same three groups of those who work for gain, with the difference that he further classifies them into those who work for pay and those who work for a share in the products. The above three classes of hired labour belong to the former group, while in the latter class are those who serve husbandmen for a share in the grain, and those who serve cattle-owners for a share of the milk.<sup>2</sup>

From these details, we may derive our own classification of hired labour as follows:

#### Hired Labour

##### 1. Hired servants:

- a) Soldiers
- b) Agricultural and pastoral labour (i) for pay, (ii) for share.
- c) Industrial labour
- d) Domestic servants and porters.

2. Professional people of various kinds, such as those given in Kautilya's list and others belonging to despised crafts and callings.

Kautilya in his six classes of troops mentions bhr̥ta or mercenary troops, śrenibala or corporations of soldiers, and ātavī or forest tribes, who could be recruited on hire as the need arose. The bhr̥ta and śrenibala were regular paid troops, while the wild tribes

#### Mercenary troops

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1. Nār. V. 23. 24.

2. Br. XVI. 8. 10. 11.

were paid in raw produce and allowed to plunder.<sup>1</sup> The soldiers were trained, and paid according to their class and rank. For instance, the chief of military corporations should receive 8,000 paṇas, the superintendent of infantry 4,000, and ordinary trained soldiers 500 paṇas.<sup>2</sup>

Agricultural, pastoral and industrial labour were paid according to the work done, and the time spent in doing it. When the wages had not previously been settled, the cultivator was to obtain 1/10 of the crops grown, the herdsman 1/10 of the clarified butter, and the trader's employee 1/10 of the sale proceeds.<sup>3</sup> Nārada also gives the same conditions.<sup>4</sup> Brhaspati suggests that a cultivator who is supplied with food and clothing be given 1/5 of the crop as his share, while he who worked for profit alone should receive a third part of the produce.<sup>5</sup> Paid agricultural labourers or grāmabhṛtaka are mentioned by Kauṭilya,<sup>6</sup> and their wages fixed at 500 paṇas.<sup>7</sup> These labourers were held to the terms of their agreement.<sup>8</sup> The herdsman, paid on a share basis, should receive all the milk every eighth day.<sup>9</sup> Nārada also says that of a hundred cows tended by him he should receive a heifer every year, and out of two hundred cows a milch cow should be <sup>his</sup> due.<sup>10</sup> He was responsible for the

1. Arth. IX. 12.

2. Arth. V. 3.

3. Arth. III. 13.

4. Nār. VI. 3.

Cf. Yaj. II. 194.

5. Br. XVI. 13.

6. Arth. II. 1.

7. Ibid. V. 3.

8. Arth. III. 10.

9. Br. XVI. 19; Nār. V. 1. 10.

10. Ibid.



Pastoral labour cattle, and if he failed to save them from danger or accident, out of negligence, he should make good the loss to the owner.<sup>1</sup> In the case of servants working with traders, one who abandoned merchandise which he had agreed to convey to its destination should give up a sixth of his wages, while an employer failing to pay the agreed wages should give the sum stipulated, with interest. If a carrier failed to transport goods entrusted to him, he was to forfeit his wages and be compelled to pay twice the amount if he raised difficulties on specially important occasions, such as a wedding or the auspicious time for undertaking a journey.<sup>2</sup>

When the merchandise was damaged by the carrier's fault, he was to make good the loss, except such losses as were caused by misfortune, or due to the king's action.<sup>3</sup> Hired servants were expected to fulfil the terms under which they were engaged and to give the master full value for the wages paid. The master was to pay the wages regularly and justly, failing which he was to be fined according to his offence.<sup>4</sup>

Domestic servants Manu prescribes wages both in money and in kind for domestic servants, according to the nature of their work.<sup>5</sup>

Servants are mentioned in some of our inscriptions. The Gaṅgaḍhār stone inscription of Viśvavarman tells us that

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1. Nār. VI. 11-16; Br. XVI. 20.
  2. Nār. VI. 6. 8; also the Mit. on 8, p. 280.
  3. Nār. VI. 9.
  4. Arth. III. 13; Br. XVI. 14-18; Nār. VI. 2. 5.
  5. Manu. VII. 125-126.

the king Naravarman pleased his servants (bhr̥ttā-jana) with honourable treatment.<sup>1</sup> The Alinā copper-plate of Śīlāditya VII shows that the king had "acquired the goddess of royalty through the strength of the array of his hereditary servants" (maula-bhr̥ttya) "who had been brought under subjection by his splendour and had been acquired by gifts and honourable treatment and straightforwardness and were attached to him by affection".<sup>2</sup> In the Valabhī grant of Dhruvasena III we are told that Bhaṭārka acquired the splendour of royalty by his devoted army, which consisted of hereditary servants, hired soldiers and men employed in posts or maula, bhr̥ta and śreni.<sup>3</sup> From the context it seems that the terms bhr̥ttya-jana and maula-bhr̥ta have been used as servants in the wider sense, those serving the king.

Under hired professional people may be classed all those who followed the lower independent professions, and who served of their free will for agreed wages. The same rules applied to them as to hired servants. To this class may Lower professions belong itinerant musicians, jugglers, buffoons, physicians, cooks, hunters, fishermen, boatmen, chariot-makers, basket-makers, and so on. All those who belonged to the despised crafts and callings, whose vocations did not require a high degree of specialisation, may be placed in this class of labourers. Their terms of service were the same as those of other hired workers, but the treatment they

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1. G.I. p. 75.

2. G.I. p. 180

3. E.I. Vol. I, p. 89 and

J.B.R.A.S. Vol. XI. p. 346.

received, and their social status, naturally varied with their profession and racial origin.

