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PREFACE

THE reception accorded to the First Volume of our Studies has proved encouraging enough to make us decide to continue the journal. On account of the exigencies of printing, the present volume could not be as representative of our varibus departments as its predecessor. The volume is to be got out before the end of the session, and this has led to a large number of contributions to be held over for the next volume. We expect to be able to make better arrangements in future to guard against such eventualities.

THE UNIVERSITY:
March 31, 1926.

GANGANATHA JHA,
Vice-Chancellor.

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Allahabad
University Studies

VOL. II 1926 No. 2

THE ORIGIN AND DEVELOPMENT OF THE MUSLIM LAW OF MARRIAGE

BY

Dr. MAHOMED U. S. JUNG, M.A., LL.D., Bar-at-Law,

Reader-in-Law.

The development of the institution of marriage is a matter of historical interest. It originated in the form of irregular unions and marital unions.[1] Marriage by capture was the primitive form of marriage, and ultimately it gave way to elopement with consent, "a compromise with real capture." The institution of marriage by purchase gradually grew up, and this notion of acquisition of a wife, as property, paved the way for marriage by agreement, subject to a dowry. Polyandry, polygamy and even monogamy were enjoined by immemorial customs, and practised in different parts of the world. The transition from the sacramental indissolubility of marriage to the treatment of marriage, as a civil institution, is a modern idea.[2]

[1] "Marital unions are the outcome of sexual selection and restrictions." Vinogradoff, 'Historical Jurisprudence,' vol. I, p. 167.

[2] "In civil society it becomes a civil contract regulated and prescribed by law." Story, 'Conflict of Laws,' p. 143.

Whether the Arabian civilisation in its natural growth passed through these various stages is a matter of speculation and conjecture for the historians. The advent of the great Prophet of Islam marked a triumphant period, the old political and social structure of the Arabian culture tottered down, and was replaced by a refined civilisation, which is the ideal of the Muslims and the admiration of the world. The Arabs themselves refer to the pre-Islamic era as the days of ignorance, (ایام جاهلیت), *i.e.*, "period of ignorance or rather wildness or savagery, in antithesis to the moral reasonableness of a civilised man."[1]

Marriage by capture.

In archaic times marriage by capture was prevalent. "The rape of the Sabine women" and the Tartar's raids in the Caucasus are well known. The raids were followed in pursuits by the parents and relatives of the damsel and were frequently successful. And in cases of elopement with consent of parents such pursuits were held for enjoyment. The modern Muslim practice of escorting the bride to the accompaniment of music, with great pomp, assumes the semblance of a party returning from a successful raid. The ancient Arabs prided themselves in capturing maidens. "According to Ibn Abd Rabbih, the *hajin*, that is, the son of an *ajamiya*, or non-Arab woman, did not inherit in the Times of Ignorance, but there was no such disability as regards the son of a captive, nay according to Arab tradition the best and stoutest sons are born of reluctant wives."[2] Indeed the Arab maidens preferred to be carried away as it manifested their paramours' intense love and affection.

Sir Walter Scott depicts an interesting episode:

"LOCHINWAR."

"She is won! we are gone! over bank, bush, and scaur—
They'll have fleet steeds that follow," quoth young Lochinwar.

* * * *

[1] Niholson, 'Literary History of the Arabs,' p. 30.
[2] Robertson Smith. 'Kinship and Marriage,' p. 90.

There was racing and chasing on Cannobie Lee,
But the lost bride of Netherby ne'er did they see.
So daring in love, and so dauntless in war,
Have ye e'er heard of gallant like young Lochinwar ? "

The Hindu Law recognises marriage by forcible capture as "Rakshasa rite," and attaches no insignificance to such an institution. The laws of Manu enacted :

III. 33.

"The forcible abduction of a maiden from her home, while she cries and weeps after (her kinsmen) have been slain or wounded and their houses broken up is called the Rakshasa rite."

हत्वा छित्वा च भित्वा च क्रोशंतीं रुदतीं गृहात्।
प्रसह्य कन्याहरणं राक्षसो विधिरुच्यते

Marriage by capture is a form of marriages of dominion. McLennan thinks that "Marriage by capture arose from the rule of exogamy." Westermarck suggests that "the practice of capturing women for wives is due chiefly to the aversion to close intermarriage.....together with the difficulty a savage man has in procuring a wife in a friendly manner without giving compensation for the loss he inflicts on her father.[1]" Marriage by elopement is another instance of capture with consent.

Capture was afterwards supplemented by purchase. This is really the beginning of marriage by agreement, it precedes marriage by contract. The contract of purchase is subject to well-understood or specified conditions. The kin of the woman attempts to maintain authority and supervision over the bride, and consider themselves under obligations to revenge her ill-treatment and death if caused by the husband. This was exactly the case in ancient Arabia. Robertson Smith says, "the strength of the feelings of kinship bettered the wife's position, whether she were married in her own kin or to an alien, unless she were carried far out of the reach of her natural protectors."[2]

[1] 'The History of Human Marriage,' p. 389.
[2] 'Kinship,' p. 123.

In Ancient India the *Asura* form of marriage (*i.e.*, by purchase) was prevalent. It is still common among the Sudras. The laws of Manu forbid such unions:

III. 51.

"No father who knows (the law) must take even the smallest gratuity for his daughter."

न कन्यायाः पिता विद्वान्गृह्णीयाच्छुल्कमन्वपि

IX. 98.

"Even a Sudra ought not to take a nuptial fee, when he gives away his daughter; for he who takes a fee sells his daughter, covering (the transaction by another name)."

आदतीत न शूद्रोऽपि शुल्कं दुहितरन्ददन्।
शुल्कं हि गृह्णन् कुरुते छन्नं दुहितरविक्रयं

Similarly the ancient Greeks used to buy wives, and later its reverse the dowry system was inaugurated as a mark of distinction between a wife and a concubine.

At Rome the Plebian institution of marriage, "Co-emptio in Manu," was a fictitious sale "per aes et libram." Dr. Hunter suggests that co-emptio was a survival of "the rape of the Sabine women," a substitution of purchase and sale for the capture of wives, while in Germany marriage by purchase was abolished after the introduction of Christianity.

The debased form of marriage by purchase is the institution of buying females to serve as slaves and concubines. The Muslim Law recognises slavery; but prefers that Nikáḥ should be contracted with the slave girls. Islam does not tolerate simple (unalloyed) concubinage. In the Holy Koran, whenever the establishment of conjugal relations with slave girls is mentioned, it is indicated that marriage should be solemnized:

Part V, hh. IV.

"But whoever of you is not possessed of means to marry free believing women, then he may marry those which your right hands possess from believing slave girls, and Allah knows best your faith."

و من لم يستطع منكم طولا ان ينكح المحصنت المومنت فمن ماملكت ايمانكم من فتيتكم المومنت - والله اعلم بايمانكم -

The Holy Prophet altered the notion that a woman was like an acquisition of a thing, and the solemn marriage subject to dowry purged of all its evil incidents was established for the Muslims of Arabia. The dower may be a sum of money, or property or even personal service. The custom of obtaining a wife by services rendered to her father was common among the ancient people of the world. A Hebrew tradition has well familiarized us:

The Raddul Muhtár says :—
"Moses contracted a marriage with the daughter of Shoab and the dower was that she should graze his sheep for eight years."

ردالمحتار
زوج موسى بنته علي ان يرعي له غنمه مثانية سنين

The system of dowry was not a new idea, it was customary among the ancient people. Rev. James Macdonald in his book 'Light in Africa' observed an interesting custom among the South African tribes: "A man obtains a wife by giving her father a certain number of cattle, she retains certain rights to property and an interest in the cattle paid for her. They are a guarantee for the husband's good behaviour."[1]

The institution of dower has passed through successive stages. The Tafsír Aḥmadí says that in ancient Arabia, dower formed part of the marriage contract, but was generally misappropriated by the wife's relatives; dower was originally similar to purchase or presents, and finally it came to be regarded as the exclusive property of the wife, capable of being transferred to her heirs. Imám Muslim cites an example how in ancient Arabia dower was avoided by a device called Shighár (شغار):

A gives in marriage his daughter or sister to B in consideration of B giving his daughter or sister to A.

The institution of Shighár is similar to the conditional "Sata" marriage of the Hindu Law. Islam does not tolerate any device whether by contract or otherwise to defeat the right of the wife to dower.

[1] P. 159.

The Muslim dower is also similar to the donatio propter nuptias of the Roman Law.

Mr. Sutherland in his book 'Origin and Growth of the Moral Instinct' lays down a bold proposition. He observes: "In cultured communities the dowry dies out, just as the purchase-money declined in the civilised stages."[1] The institution of dower is rapidly becoming extinct. Dower is now more or less nominal, nevertheless it serves a useful purpose, as it checks the exercise of the arbitrary power of divorce, which the law has conferred solely on the husband. In Muslim legal treatise dower is known as *sadac*[2] and the wife acquires a complete legal right over her dower.

Polyandry.

Polyandry is an old institution and according to McLennan and Morgan it is a natural stage in the development of society.[3] It was practised in Greece. Eusebius and Socrates mention it. The Nairs, the Todas and various tribes of Tibet and the Australian aborigines have practised it. Polyandry was generally prevalent in the form of communal marriage, where the kinsmen have a sort of common property in one or more women especially set apart. Such was the custom in Australia among the Dieri and kindred tribes.

It is curious but convincing that polyandry was practised at the sacred temples where female ascetics and dedicated maidens largely assembled to offer their homage to the deity. It was so in Greece. Eusebius refers in this connection to the Astarte worship. Sozomen speaks about the holy virgins of Heliopolis and says that Constantine forbade the Phoenicians from practising the prostitution of the maidens. In India the life led by

[1] P. 243.

[2] Robertson Smith, 'Kinship,' p. 93. "In Islam *sadac* simply means a dowry and is synonymous with *mahr*. But originally thet wo words were quite distinct: *sadac* is a gift to the wife, and *mahr* to the parents of the wife."

[3] Westermarck says ('The History of Human Marriage,' p. 515), "Polyandry seems, indeed, to presuppose a certain amount of civilisation. We have no trustworthy account of its occurrence among the lowest savage races."

the *Jat-Vairagis* in the *Akharas* is another instance of the prostitution at the temples. The same was the case in Arabia: "In Arabia and elsewhere in the Semitic world.....unrestricted prostitution of married and unmarried women was practised at the temples and defended on the analogy of the license allowed to herself by the unmarried mother-goddess."[1]

The oldest evidence of the existence of polyandry in Arabia is that of Strabo: "All the kindred have their property in common, the eldest being lord; all have one wife and it is first come first served, the man who enters to her leaving at the door the stick which it is usual for every one to carry; but the night she spends with the eldest. Hence all are brothers of all (within the stock of συγγενεις); they have also conjugal intercourse with mothers..... "[2]. This institution is termd as a "regulated polyandry." It closely resembles the "fraternal polyandry" which existed in India. The classical instance of the Pandavas and Draupadi need only be cited. The institution of levirate (which is sanctioned by the Muslim Law also) is simply a relic of fraternal polyandry.

Ṣaḥíḥ Bukhárí, a book of the traditions universally revered by the Muslims of the world, as well as Abu Dáud, report two famous *Hadises* about the existence of a peculiar system of polyandry in ancient Arabia:

1. "A number of men, not more than ten, used to cohabit with a woman. When she conceived and was delivered of a child, then she would send for all these men, who were bound to attend. She told them, 'You remember our agreement, now I have brought forth a child and I am of opinion that this child is so and so's issue.'