### Specialised Labour.

At the apex of this pyramid of workers are the specialised labourers. Here may be classed all artisans following highly specialised crafts such as work in various metals, and those following independent professions that had a respected social position, like the officials, merchants, teachers, musicians, and so on. The first two classes of labourers given by Nārada and Brhaspati, may be included here,<sup>1</sup> as also Nārada's last group, namely officials.<sup>2</sup>

The superintendents of various state departments may be placed in this category, as their posts required specialised knowledge. The mining officer was to possess expert knowledge relating to metals and gems, the state goldsmith was

Officials a skilled craftsman and knew all about gold, the agricultural superintendent was well acquainted with the techniques of his office, the superintendent of elephants must be well-armed with knowledge as to the elephant's habitat, its habits, and the art of catching and training it.<sup>3</sup> The other officials dealt with under Village and Town Administration should belong here. Their duties and responsibilities have already been discussed. They held highly responsible posts

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1. Nār. V. 3; Br. XVI. 5. 6.

2. Nār. Ibid.

3. Arth. II. 12. 13. 24. 31.

and were to fulfil them adequately, being directly responsible to the king, who could punish them if they were negligent or their work unsatisfactory.

Nārada gives detailed rules for the guidance of students and apprentices. A student was to attend diligently on his Teacher teacher while he was acquiring learning. His conduct and Student towards his teacher was to be respectful, and the same reverence was to be accorded to the wife and son of his guru. His life should be frugal and industrious. He should lie on a low couch, be the first to rise in the morning, and the last to retire at night. He was to eschew ornaments, and serve his master by begging alms for him. He must be chaste, obedient, attentive and humble, following the directions of his teacher, and occupying a lower seat. The teacher was entitled to correct him if disobedient, by scolding or chastising with a rope or cane, but he should not strike him a heavy blow, nor mete out harsh or cruel treatment to him, otherwise the king could punish him. After chastising him for an offence, the teacher was to encourage him. On completing his studies, the student was to give his teacher the customary present and return home.<sup>1</sup>

Nārada gives similar rules of conduct to be followed by apprentices learning to be skilled craftsmen.<sup>2</sup> If a young man desired to be initiated into the art of his own craft, he was to go and live with a master-craftsman, with the sanction of his relations, the duration of his apprenticeship having been

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1. Nār. V. 8-15.

2. Nār. 16-21.

Apprenticeship fixed.<sup>1</sup> During the period of his apprenticeship, his relationship with the master-craftsman partook of the qualities of both trainee and employee; he was at the same time the pupil and the servant of the craftsman under whom he served his term. He was to live at his master's house, be wholly dependent on him for food, and be treated by him with paternal care. He was to be taught at the house of his master and was not to be employed in work of a different type from the craft he was learning.<sup>2</sup> He was expected to keep to the terms of his apprenticeship, and his master had full authority over him, to compel him to do so. In the case of recalcitrant apprentices, the master could apply force to bring them back in cases of truancy, and impose punishments, if necessary. "If one forsakes a master who instructs him and whose character is unexceptionable, he may be compelled by forcible means, to remain (at the master's house) and he deserves corporal punishment and confinement".<sup>3</sup> If a quick and capable apprentice finished his course of instruction before the period fixed for his training was over, he was still expected to remain for the time stipulated with his master, and during that time the profit accruing from his labour legally belonged to his master.<sup>4</sup> When he had become proficient in his craft, and had completed his course of training, the apprentice was required to reward his master as plentifully as he could, and to return home, after having taken due leave of him. Or,

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1. Nār. V. 16.

2. Nār. V. 17;  
also XVI. 6.

3. Nār. V. 18.

4. Ibid. 19; also  
Yāj. II. 184.

a certain fee having been agreed upon, and the skill of the pupil examined, he was to take his fee and depart and not go to live in the house of another man.<sup>1</sup> Kātyāyana gives four grades of craftsmanship: (a) skill as embodied in the śiṣya Four grades of craftsmanship (the young apprentice), (b) the abhijña (the craftsman possessing full knowledge), (c) the kuśala (the skilled craftsman), (d) the ācārya (he who introduces new modes or inventions).<sup>2</sup> Private crafts and industries employed these grades of craftsmen. The specialised labour employed in state offices included experts in metallurgy and mineralogy, required in mining operations,<sup>3</sup> those employed to mint gold and Employment of skilled Labour silver coins from bullion<sup>4</sup> and to make jewellery of intricate designs<sup>5</sup>, workmen skilled in making weapons, armour and other equipment for warfare,<sup>6</sup> and so on. Most of these labourers were organised into guilds and worked in accordance with the rules of their organisations, which will be dealt with in detail in the next section.

## 2. CORPORATE ORGANISATION

Rise of guilds -- Types of guilds -- their constitution -- status -- functions -- privileges. Relationship with king.

Labour, when organised and welded together, has a cumulative effect and produces the maximum of speed and

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1. Nār. V. 20. 21.

2. Nūtana-mārga-pravartakah  
— vyavahāramayūkha

3. Arth. II. 2.

4. Ibid. II. 14.

5. Ibid. II. 13.

6. Arth. II. 18.

efficiency in production. This fundamental principle that forms the basis of work, has always given the impulse to co-operative tendencies that have had as their objective a high level of total achievement reached with skill and speed, while minimising individual effort and strain. So we find the emergence of corporate organisations in our period out of the prevailing matrix of individual labour. In the life of the village, the corporate mind was at work in the organisation of village activities, such as the construction of the 'prekṣā-grha' and so on. In the field of agriculture also, this trend has been observed, and it is no matter for wonder that it spread to the industrial sphere as well. Mention of guilds has already been made. The purpose of the present chapter is to deal more fully with these industrial organisations, to attempt to describe the factors that led to their development, and to see how they functioned, and what position they achieved in civic life.

These organisations, which have been called guilds, on the analogy of their prototypes in medieval Europe, were numerous and were considered very important as is seen from the fact that the superintendent of accounts in the Arthaśāstra was to keep a register of the history of the customs, professions and transactions of the corporations.<sup>1</sup> What were the impulses behind the formation of these guilds, on what basis were they organised, and how did they come to achieve their position of importance?

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1. Arth. II. 7.