ابوداؤد

١ يجتمع الرهط دون العشرة فيد - خلون على المرأة كلهم يصيبها فاذا حملت و وضعت و مرليال بعدان تضع حملها ارسلت اليهم فلم يستطع رجل منهم ان يمتنع حتي يجتمعو اعندها تقول لهم قد عرفتم الذي كان من امركم وقد ولدت وهو ابنک يا فلان تسمي من احبت منهم باسمه فيلحق به ولدها -

[1] Robertson Smith 'Kinship,' p. 165.
[2] Robertson Smith 'Kinship,' p. 158.

The named father had to recognise the paternity."

2. "Many men used to have sexual intercourse with a woman, who would not refuse any visitors. When such a woman had an issue born to her, then her "frequent" visitors would assemble, and by physiognomistic test used to decide, who was the father of the child."

٢ يجتمع الناس الكثير نيد
خلون على المرأة لاتمتنع ممن جاءها
وهن البغاديكن ينصبن علي ابوابهن
رايات تكن علماً لمن ارادهن د خل
عليهن فاذاحملت فوضعت حملها
جمعواها و دعوا لهما لقا فة ثمة القفوا
ولدها بالذي يرون فالقاطة ودعي ابنه -

The Prophet of Islam abolished the institution of polyandry, and forbade such practices.

The custom of polyandry was the result of poverty, and excess of the male population due to the large number of female infanticides. The Arabian desert was an ideal place, for its poverty was proverbial, and female infanticide was enjoined by custom as obligatory.

Women who had a free hand and selected their own men could hardly be considered to be acquainted with the notion of chastity, their children were all full tribesmen without any distinction of legitimate and illegitimate offspring. However, with the introduction of the "higher polyandry" where the group of husbands reserves the wife exclusively, the idea of conjugal fidelity develops, and gradually monandry comes into existence, and a man prefers to have a wife to himself. Still however it is for the husband to decide who shall actually beget his wife's children. We find in an *Hadis* reported in the Bukhari and Abú Dáúd a curious instance where the husband tolerates polyandry to obtain a "goodly seed":

"A custom was that a husband would say to his wife after the termination of her monthly courses, "send for such a man and

كان الرجل يقول لامرأته اذا طهرت
من طمثها ارسل الي فلان فاستبضعي
منه ويعتزلها زوجها ولا يمسها ابداً
حتي يتبين حملها من ذالك الرجل

have intercourse with him," and the husband would keep away from her, until she had conceived by that man, and thereafter would return to her. This was done with a view to obtain a noble seed."

الذي تستبضع منه فاذاتبين حملها اصابها زوجها ان احب وان يفعل ذلك رغبة في نجابة الولد فكان هذا النكاح سمي نكاح الاستبضاع -

This institution was common among the ancient Arabs, and was put to an end after the dawn of Islam, as being nothing short of permissible fornication and adultery.

The Koran says: Part XV, ch. XVII

"And go not near adultery, it is a foul deed and an evil path."

ولا تقربوا الزنى انه كان فاحشة وساء سبيلا -

It is curious that a parallel system was in existence in India called Niyoga, though now obsolete; it was recognised by the laws of Manu for the Sudras:

"On failure of issue (by her husband) a woman, who has been authorised, may obtain (in the proper manner prescribed) the desired offspring by (cohabitation with) a brother-in-law or a Sapinda."

IX. 59

देवराद्वा सपिण्डाद्वा
स्त्रिया सम्यङ्नियुक्तया ।
प्रजेप्सिताधिगन्तव्या
संतानस्य परिक्षये ॥

The Hindus sanctioned Niyoga, as it was necessary for a Hindu to have a son to perform the sacred rites. It is suggested, that among the Semites a similar notion that the dead man will miss something if he leaves no children to worship had survived. Apparently this was not the sole reason. The Arabs desired to obtain a noble seed—a gifted child with natural attributes of heredity, and this is far from being a desire to have a son to perform the sacred rites. Plato was of a similar opinion. In Greece, he said, "Every individual is bound to provide for a continuance of representations to succeed himself as ministers of the divinity."

Polygamy.

Westermarck observes: "Polygamy was permitted by most of the ancient peoples with whom history acquaints us, and is, in our day, permitted by several civilised nations and the bulk of savage tribe."[1] Plurality of wives was considered as an additional source of wealth by the ancient people. However all the ancient nations did not indulge in polygamy. The Veddas of Ceylon wandered through the forests in monogamous pairs with their wives, children and hunting dogs.

Polygamy was practised by the Jews and was enjoined in certain cases by the Mosaic Law. The 'ancient' Christian Church did not forbid it. The Anabaptists and Bernardino Ochino approved of the institution of plurality of wives. In 1540 Luther consented to the second marriage of Philip the Magnanimous, who married with his wife's approval. Among the tribes of Africa, Australia and the Mormons of America, we find that polygamy was customary. Harald Harfgar, Vladimir of Russia, Sanio of Bohemia, Meshko of Poland are all credited with plurality of wives. The Hindu Law does not restrict the number of wives. The monogamous marriage of modern times is the outcome of a slow growth, starting from the state of sexual promiscuity, irregular and temporary unions.

The Romans later on preferred monogamy, and it was a fundamental rule of Roman Law that a man could not have two wives at the same time "duos uxores eoden tempore habere non licet."

The Muslim Law inherited the doctrine of plurality of wives from time immemorial. So many Prophets had married a number of wives. Jacob had Joseph and his brothers born of different wives, the Prophet Solomon had contracted numerous marriages. Abraham the traditional founder of the Quraysh Arabs had at least two wives. He left his second wife Hagar and Ishmael at Mecca.

[1] 'The History of Human Marriage,' p. 431.

While in ancient Arabia there was no restriction as to the number of wives that one could legally marry, Islam limited the number to four, and represented monogamy as an ideal form of marriage.