### Rise of Guilds

Much commerce and exchange of goods was carried on over overland trade-routes. Journeys over these roads were fraught with danger, especially due to the activities of organised bands of robbers and freebooters. The Jātaka stories have numerous references to attacks made on traders, laden with merchandise, as they travelled over difficult and insecure routes.<sup>1</sup> These

traders protected themselves against dangers by organising themselves into a body and moving about in caravans, so that where individually they were certain to be overcome by the robbers, collectively they were well equipped to meet their attacks. Brhaspati says that danger to one was to be regarded as danger to all, and repelled as such by collective effort.<sup>2</sup> The next logical step from this was to form a regular and permanent organisation that would look after all their interests, and not only operate in the provision of protection on dangerous trade routes. Thus, the general insecurity of the times and the dangers of travel formed one potent factor in giving a direction to the co-operative trends so that they led to the formation of corporate organisations.

Then, the social stratification in castes was another factor that helped in the development of such organisations, as the idea of work on a co-operative basis is inherent in the caste-system with its occupational differentiation. It was natural that men working at the same task and grouped together

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1. Cf. Jāt. IV. p.430; also Jāt. II, p.294.

2. Br. XVIII, 6.

in the same social category should tend to come together on the basis of their work, and, realising the advantages of

b) Functional differentiation of castes united labour, both from the point of view of production and the position achieved as a body that was denied to them as individuals, they should form themselves into organisations constructed on the same foundation as their caste, namely, allocation of function, and differentiate themselves further into numerous organisations relating to the different trades and crafts that had reached a high level of advancement, prosperity and craftsmanship, in our period.

The family structure, with the strongly-knit social units of the large joint families, and the hereditary nature of the various occupations, being handed down from father to son, with the wealth of experience and improvement in craftsmanship accumulated by each generation, also was a factor in canalising these co-operative tendencies. With the development of trade and industries, these tradesmen's

c) Here- families grew more compact - "the significance ditary occupation and inner compactness deepened, and being similar to the castes on account of the traditional organisation, and the hereditariness of membership, they gradually got .... as certain rules and customs with reference to marriage and interdining were developed, the appearance of real caste".<sup>1</sup> But these occupations were not always fixed

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1. Pick: Die Sociale Gliederung (Eng. Tr.), p.179.

and hereditary, as we see from the Mandasore inscription,<sup>1</sup> which tells us of a guild of silk-weavers that migrated to another place, where some of the members kept to their original profession, but many others took to various pursuits. Some learnt archery and became good fighters, others adopted a religious life and initiated religious disputations, some others took to the study of astrology and astronomy, while a few gave up all worldly thoughts and became ascetics, and the rest occupied themselves in other work. The occupational Occupational division had not become rigid, and although division not rigid the natural tendency was to follow the ancestral occupation, there was no bar against a change of profession. This guild referred to, had originally been formed round the common occupation, but after its migration, it continued to function as a guild, retaining its structural unity, although the members took to different occupations. Neither was the training in the hereditary craft always obtained by the son from his father, Many apprentices were grouped round a master-craftsman, who held them to their work according to specific rules and provided the specialised training in the craft that he had succeeded in mastering to a high degree.

But probably the greatest single factor that produced the guilds was the localisation of industry. The geographical distribution of the population according to

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1. G.I. No. 18.

occupation, both in certain cities which became centres of certain industries, and also within the city itself, where people following the same occupation dwelt in the same locality, not only facilitated business and gave a great

d) Localisation      impetus to the standard of work by  
    of  
    Industry      naturally leading to co-operative endeavour,

while competition between rival sub-groups also tended to improve methods of work, but also led to the formation of trade-guilds and guilds of artisans and mechanics. These could function with greater ease as their members were not scattered, and work on a co-operative basis could be organised. Kauṭilya in his plan of the city allocates specific areas to the various trades. "On the eastern side, merchants trading in scents, garlands, grains and liquids (gandha-mālya-dhānya-rasa-panyāḥ), and the people of Kṣatriya caste shall have their habitations..... To the south .... those who trade in cooked rice, liquor and flesh (pakkaṇna-surā-māṃsa-panyāḥ) besides courtesans, musicians, and the people of Vaiśya caste shall live ..... To the west, artisans manufacturing worsted threads, cotton threads, bamboo-mats, skins, armours, weapons, and gloves, as well as the people of the Śūdra caste, shall have their dwellings (ūrṇāsūtra-venucarma-varma-śastrābharāṇa-kāravah).... To the north, the royal tutelary deity of the city, iron-smiths, artisans working on precious stones, as well as Brāhmaṇas shall reside.<sup>1</sup> A different and more elaborate

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1. Arth. II. 4.

distribution is given in the Agni-Purāṇa, where the goldsmiths are placed in the south-west corner of the town; the professional dancers, musicians and harlots in the south; the stage-managers, carriage-men and fishermen in the south-west; dealers in cars and chariots, weapons and cutlery in the west; liquor merchants, officers and employees in the north-west, religious people in the north; fruit-vendors in the north-east. That it was possible for a whole guild to move en bloc from one place to another has already been seen from the Mandasore inscription<sup>1</sup> where the guild of silk-weavers, originally settled at Lāṭa, moved to the city of Daśapura. The Indore copper-plate of Skandagupta<sup>2</sup> records the gift Mobile by a Brāhmaṇa of an endowment to a temple for nature of guilds the maintenance of an oil lamp out of the interest. We are told that "this gift of a Brāhmaṇa's endowment of (the temple of) the Sun (is) the perpetual property of the guild of oil-men, of which Jīvanta is the head, residing at the town of Indrapura, as long as it continues in complete unity (even) in moving away from this settlement". The inscription envisages the event of the removal from that town of the guild of oil-men in question. It seems from this that it was not unusual for an exodus to take place occasionally of a complete body of people as was represented by a trade guild. These bodies were therefore mobile in nature, and their geographical distribution was elastic and open to alteration.

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1. G.I. p. 84.

2. G.I. p. 71.

The development of business traditions within each guild, the fostering of the team spirit through co-operative endeavour, and the pride of craftsmanship and a high standard

e) Development of business traditions of execution, would further help in consolidating the guilds, give them their distinctive spirit and aid them to play successfully their important role in the civic and commercial life of the city.

#### Types of Guilds.

Our inscriptions give us many indications of different types of guilds. Mention has already been made of the silk-weavers' guild alluded to in the Mandasore inscription, and the guild of oil-men of the Indore copper-plate of Skandagupta.<sup>1</sup> The Dāmodarpur copper-plates<sup>2</sup> mention nagara-śreṣṭhī<sup>h</sup> (president of the bankers' guild), sārthavāha (chief merchant) and prathamakulika (chief artisan), all three holding high positions in the guild-management, and representing their various interests on the town council. The clay seals discovered at Basārḥ bear the following words:

1. śreṣṭhī-sārthavāha-kulika-nigama.
2. śreṣṭhī-kulika-nigama.
3. śreṣṭhī-nigama.
4. kulika-nigama.

Dr. Bloch has interpreted nigama as guild. The above words therefore refer to guilds of bankers (śreṣṭhī<sup>h</sup>), traders (sārthavāha) and artisans (kulika).. The Nāsik Cave

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1. G. I. pp. 84 and 71.

2. E. I. XV. p. 113 ff.

inscription<sup>1</sup> records a gift that was invested with two weavers' guilds.<sup>2</sup> Another inscription of Nāsik<sup>3</sup> records the investment of similar endowments with guilds of kulārikas (potters), odayantrikas (probably mechanics working hydraulic engines and other mechanical contrivances) oil-millers and others. A Mathurā Brāhmī inscription of Huvīṣka's time records the existence of a guild of flour-makers (samitakara).<sup>4</sup> An inscription at Junnār records the investment of money with guilds of bamboo-workers and braziers.<sup>5</sup> Another Junnār inscription tells us of a guild of corn-dealers<sup>6</sup>. Ivory-workers are mentioned in a Sāñci inscription and in the Rāmāyaṇa.<sup>7</sup> Various other guilds are mentioned in the inscriptions of later periods - guilds of horse-dealers in the Pehoa inscription of 877 A.D.,<sup>8</sup> and the Harsa Stone pillar;<sup>9</sup> guilds of gardeners in the Vaillabhaṭṭasvāmin Temple at Gwalior;<sup>10</sup> guilds of betel-sellers, oil-makers and stone-cutters in the Śīyaḍonī inscription of the later half of the 10th century;<sup>11</sup> of Vagulika (perhaps hunters) in the Kārītalāī stone inscription;<sup>12</sup> of sculptors (stone-cutters and engravers) or śilpi-goṣṭhi in the Deopara inscription of Vijayasena.<sup>13</sup> Later South Indian inscriptions also

1. E. I. X. Lüd, No. 1133.

2. E. I. VIII, pp. 82-86.

3. Ibid, p. 88, No. 15 pl. vii.

4. E. I. XXI. 10.

5. E. I. X. p. 132. Lüd. No. 1165.

6. Lüd. No. 1180.

7. Rām. II. 83. 12 ff.

8. E. I. I. p. 184.

9. E. I. II, p. 116 ff. 973-74.

10. E. I. I. p. 159 ff.

11. E. I. I. 167 ff.

12. E. I. II. p. 174 ff.

13. E. I. I. 311 ff.



tell us of a guild of braziers in the Laksmeshwar inscription of Vikramāditya 725 A.D.;<sup>1</sup> of weavers in another inscription of the same place dated 793 A.D.; of potters in a 12th or 13th century inscription; and of mercantile corporations at a still later date.<sup>2</sup>

If we turn to the literature of our period, we find there too references to numerous types of guilds. Brhaspati mentions agricultural corporations, goldsmiths, workers (śilpin) in gold, silver, thread, wood, stone and leather, musicians and bands of freebooters,<sup>3</sup> also money-lenders, tradesmen, artisans such as carpenters and others, dancers, religious orders (such as Pāśupatas) and robbers.<sup>4</sup> Gautama<sup>5</sup> speaks of guilds of cultivators, herdsmen, traders, money-lenders and artisans. Vyāsa tells of guilds of dyers (raṅgopajīvins. Religious orders, or corporate organisations of priests, are mentioned by Nārada,<sup>6</sup> Manu<sup>7</sup>, Yājñavalkya<sup>8</sup> and Viṣṇu<sup>9</sup>. Daṇḍin<sup>10</sup> refers to a merchants' guild (vaṇig-jana-samāja) and the Jaina Prākṛta stories tell us of a guild of painters (citrakara). We are informed that at times this work was entrusted to the guild of painters in equal portions, implying that the members

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1. E. I. XIV. p. 188 ff.

2. R. C. Majumdar: Corporate Life in Ancient India, 87 ff. Cf. also R. K. Mookherjee: Local Government in Ancient India for further treatment of inscriptions from South India, and of later periods.

3. Br. XIV. 27-32

4. Ibid. I. 26.

5. Gaut. XI. 21.

6. Nār. III. 8. 9.

7. Manu VIII, 206, 389.

8. Yāj. II. 237

9. Viṣṇu. 113.

10. D. K. C. p. 180.

of this guild must have been assigned separate allotments of work, so that the whole might be executed quickly and efficiently. Hence we find several painters engaged in a combined undertaking.<sup>1</sup> Kautilya mentions śreni-bala or corporations of soldiers amongst different kinds of troops.<sup>2</sup> Elsewhere he talks of Kṣatriya guilds, in which Kṣatriyas banded themselves together for the purposes of war and also agriculture and trade. These guilds are mentioned as having existed in Kāmboja and Surāṣṭra<sup>3</sup> (Kāmboja-Surāṣṭra-Kṣatriya-śrenyādayo vārttā-śastropajīvinah)

From these references, we may attempt a rough classification of the different guilds that existed, as follows:-

- (1) Guilds of artisans and craftsmen. These may be subdivided into:
  - (a) Metal workers - those who worked in gold, silver or base metals, like tin, iron, lead and brass.
  - (b) workers with other materials. These would include carpenters, leather-workers, stone-cutters, bamboo-workers, weavers and other textile workers, potters, dyers, ivory-workers.
- (2) Guilds of mechanics.
- (3) Guilds of traders of various kinds, including oilmen, oil-millers, flour-millers, corn-dealers, betel-sellers, horse-dealers.