The Holy Koran says: Part IV, ch. IV.

"Marry such women as seem good to you—two, three or four; but if you fear that you cannot do justice (between them) then marry only one, or what your right hand possesses (*e.g*, captives of war and slaves); this is better so that you may not deviate from the right path."

فانكحوا ماطاب لكم من النساء
مثنى وثلث وربع - فان خفتم الا تعدلوا
فواحدة اوما ملكت ايمانكم ذلك
ادنى الاتعولوا -

And the Koran says in the next 'Sípára': Part V, ch. IV.

"And it is not in your power to do justice between wives, even though you may covet it; but keep yourself not aloof from one with total aversion, nor leave her like one in suspense, and if you make reconciliations, and guard yourself, then surely Allah is Forgiving, Merciful."

ولن تستطيعوا ان تعدلوا بين النساء
ولو حرصتم فلا تميلوا كل الميل فتذروها
كالمعلقة وان تصلحوا وتتقوا فان الله
كان غفورارحيماً -

Thus Islam prefers monogamy, and it is only in special cases that it permits subsequent marriages.

The Laws of Manu lay down some conditions for celebrating subsequent marriages:

"A barren wife may be superseded in the eighth year, she whose children (all) die in the tenth, she who bears only daughters in the eleventh, but she who is quarrelsome without delay."

IX. 81.

वन्ध्याष्टमेऽधिवेद्याब्दे दशमे तु मृतप्रजा।
एकादशे स्त्रीजननी सद्यस्त्व प्रियवादिनी

It is said that the Mûtazila sect of Islam holds marriage with more than one wife as unlawful. Ameer Ali boldly observes, "there is a great difference of opinion among the followers of Islam regarding the lawfulness of polygamy.....A

large and influential section of Islamists hold it to be absolutely unlawful, the circumstances which rendered it permissible in primitive times having either passed away or not existing in modern times."[1]

This observation is a solitary opinion of an eminent lawyer. The Koranic enactments act for all times as a divine influence, and it is essential for them to be as wide in their application as possible. Monogamy may be an ideal, but polygamy remains a lawful institution recognised by the law all over the Muslim world—in Arabia, in Egypt and other parts of Muslim Africa, in China, India, and other countries inhabited by the Muslims.

Referring to this view of Ameer Ali, Sir Roland Wilson remarked: "Elsewhere in his book this learned and ingenious writer boldly refers to 'Mussalmans of the polygamous sect,' as though they, rather than his friends, were the schismatic minority, in spite of the fact that the standard text-books of all sects and schools except his own afford absolutely no hint of polygamy being considered unlawful....."[2]

It is further interesting that the early Mûtazila[3] during the reign of Al-Mámún endeavoured to proclaim the legality of temporary marriages, though the modern Mûtazila totally disapprove of Mutá, and are now represented as the champions of the cause of monogamy.

The Turkish Government of Angora is contemplating an enactment to make monogamy the general law, and providing that second marriage shall only be celebrated after judicial sanction.[4] A similar movement is progressing in Egypt. In India, as the Muslim male population is in excess of females, polygamy is not practicable for all, and further those who

[1] Wilson, 'Anglo-Muhammadan Law,' 3rd Edition, p. 467. (Ameer Ali has lately revised this text. 'Muhammadan Law,' Vol. II, 3rd Edition, p. 188.)
[2] 'Anglo-Muhammadan Law,' p. 468 (3rd Edition).
[3] Osborn, 'Khalifs of Baghdad,' p. 253, Note.
[4] As reported in the Press, 1924.

consider it morally objectionable provide against it by a special clause in the marriage contract, but still it flourishes among a "class of men" all over India, as likewise in the Muslim world.[1]

Temporary Marriages.

In ancient Arabia temporary marriages were common, and an interesting narrative is reported in Al-Tirmizí:

"Ibn 'Abbás said, Mut'a was only in the beginning of Islam. A man would come to a town in which he had no acquaintances, then he would keep (marry) a woman for the time that he would stay there, and she would look after him and cook his food for him."

الترمذي

وعن ابن عباس قال انما كانت المتعة في اول الا سلام كان الرجل يقدم البلدة ليس له بها معرفة فيتزوج المرأة بقدر مايرى انه يقيم فتحفظ له متاعه وتصلح له شيئه –

This institution may be described as the "marriage of convenience." The contract for a fixed period is merely a limitation to absolute right of divorce. Lane in his translation of the Arabian Nights cites the case of a man who had married nine hundred women. A temporary, "Mut'a, marriage is said to be a marriage that no one need know anything about." In other words, the bride's kin might know nothing about it, that is, there was no contract with the woman's kin—such as was customary when the bride left her kin and came to live with her husband. Consequently in a Mut'a marriage the wife remained with her people and the children of the marriage did not belong to her husband. The mother was the centre of the family, hence it constituted a matriarchal system.[2]

Westermarck observes: "Hardly less variable than moral ideas relating to marriage are those concerning sexual relations

[1] Baillie, 'Digest,' p. xxvi: "Divorce and polygamy, though perfectly allowable by the law, are thus very much in the nature of luxuries which are confined to the rich."

[2] The modern Shiá Mut'a marriage is based upon patriarchal system.

of a non-matrimonial character. Among many uncivilised peoples both sexes enjoy perfect freedom previous to marriage, and in some cases it is considered almost dishonourable for a girl to have no lover."[1] Such was the custom prevalent in the East African Barea and Kunama, in Malay Archipelago, Indo-China and elsewhere. Among the Angami Nagas promiscuous connection is customary, as men are desirous of having proof as to their capacity of procreation before they contract a lawful marriage. It is curious that the conception of chastity begins with marriage, and even here the standard varies. According to Mr. Griffis, "Confucianism virtually admits two standards of morality, one for man, another for woman...chastity is a female virtue, it is a part of womanly duty, it has little or no relation to man personally."[2] Similarly the ancient Hebrews forbid fornication to women[3] but not to men.[4] In Greece virginity was "an object of worship." Athens was proud of virgin's temple, the Parthenon. At Rome the profligacy of women was checked by various enactments, and Tacitus says, that the publication of a list of prostitutes on the Aedile's register was in itself a sufficient punishment. The Hindus conceive chastity as virtue. Chastity was not a virtue in ancient Arabia, but a gradual progress was going on. At Mecca the women had accepted chastity and we read of Fatima, wife of Ziyad, who was carried away by a Fazarite, casted herself from her camel and so preferred death rather than that any shame should be attributed to her family and sons on her account. Women who still persisted and adhered to the old laxity now formed a class of their own—prostitutes, and their houses were marked by a flag hung over the door. Chastity was still no part of virtue for the men, it was not considered as disgrace to visit

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[1] 'The Origin and Development of Moral Ideas,' vol. II, p. 422.
[2] 'The Religions of Japan,' p. 149.
[3] "Do not prostitute thy daughter to cause her to be a whore." 'Leviticus,' XIX, 29.
[4] Westermarck, 'The Origin and Development of Moral Ideas,' vol. II, p. 427.

such houses, and men were prepared to admit and acknowledge a prostitute's child. The Muslim world regards chastity as an essential duty for all Muslims.

The Sunni Muhammadans disapprove of temporary marriages, and according to a tradition reported by the fourth Khalif Ali, the Prophet forbade Mut'a marriages on the day of the battle of Khayber in accordance with the verse of the Koran found in the Surat-ul-Muminín :

Part XVIII, ch. XXIII.

"None is lawful except their wives, or those whom their right hands possess, for they surely are not blameable."

الا علے ازواجهم اوما ملکت ایمانهم فانهم غیر ملو مین –

Accordingly the Raddul Muhtár clearly says :

"Marriage in Mut'a form is invalid."

و بطل نکاح متعة و موقت –

And if a Nikáh for a fixed term is celebrated, the doctrine of Imam Zafar applies, and such a marriage is regarded as permanent.

The Shiá hold that Mut'a marriages are lawful. The essential conditions are a dower and a period for cohabitation which are mutually agreed upon, and the marriage lasts till the efflux of the fixed period, and according to Shara-i-looma, dissolution of marriage could also be effected by "the doctrine of the gift of the term."

Divorce.

The laws determining separation of the married parties are of considerable historical interest. In a sacramental marriage divorce was impossible. The Christian Church treats marriage as a sacrament. The man and wife are made "one flesh by the act of God." "What therefore God hath joined together let no man put asunder." "Quod Deus conjunxit, homon non separet." For the separation of the parties the Canon Law required the decree of nullity, "Annulatio Matrimonii," a judicial fiction that such

a marriage never existed. The same was the case under the Hindu Law. The Laws of Manu provided no divorce:

IX. 46.

"Neither by sale nor by repudiation is a wife released from her husband; such we know the law to be, which the Lord of creatures (Prajāpati) made of old."

न विक्रय विसर्गाभ्यां भर्तुर्भार्यांविमुच्यते।
एवं धर्मं विजानीमः प्राक् प्रजापतिनिर्मितम्॥
(Some substitute "निष्क्रय" for "विक्रय".)

For the Hindus marriage is a religious duty, and the custom of *sattee* is the consequence of the complete union. In ancient Arabia divorce was very common, and it was of various kinds, and it took place generally at the instance of the husband.

Zihár.

Zihar in the literal sense means "the back," in law it signifies a man's comparing or likening his wife to his mother, or any female relations within the prohibited degree whether by consanguinity, affinity or fosterage. The usual phrase is "thou art to me as the back of my mother." In archaic times *Zihar* stood like divorce, but the Muslim Law considers it as a temporary prohibition without dissolving marriage, and it continues till the performance of expiation.

The Holy Koran says:

Part XXVIII, ch. LVIII.

"As for those of you who put away their wives by likening their backs to the backs of their mothers, *let them know* that they are not their mothers, their mothers are no others than those who gave them birth and surely they utter a hateful word and a falsehood, and verily Allah pardons and forgives.

الذين يظهرون منكم من نسائهم ما هن
امهاتهم - ان امهاتهم الا اللائي ولد نهم
وانهم ليقولون منكراً من القول وزورا وان الله
لعفو غفور -

The atonement for *Zihar* consists either of (a) manumission of a slave, (b) fasting for two months, (c) feeding sixty poor persons.

Ila.

Ila was common in the dark ages, and in its "primitive sense, it signifies a vow," and was considered as a divorce. The Muslim Law construes it as a divorce suspended for four months. *Ila* takes place when a person swears that he will not have sexual intercourse with his wife for four months. *Ila* must not be for a shorter period.

The Koran mentions *Ila*: Part II, ch. II.

"Those who swear that they will not go unto their wives, should wait four months. But if they go back, then Allah is Forgiving and Merciful."

للذين يولون من نسائهم تربص اربعة اشهر فان فاؤا فان الله غفوررحيم –

The Prophet of Islam disapproved of *Ila* and *Zihar* and prescribed the recognised modes of Talak-us-Sunnat.

Mr. Abdur Rahim points out, "sometimes an Arab would pronounce Talaq[1] ten times and take his wife back and again divorce her and then take her back and so on." The wife in such a predicament was absolutely at the mercy of her husband, it depended upon the discretion of the husband to dissolve the marriage tie completely or not.