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1. Meyer, Hindu Tales, p.174.

2. Arth. IX. 2.

3. Arth. XI. 1.

- (4) Guilds of merchants.
- (5) Guilds of money-lenders and bankers.
- (6) Guilds of cultivators, herdsmen and shepherds, hunters and gardeners.
- (7) Guilds of painters, musicians, dancers and actors.
- (8) Religious orders.
- (9) Soldiers' guilds.
- (10) Kṣatriya guilds.
- (11) Guilds of Freebooters and robbers.

From all this evidence, we see how strong was the guild movement, what a motley crowd it represented, and what a wide variety of interests were served. We shall now proceed to discuss the constitutional features of these guilds, their composition and the rules and regulations that controlled them.

#### Constitution.

The guilds were organised under a guild-president or head, and an advisory board. The title of the president of the bankers' guild was "nagara-śreṣṭhin", as we have already seen from the Dāmodarpur plate quoted above.<sup>1</sup> In *Mudrārākṣasa*, we learn that there existed at Pāṭaliputra a guild of the śreṣṭhins.<sup>2</sup> These were evidently controlled by a chief who was known as the nagaraśreṣṭhin<sup>3</sup>. Quite

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1. E. I. XV. p. 113 ff.

2. Viśākhadatta-Mu. Act VII. 10, p. 98

3. Ibid, p. 101 - the expression 'eṣa śreṣṭhī Candanadāsaḥ prthivyām sarva-nagaraśreṣṭhi-padam āropyatām' suggests that there was a post like that of the chief of the guilds of all the towns in the empire.

often the guild was named after its chief, as in the Indore copper-plate,<sup>1</sup> which mentions a guild of oilmen by the name of its head, Jivanta. Brhaspati gives as the qualities of a good head of an association honesty, acquaintance with the Vedas and with the ethics of duty, efficiency, self-control, noble birth, versatility and skill.<sup>2</sup> Due to the importance of his position within the guild, the president was to receive a double share of the remuneration. Brhaspati specifies that this shall be so in the case of a headman, among a number of workmen jointly building a house or temple or digging a pool or making articles of leather.<sup>3</sup> The authority of these heads of guilds within their own organisations was considerable. Their actions, whether harsh or kind towards other people, must be approved of by the king, but there is no reason to suppose that these heads were autocratic.<sup>4</sup> The very corporate nature of the guild in its organisation and distribution of profits, responsibilities and liabilities, does not seem to allow much room for autocratic demonstrations of power. And where flagrant injustice or oppression was observed, the king had the President power to step in and restrain the heads or other of the Guild members, as the case may be.<sup>5</sup> But that the nagara-sresthin was an important figure in the civic life

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1. G.I. No. 16.

2. Br. XVII. 9.

3. Br. XIV. 29.

4. Br. XVII, 18; also Nar. X. 3.

5. Ibid. 9.

is obvious from the instance, already quoted, of the Dāmodarpur plate, which shows the guild-president and other important members of guilds in the responsible position of city councillors.<sup>1</sup> The position of nagara-śreṣṭhin was one of considerable importance and responsibility, and it was conferred as a reward on any deserving śreṣṭhin by the king.<sup>2</sup>

The guild-president was aided in his work, and had his power limited, by an advisory board, consisting of two or five persons. Brhaspati recommends that two, three or five persons be appointed as advisers of the association, and their advice was to be followed by the guilds and other fellowships.<sup>3</sup> A later period inscription at the Vaillabhaṭṭa-svāmin Temple at Gwalior mentions by name the executive officers of three guilds of oil-millers, who were four from Śrī-sarveśvara-pura, two from Śrīvatsa-svāmi-pura, and four from two other places.<sup>4</sup> The guild of gardeners mentioned in the same inscription had an executive body of seven chiefs.<sup>5</sup> The fact that they are mentioned individually by name (kārya-cintaka) indicates their importance.

Advisory Board

Yājñavalkya says that pure and virtuous men were to be appointed as executive officers.<sup>6</sup> It was these officers who enforced the rules of their guild, saw that they were observed, exacted

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1. E. I. XV. p. 113 ff.
  2. Viśākhaḍatta. Mu. Act. VII. 10. p. 98.
  3. Br. XVII. 10.
  4. E. I. p. 159 ff.
  5. Ibid.
  6. Yāj. II. 186-192.

penalties and imposed punishments in the case of defection of the members, and carried on both the internal management and the external larger business of the guild.

Membership of the guilds was naturally based on the occupation and the locality to which the individual belonged. A certain standard of character and capabilities was expected from the members, and no doubt guilds of high standing set a relatively high premium on their membership. Brhaspati

Membership advises that trade and other occupations should not be carried on by prudent men jointly with incompetent or lazy persons, or with such as were afflicted by an illness, ill-fated or destitute; but that joint work should be undertaken with persons of noble parentage, clever, active, intelligent, familiar with coins, skilled in revenue and expenditure, honest and enterprising.<sup>1</sup>

The corporate nature of these organisations is to be seen from their rules. First of all, there was the principle of joint responsibility. When one member gave or lent property, or undertook a contract, when authorised by many, the rest of the members were bound by his action.<sup>2</sup> The members were also under joint liabilities. When a loss or diminution occurred through fate or the king, the loss was to be borne by all members in proportion to their respective shares.<sup>3</sup> Joint responsibility for a contract

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1. Br. XIV. 1. 2.  
3. Ibid. 8.