Separation may also be produced not merely by the dismissal of the wife, but at her demand or on the demand of her kin. This system was also prevalent in Arabia. Where the matriarchal system was flourishing, the wife could easily effect divorce. Robertson Smith says: "The women in the *Jahiliya*, or some of them had the right to dismiss their husbands and the form of dismissal was this: If they lived in a tent they turned it round so that if the door faced east it now faced west and when the man saw this he knew that he was dismissed."[2] According to the traditional custom a man had no right to enter the tent of his unwilling wife. But in

[1] 'Muhammadan Jurisprudence,' p. 10.
[2] 'Kinship,' p. 65.

baal[1] marriage of ancient Arabia there also existed divorce at the request of the wife known as Khula' which survived down to the Muslim Law. Khula' was a friendly arrangement between the husband and the wife's father by which the husband was repaid the dowry.

Under the Muslim Law divorce is an arbitrary act of a husband, and he may divorce his wife with or without her consent. Divorce may be verbal only and no special expressions are necessary; it suffices, if it denotes a clear intention to dissolve the marriage, and writing is not necessary to the legal validity of divorce. Divorce is either revocable or irrevocable. During the period of *iddat*,[2] marriage is deemed to subsist with respect to various of its effects such as maintenance, residence, the right of inheritance and the husband may take back his wife; but after the period has elapsed, he cannot exercise this right. The husband can delegate to a third person or to his wife the power to repudiate herself, تفويض الطلاق *Khula'* is a repudiation by consent and is at the instance of the wife for a valuable consideration. *Mubarat* is a divorce by mutual consent.

Patirarchal system.

The Muslim family law is based upon the patriarchal system. However we can trace with confidence the existence of matriarchal system in ancient Arabia. According to McLennan and Morgan formerly the family centred round the mother, but Westermarck and A. Lang hold that the highest state was patriarchal. The "Cyclopæan family" was ever maintained under the despotic sway of the sire over his wife and children. The matriarchal system is loosely knitted, it is based on the rule of the weaker sex, hence the ultimate triumph of the more solid and single patriarchal organisation was inevitable. Wherever the matriarchal system

[1] Baal marriage is under husband's authority with male kinship.
[2] Iddat is the waiting for a definite period—on divorce it is 3 months, on widowhood it is 4 months and ten days. In the pre-Islamic era iddat was for one whole year.

has flourished, it was because of the support of man. There is a definite element of male influence such as the mother's brother who is looked upon as her natural helper. The Nairs represent a fully-developed matriarchal organisation of this kind and the mother holds real property, and the inheritance passes through her.

However, there is no inherent incompatibility between the patriarchal and matriarchal systems, and the transition from one system to the other can be detected.

Vinogradoff observes, "the important question is that of *residence* whether the household is within the circle of influence of the wife's or husband's family."[1]

We have seen that in Arabia "the tent" of the woman was her exclusive home, and so long as this tent was situated in the neighbourhood of her relations, the woman was able to check any attempt to interference and domination on the part of her husband, but the moment she elected to live in the company of her husband's tribes, she naturally lost her independence, and thus unconsciously surrendered herself to the control of the husband. The natural conditions in Arabia only hastened the fall of the matriarchal system. The notion that a wife was like an acquisition of a thing, by capture or by purchase, led to a disastrous result.

The Arabs soon came to regard women as subject of inheritance. The sons and heirs were entitled to inherit their step-mothers by simply throwing a sheet of cloth on them.

The Tafsír Ahmadí says:

"During the time of ignorance, if a man died and left a widow, step-sons and relatives, then if one of them threw a sheet of cloth over the widow, she immediately became his wife though unwilling, and the same former dower was fixed again."

تفسير احمدي

ان في الجا هلية لما مات الرجل وترك امرآة وانبامن غيرها واقاربه يلقي ذالك الدين اوالا قارب وقت وفات ذالك الرجل ثوباً عليها فتنز جو ها اكراها وقرر وامهرها على ماكود مورثهم -

[1] 'Historical Jurisprudence,' vol. , p. 196.

The Holy Koran emphatically denounced the custom of taking women as wives against their wishes.

Part XV, ch. IV.

"Oh believers! It is not lawful for you that you should take women as heritage against their will."

يا ايها الذين امنو الا يحل لكم ان ترثوا النساء كرها –

Further numerous customs led to the degradation of the women. The recognition that they were not free agent to marriage and their consent or refusal was immaterial; the deprivation of their right to dower and its appropriation by their relations; the institution of repeated divorces and repudiations at intervals, and their cancellation at will and pleasure of their husbands; the adoption of a system of regular confinement for one whole year to mourn their husband's death; the severe punishment which was inflicted upon them, if proved to have committed adultery; such were only glaring instances of their deplorable and deteriorated status in life.

The condition of the women was in no way satisfactory in other countries. In ancient Greece she was held in bondage to her husband. Aristotle observes: "A good and perfect wife ought to be mistress of everything within the house,.....the wife ought to show herself even more obedient to the rein than if she had entered the house as a purchased slave. For she has been bought at a high price for the sake of sharing life and bearing children, than which no higher or holier tie can possibly exist." ('Œconomica.')

The Zoroastrian Yasts likewise define a holy woman as "rich in good thoughts, good words and good deeds, well-principled and obedient to her husband."

Similarly the laws of Manu declared:

IX. 3.

"Her father protects (her) in childhood, her husband protects (her) in youth and her sons protect (her) in old age, a woman is never fit for independence."

पिता रक्षति कौमारे भर्ता रक्षति यौवने।
रक्षन्ति स्थाविरे पुत्रा न स्त्री
स्वातन्त्र्यमर्हति॥

Donaldson writes: "In the first three centuries I have not been able to see that Christianity had any favourable effect on the position of women, but on the contrary it tended to lower their character and contract the range of their activity."[1]

At a period in the growth of the Arabian civilisation the matriarchal and patriarchal systems must have come into contact, and in the struggle the fittest survived. Here is an instructive narrative illustrating the transitional stage. A suitor is proposing for a girl's hand. The father says, "yes if I may give names to all her sons and give all her daughters in marriage." "Nay," says the suitor, "our sons we will name after our fathers and uncles, and our daughters we will give in marriage to chieftains of their own rank, but I will settle on your daughter estates in Kinda and promise to refuse her no request that she makes on behalf of her people."[2]

In this case we see a compromise between the two divergent systems; the husband is in favour of the marriage of dominion type, thus the matriarchal system was superseded in Arabia by the introduction of *baal* marriage. *Beena*[3] marriage with kinship through the mother existed for some time in Arabia. The Muslim historians narrate the story of Salmā, the wife of Hâshim the Meccan, that she "would not marry any one except on condition that she should be her own mistress and separate from him when she pleased."[4] The story goes on to say that a son Abd-ul-Muttalib was born to Salmā and he remained with the mother's kin, until the father's kin persuaded the mother to give up the boy to them.