2. Br. XIV. 5.

was such that if the one deputed to fulfil the contract were to meet with an accident, the contract was not to suffer. He was to be replaced either by a kinsman or by his associates.<sup>1</sup>

Corporate  
nature

A contract was binding both in times of distress and in acts of piety.<sup>2</sup> A common loan was to be recovered jointly or the interest might be lost.<sup>3</sup> The profits were to be shared equally or as stipulated, according to the shares<sup>4</sup>, and a joint fund was maintained, which was quite often used for charitable purposes.<sup>5</sup> Nārada also shows that a common fund was maintained, as this was the basis of joint business, and this fund was made up of the contributions of individual members.<sup>6</sup> Property owned by the guild was on a corporate basis.<sup>7</sup> And any danger that threatened the guild, especially in the instance of attacks from thieves and robbers, was to be regarded as a common distress, to be repelled by all, and not left to individual members to do the best they could to guard the common interests.<sup>8</sup>

The head of the guild and the advisory board had full executive and judicial authority over the other members. Fines and punishments could be imposed by them if the rules of the guild were violated, or if acts injurious to the reputation or the common interest of the members were perpetrated. Thus, breach of an agreement undertaken by the guild, without adequate cause, was regarded as a very serious misdemeanour,

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1. Br. XIV. 15

2. Br. XVII. 5.

3. Ibid. 19.

4. Arth. III. 14.

5. Br. XVII. 23. 24.

6. Nār. III. 2.

7. Yāj. II. 186-192.

8. Br. XVII. 6.



likely to bring discredit on the whole organisation, and was drastically punished. Brhaspati says "(Such an agreement) must be kept by all. He who fails (in his agreement) though able (to perform it), shall be punished by confiscation of Discipline within the guild of his entire property, and by banishment from the town".<sup>1</sup> We see from this how high a professional standard was set for the members of the guild. If anyone failed to pay in the gains made by him in transacting business on behalf of his guild, he was to pay a fine amounting to eleven times the value of the sum withheld.<sup>2</sup> Kautilya advocates the imposition of fines for leaving a guild, and other punishments up to expelling members from the guild, according to the degree of offence.<sup>3</sup> Yājñavalkya further provides that if a man stole the property of a guild or any other corporation, or broke any agreement with it, he was to be banished from the realm and all his property confiscated.<sup>4</sup> And those who sowed the seeds of dissension or caused disaffection among the members of a guild were regarded as specially culpable. Nārada compares the action of such men to the effects of an epidemic disease, which were likely to prove dangerous if allowed to go free. He therefore urges that such men be punished with special severity.<sup>5</sup>

Let us now examine the relationship between the

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1. Br. XVII. 13.  
2. Yāj. II. 190.  
3. Arth. III. 14.

4. Yāj. II. 187. 192.  
5. Nār. X. 6.

individual members and the body as a whole. In the first place, as already stated, all the gains made by individuals while carrying out the business of the guild were to be paid into the guild treasury.<sup>1</sup> The share-basis of the division The individual of profits has already been commented on, vis-à-vis the corporate body Each member was a partner in the organisation and his share of the profits was to be in proportion to his holdings in the company. Brhaspati also shows how profits were distributed among members not only according to the share of stock, but also according to the amount, and the nature of the work put in. Thus, in the case of goldsmiths' and artisans' guilds, profits were to be shared in proportion to the nature of the work. The labour of the skilled craftsman executing fine and delicate work was surely to be rated higher than that of the unskilled or semi-skilled worker in other stages of the same work. Musicians also divided their shares according to the nature of their work. The singers were to receive equal shares, but the musician who knew how to beat the time was to receive half as much again.<sup>2</sup> The loss, expenses and profits of each partner were either equal to those of the other partners, or were greater or less, in direct proportion to the shares held.<sup>3</sup> Each individual member was to contribute to the common fund for his upkeep and other expenses. Nārada specifies that

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1. Yāj. II. 190.

2. Br. XIV. 28. 30.

3. Br. XIV. 3; Manu VIII. 211; Yāj. II. 259; Nār. III. 3.

the merchandise, stores, food, charges (for tools and the like), the loss, the freight and the expense of keeping valuables must be duly paid for by each of the several partners in accordance with the terms of agreement.<sup>1</sup> The principles of partnership and joint-stock were thus the basis on which the guild was organised. Each member was held individually responsible for any loss to the common funds caused by his personal negligence, or by his infringement of the rules of the society, and in losses caused by acting against the instructions or without the authorisation of his partners.<sup>2</sup> Then, individuals were rewarded for guarding the common property against fire, against a gang of robbers, or against an encroaching prince with nefarious designs on it. Such were to receive a tenth part of the property as a reward for serving faithfully the common interests.<sup>3</sup>

The guild was subject to the ultimate authority of the king. While the king in general gave due importance to the rules framed by the guilds, he reserved the power to step in and interfere in extreme cases.

Settling of disputes Disputes that were proving troublesome and could not be settled, were decided by the king, and his decision was enforced with authority.<sup>4</sup> But this was an extreme measure, and in general disputes the rules of the

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1. Nār. III. 4.

2. Nār. III. 5; Yāj. II. 260.

3. Nār. III. 6; also Yāj. II. 260.

4. Yāj. II. 18.

guild were applied to effect a settlement. Śukra says that "the cultivators, artisans, artists, usurers, corporations, dancers, ascetics, and thieves should decide their disputes according to the usage of their guild."<sup>1</sup>

The general rules of the guild were held in high esteem in all quarters. The king treated them as highly important, giving them equal statu<sup>2</sup> with the laws of the State, and the rules of the castes. The public treated them with respect, and the members of the guilds were proud of their Status traditions and were bound together by a strong accorded to common loyalty. Manu refers to the rules of the guild rules guild as "śreṇi-dharma". Yājñavalkya says that the violation of the rules and regulations of the guilds was to be considered high treason.<sup>2</sup> Nārada terms the aggregate of rules framed by the guilds "samaya"<sup>3</sup>, and Yājñavalkya lays down the general maxim that the duties arising from these rules and regulations when not inconsistent with the injunctions of the sacred texts, as well as the regulations laid down by the king, were to be observed with care, thus placing duty towards the guild on an equal footing with obedience to sacred laws and the laws of the State.<sup>4</sup> The Mahābhārata shows how Loyalty to strong was the feeling of loyalty towards the guild. guild The Śāntiparva<sup>5</sup> says that forsaking the duties to the

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1. Śukra. IV. V. 35-36.

2. Yāj. II. 186-192

3. Nār. XI.

4. Yāj. II. 186.

5. Śānti. 36. 19.

guild to which they belong is a sin beyond any expiation.

Functions of Guilds.

A consideration of the functions of the guilds and their variety of activities, will reveal their highly respected and important status in the socio-economic organisation of our period. Apart from their functions in regard to their respective trades; which they succeeded in raising to high standards of excellence, the position they held in the public esteem and the amount of confidence reposed in them is indicated by the fact that being wealthy organisations they

operated as banks, and also as executors of  
a) Banks important trusts and endowments. They kept money for others, and their stable position invited the confidence that resulted in their appointment as trustees of property and endowments. Thus the Nāsik Cave inscription<sup>1</sup> shows how an endowment to benefit Buddhist monks dwelling in a cave was invested in two weavers' guilds, which paid interest on the capital invested at certain rates. The transaction received

Investment official recognition, and was on a par with  
of money transactions enacted with the State, as it was proclaimed and registered at the town-hall, at the record office, according to custom.<sup>2</sup> Other instances of investment of capital with guilds are to be seen from another inscription of our period at Nāsik<sup>3</sup> which records how sums of money were

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1. E.I. X. Ibid. No. 1133.

2. E.I. VIII. p. 82-86.

3. Ibid. p. 88. No. 15, pl. vii.

invested in the guilds of Kulārikas (potters), odayantrikas (mechanics), and oil-millers. An inscription at Junnār records investment of money with guilds of bamboo-workers and braziers.<sup>1</sup> Later inscriptions from Gwalior at the Vaillabhaṭṭa-svāmin temple<sup>2</sup> also record endowments with the guilds of oil-millers and gardeners. Not only was money invested with them, also property. An inscription at Junnār shows how the income Investment of Property of two fields was invested with the guild at Konācika.<sup>3</sup> This same inscription reveals that these guilds undertook the execution of public and pious trusts. Here, the income from the fields invested in the guilds was to be used for planting karañja and banyan trees. The Nāsik inscriptions mentioned above vested the guilds, in which they invested their capital, with the authority to execute the Execution of trusts trusts of providing cloth money and "kusana" for the Buddhist monks who dwelt in the cave<sup>4</sup> and to provide medical relief to the Saṅgha for monks dwelling in the monastery on Mount Triraśmi.<sup>5</sup> The Indore copper-plate<sup>6</sup> shows how an endowment was invested with a guild of oil-millers for them to maintain perpetually an oil lamp in the temple of the Sun. Guilds deposited money with dependable people, with the stipulation that these safe deposits could be taken back in times of distress.<sup>7</sup>

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1. Lüdt. No. 1165.

2. E. I. p. 159 ff.

3. A. S. W. I. IV., p. 96 - Lüders, No. 1162; E. I. X, p. 132.

4. Lüdt. 1133.

5. E. I. VIII, p. 88, No. 15, pl. vii.

6. G. I. No. 16.

7. Arth. IV. 1.

The great prominence achieved by the guilds by virtue of their wealth and economic importance was recognised by the administrative and judicial authority vested in them. Civic affairs were dominated by powerful craft and trade guilds.

b) Administrative authority We have already seen from the Dāmodarpur plates<sup>1</sup> that the Viṣayapatis appear to have been aided in their administrative work (samvyavahāra) by a board of advisers, consisting of four members, representing the various important interests of the civic life of the times. Of these four, three were apparently high executive officers of trade-guilds, namely, the nagaraśreṣṭhin or guild-president representing, perhaps, the banks, ~~wealthy-urban-population~~, the sārthavāha or chief merchant, perhaps representing the various trade-guilds, and the prathama kulika (chief artisan), who was the representative of the various artisan classes. The craftsmen were so well organised that every corporation had a leader from its own guild, and as such he had some influence in the administration of the country.

Judicial power over their own members was recognised to be vested in the guilds, as we have seen in discussing the rules of the guilds and the powers of the executive authorities. Daṇḍin<sup>2</sup> describes how a rogue, being caught, refused to confess to his captor, but insisted on being taken

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1. E. I. XV. p. 115 ff.

2. Dke. p. 180.



c) Judicial authority before the merchant's guild, of which he was an employee, and in front of the guild executives, he stated his case. Whether these guilds also had a certain amount of judicial authority in public matters is not very clear but Brhaspati describes guilds as acting in the capacity of judicial courts for deciding law suits when authorised by the king, except in the case of violent crimes, for passing sentences and for receiving appeals.<sup>1</sup> Disputes amongst kinsmen which were not settled out of court could be taken to these guild-courts. If they failed, the matter should be referred to the popular assembly, and even if that did not succeed, appointed judges were to arbitrate between the opposed parties.<sup>2</sup> Nārada says: "Gatherings (kula), corporations (śrenī), assemblies (gaṇa), one appointed (by the king), and the king (himself), are invested with the power to decide law suits; and of these, each succeeding one is superior to the one preceding him in order."<sup>3</sup> This seems to imply that guilds were known to act as law-courts on occasion.

Apparently many of the more wealthy and powerful guilds maintained regular armies for their protection. This is a very understandable development, as in the course of their trade they had to undertake journeys that involved attacks from robbers, and their wealth

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1. Br. I. 28. 29.