However in Arabia the process of the subjection of the women and children was totally complete before the dawn of Islam, and the endeavours of the Prophet were to emancipate

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[1] 'Contemporary Review,' LVI, 433. "Thy desire shall be to thy husband and he shall rule over thee." 'Genesis,' iii, 16.

[2] Robertson Smith, 'Kinship,' p. 124.

[3] Beena marriage is where the husband goes to settle in his wife's village.

[4] Robertson Smith, 'Kinship,' p. 85.

the women from hereditary bondage, restore her position and give her a legal status in the eye of the law. The entire Muslim Law stands as a testimony. The abolition of polyandry, the restrictions imposed on polygamy, and the recognition of the prohibited circle for intermarriage by reason of consanguinity, affinity and fosterage, the treatment of marriage as a devotion and condemnation of divorce, the recognition that a woman is a free agent in marriage, that her consent is essential to validate the marriage contract, and the amendment of the pre-Islamic law of inheritance by giving the woman definite share in property, the modification in the law of dower, its treatment as exclusive property of the wife, and above all the recognition of the wife's separate property and independent status in law, these all are the facts which speak for themselves.

Westermarck has well observed: "The history of human marriage is the history of a relation in which women have been gradually triumphing over the passions, the prejudices and the selfish interests of men."[1]

Conclusion.

The Muslim law of marriage stands in complete contrast to vague and indefinite customs of marriage that were common in ancient Arabia, but these immemorial usages and customs form an integral part of the history of Muslim marriage. In Islam marriage is both a civil contract and a religious rite. According to all jurists it is a *Sunnat Muwakkidah.* It is an institution for the procreation of children, the regulation of social life and for the benefit of society. There is no merger of the personality of the husband and wife. Property is not the object of marriage. Dower is not like the institution of purchase-money for the wife. Divorce is permissible in special circumstances, it is tolerated as a necessary evil.

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[1] 'The History of Human Marriage,' p. 550.

BERNARD SHAW AS A CRITIC OF CONTEMPORARY SOCIETY

BY

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"He who can, does. He who cannot, teaches."
—*Maxims for Revolutionists.*

The apotheosis of Bernard Shaw has been justly described as one of the miracles of the present age. His literary career was begun nearly half a century ago, when he left Ireland and came to London, throwing, as he tells us, not himself but his mother into the struggle for life, and writing novels which nobody would publish. But for many years the British public was either indifferent or hostile to him. To-day he is publicly referred to by a royal personage as "that world-famous Irish dramatist;" Mr. A. B. Walkley describes him as "the venerable patriarch, who now dominates the spiritual universe as a kind of Pope Bernard I;" while the London correspondent of the *Statesman* is "thrilled" as he sees before him in a theatre the figure of the "first play-wright of the age." It would seem that Bernard Shaw has conquered his public. We have at last managed to catch up with a few of his ideas, and have learned to look with curiosity and respect, if not with complete understanding, upon an author who, it appears, was not a mere buffoon after all, and whose greatness, having been duly recognised upon the Continent for years, must now, in true British fashion, be proclaimed at length in the country of his adoption. There is even a danger that Shaw may before long become a classic, and

join the company of those writers whose works we all take as read and leave in undisturbed seclusion upon our shelves.

It may be doubted, however, whether Bernard Shaw is really better understood to-day than in the old days, when his name was the Shibboleth of the few and the butt or execration of the many. To a number, perhaps even to the majority, of the folk who read or see his plays he is still the mountebank who says refreshingly witty things but whose opinions need not be taken seriously; while the Shavians, like most devotees of a literary cult, are too apt to copy the whims and eccentricities of the master while they neglect his real and essential message. In India, to put it mildly, it can hardly be said that his plays have been exhaustively studied, as anyone who tries to collect material upon them will rapidly discover. A glance at the syllabuses of most of our Indian universities might indeed lead one to suppose that English literature came to an end with the death of Robert Louis Stevenson. But the time is ripe for an intelligent study and discussion of the plays, and this little paper is offered as a brief indication of one or two possible lines of research.

Bernard Shaw has touched life at so many points and has displayed such a many-sided activity that he is perfectly justified in claiming that the life of such a man as himself is worth writing "as a historical document[1]". He has come before the public as an orator, a critic of art and music, a journalist pure and simple, as socialist, humanitarian, philosopher, dramatist, and novelist, and in each department he has done work sufficient to make the fame of any ordinary man. But it is undoubtedly to the plays, with their brilliant and illuminating prefaces, that we must look both for the fullest expression of his personality and for his most enduring

[1] Cp. Shanks, p. 11. (For the references, see the Bibliographical Note at the end of this article).

work. Under one aspect, the aspect upon which I more particularly wish to dwell, his plays are a mirror of contemporary society. In that revival of the drama which is undoubtedly the most remarkable phenomenon of the English literature of recent years, they occupy the leading place, and Shaw has invented a new type of play—the drama of discussion—which is of especial value as a social "document." Though in advance of their age when they were first pulbished, his earlier plays are now an admirable reflection of the ideas which they have partly helped to form, and nowhere can that astounding change of outlook and convention which has marked the present century in England be more concisely and more effectively studied. Considered as a part of the general Ibsenite and European movement in the direction of realistic or naturalistic drama, the English dramatic outburst of the first ten or twelve years of the present century is of very great interest. The drama has in many cases become identified with attacks upon existing conventions of various kinds—religious, social, domestic, intellectual: and the many brilliant qualities of Shaw's plays place him easily at the head of those who have thus sought to make the theatre a platform for the propagation of ideas. [1]