2. Ibid. 30.

3. Nār. I. 7.

and property must have tempted attacks even when they remained within their town. Some of these guild militia were so strong that it was possible for the king to supply his needs for defensive and offensive purposes by recruiting the śrenibala or soldiers of the guilds.<sup>1</sup> Kautilya in the same context mentions this śreni-bala among various classes of troops.<sup>2</sup> The Mahābhārata enjoins upon a king to avail himself of śreni-bala, which was equal in importance to hired soldiers (bhṛta).<sup>3</sup> The Rāmāyaṇa refers to "sayodha-śreni".<sup>4</sup> The Alīnā copper-plate inscription of Śīlāditya VII mentions śreni-bala.<sup>5</sup> The Mandasore inscription quoted several times above reveals the military aspect of guilds<sup>6</sup> and Nārada also tells us of guilds resorting to arms.<sup>7</sup> Disputes with actual resort to arms between rival guilds, must have been a well-known feature in the life of the times, as the men of the guild militia would be on the look-out for bellicose activities, which would have to be restrained by the interposition of the king.<sup>8</sup>

In the economic sphere, these guilds set the prices e) Domination of prices of commodities in common usage. Kautilya refers to "traders who unite in causing the rise and fall in the value of articles, and live by making profits cent per cent".<sup>9</sup>

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1. Arth. IX. 2.
  2. Ibid. VII. 1.
  3. Āśrama. 7. 8. 9.
  4. Rām. II. 123. 5.
  5. G. I. p. 173.

6. G. I. p. 85.
7. Nār. X. V.
8. Ibid.
9. Arth. VIII. 4.

The guilds played a considerable part in constructing and maintaining public works and in benevolent activities. The Mandasore inscription<sup>1</sup> tells us of a temple, long in a state of disrepair, being re-built by the guild of silk-

f) Benevolent activities weavers out of their accumulated wealth. A Junnār inscription<sup>2</sup> records the gift of a cave and a cistern by a guild of corn-dealers. An inscription at Gwalior<sup>3</sup> reveals how it was made obligatory upon guilds of oil-millers and gardeners to contribute to the worship conducted in the Vailla-bhaṭṭa-svāmin Temple. The executive of the oil-mills, with the other members of the guild of oil-millers, were to contribute regularly one pallika of oil per oil-mill every month, and the seven chiefs and other members of the guild of gardeners were to supply 50 garlands every day. Charitable works were instituted out of the common guild-funds, and relief was provided for helpless and poor people, for the old, the afflicted and the feeble, for persons who could not make provision for their children, and for other causes deserving of public charity.<sup>4</sup>

Amongst the many privileges accorded to these guilds, a few are worthy of mention. Merchants belonging to trade-guilds should be accorded special privileges<sup>5</sup>

Privileges and special concessions were to be allowed in law

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1. G. I. No. 18.  
2. E. I. X. Lid. No. 1180.  
3. E. I. I. p. 159 ff.

4. Br. XVII. 12. 23.  
5. Arth. III. 12.

suits between trade-guilds.<sup>1</sup> The village guilds should be protected by the regulation that no guilds of any kind other than local co-operative guilds would find an entrance to the village.<sup>2</sup>

#### Relationships with King.

The relationship between the king and the guilds was very interesting. On the one hand, their flourishing condition was a great source of revenue to the king and they might be taxed according to the king's pleasure.<sup>3</sup> He extended his benevolent patronage towards them, subsidised them if necessary, and accorded great respect to their rules and regulations. He interested himself in seeing that the rules were kept. The king was entitled to arbitrate in cases of disputes that could not be settled within the guild.<sup>4</sup> But he did not interfere except in extreme cases. And he also used his authority to restrain outbursts of communal fury against a single member.<sup>5</sup> The great power and prestige of the guilds, arising from their opulence and military strength, made it necessary for the king to win over their support as allies. Their wealth was so great that the king often exploited them. Kauṭilya offers the Machiavellian suggestion that in the case of financial distress, the king might employ a spy who would borrow from corporations bar-

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1. Arth. III. 1.

2. Arth. II. 1 - sāmuththāyikād anyas samayānubandhaḥ.

3. Arth. II. 35.

4. Yāj. II. 18; Nār. X. 2; Br. XVII. 20.

5. Br. XVII. 19.

gold etc. and then allow himself to be robbed of it.<sup>1</sup> On the other hand, in some respects these guilds were a constant thorn in the royal flesh. Their military strength was a powerful threat to the king's supremacy, and the disputes and brawls between the armed bands of different guilds had to be strictly discountenanced and were a source of trouble.<sup>2</sup> So much so that Kauṭilya thought that it was necessary to keep the śreni-bala's attention diverted from creating trouble within the realm by providing them with land that was often subject to the enemy's attacks, so that they could be kept busy fighting the king's enemies most of the time.<sup>3</sup> Kauṭilya also suggests that the higher officers of the śreni-balas be won over to support the king by paying them salaries that would suffice to win a good following in their own community.<sup>4</sup> But this had its dangers also. A śreni-mukhya, being thus supported, might be a source of trouble by causing injury to the life and property of others. How powerful these guilds were can be seen from the fact that sowing dissension among the heads of guilds or inciting them

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1. Arth. V. 2.

2. Nār. X. 4. 5. 6. -

prati-kulañ ca yad rājñah prakṛtyavamatañ ca yat.  
vādhakañ ca yad arthānām tat tebhyo vi-ni-vartayet.

mithah saṃ-ghāta-karaṇam ahetau śastra-dhāraṇam.  
parasparopaghātañ ca teṣāṃ rājā na māśayet.

doṣa-vat-karaṇam yat syād anāmnāya-pra-kalpitaṃ.  
pravṛttam api tad rājā śreyas-kāmo ni-vartayet.

3. Arth. VII. 16.

4. Arth. V. 3.

to treason was looked upon as a means of injuring the king's enemies.<sup>1</sup> In the colonisation of new areas, an unorganised body was preferred to settlement by organised guilds, which were thought to be intolerant of calamities and susceptible of anger and other passions.<sup>2</sup>

The guilds thus dominated the life of the city with their manifold activities and were a factor both to be respected and encouraged, and also to be feared.

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1. Santi. 59. 49; 141. 64.

2. Arth. II. 11.







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