For present purposes, then, we may set aside Shaw's fiction, his public speeches, his essays on social and economic questions, and his miscellaneous pamphlets, and confine ourselves to the plays and their prefaces, together with the essays bearing directly upon the drama. There is an advantage in this separation, for the plays contain the quintessence of Shaw's thought and are the vehicle of everything that is of importance in his message to his age. Moreover, as is now pretty generally recognised, they are examples of very high excellence in a new kind of dramatic art, although this excellence is regarded by

[1] For an account of the newer drama in England see Jameson, Lewisohn, Williams, and the late William Archer's *The Old Drama and the New.*

the dramatist himself purely as a means to an end. "For art's sake alone," he says, "I would not face the toil of writing a single sentence."[1] Nevertheless, we who enjoy and profit by the art which he has produced may be pardoned if we sometimes turn aside from the end and take pleasure in the contemplation of the means. It is the same with the more purely literary quality of style, upon which Shaw has some very sensible remarks to make in the passage to which reference has just been made. The business of his style, in preface, dialogue, or soliloquy, is to get his message across from the stage or the printed book to the persons for whom it is meant; but this should not blind us to the fact that Shaw is one of the greatest prose-writers of the day, wielding a nervous, concise, and rapid style which illuminates like a searchlight any subject which it touches. It may also rise at times to the level of pure poetry, as, for instance, in certain now famous passages in *Getting Married*[2], *John Bull's Other Island*[3], and *Back to Methuselah.*[4] Again, the wit, vitality, and freshness of his dialogue have been abundantly praised, but justice has not always been done to the vigour, richness, variety, and truth to life of much of his character-drawing. Shaw himself, in his customary witty fashion, puts the criticism against his characters much better than his critics,[5] and there are certainly moments when the dramatist

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[1] *Man and Superman, Epistle Dedicatory*, p. xxxv.

[2] p. 278. Where a volume contains more than one play, the references are to the pages of the whole volume.

[3] pp 17-18.

[4] pp 265-7. The list might easily be extended, witness the gorgeous setting of *Cæsar and Cleopatra*, the charm of some of the dialogue in *Saint Joan*, and the indefinable air of melancholy beauty which invests the whole of *Heartbreak House*. The more poetic view of the relations between the sexes is seen not only in *Getting Married* but also in *Mrs. Warren's Profession* and *Candida*.

[5] "*Vaughan.*—Well, at all events, you can't deny that the characters in this play were quite distinguishable from one another. That proves it's not by Shaw, because all Shaw's characters are himself: mere puppets stuck up to spout Shaw. It's only the actors that make them seem different."—*Fanny's First Play*, Epilogue, p. 232.

tends to lose himself in the philosopher or the critic. Yet most of the major characters, and the minor characters almost without exception, are individual and dramatic to a degree. In fact, a recent critic is probably not very far wrong when he says that Shaw's characters are not appreciated because they are *too* real, and adds: "It is hard to avoid the conclusion that Shaw's strongest talent (when he chooses to exert it) lies in the portrayal of human beings as they are, and that his fame will ultimately rest neither upon his ideas nor wit but upon his poetry and characterisation." [1] It should also be remembered that, as Bergson has pointed out, [2] a tendency towards the general is inherent in the nature of comedy. A too highly individualised picture would be felt to be exceptional and would therefore not be recognised as generally true by the ordinary audience; thus comedy would miss its principal effect of *corrigere ridendo*. So much must be said in order that Shaw's attack upon society may not be discounted as an essay in philosophic discussion merely, with no relation to actual life. One other feature should be noted: his characters, like those of Shakespeare, belong chiefly to the leisured and cultured classes.[3] In *Back to Methuselah* we hear of a statue to Saint Henrik Ibsen, inscribed with the motto, "I came not to call sinners but the righteous to repentance," and a somewhat similar design is discoverable in the plays of Bernard Shaw. Even the historical characters may be made the mouth-pieces or the objects of his attack, for it is Shaw's avowed intention in writing drama with a historical background to bring out

[1] Collis, p. 108.

[2] *Laughter*, pp. 169—171. The whole passage has a direct bearing upon the plays of Bernard Shaw, and explains and partly justifies his contention that art (*i.e.*, his plays) should never be other than didactic. See Preface to *Pygmalion*, p. 102.

[3] The reason for this is pointed out in the preface to *The Dark Lady of the Sonnets*, p. 128: "Industrial slavery is not compatible with that freedom of adventure, that personal refinement and intellectual culture, that scope of action, which the higher and subtler drama demands."

the elements of our common humanity in the great figures of the past. Human nature is always the same, and the romantic conventions of hero-worship are pure nonsense.[1]

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Any author has the right to claim that his work shall be judged from the particular aspect under which he wishes it chiefly to be regarded, and since Shaw considers his propaganda to be the most important feature of his plays, it will be worth while very briefly to examine his criticism of contemporary English society. The *raison d'ētre* for the attack which he makes upon existing conditions, institutions, creeds, conventions, and national idiosyncrasies is abundantly set forth in many passages of the plays, prefaces, and critical articles. As long ago as 1896, when he was working as dramatic critic for the *Saturday Review*, Shaw penned the

[1]An exact classification of Shaw's plays is difficult if not impossible. "Broadly speaking, it may be said that the plays earlier than *Man and Superman* (1903) deal either with concrete social evils or with individual character; while the later plays deal in a more abstract fashion with questions of politics, morals, and sociology. The multiplicity of Shaw's dramatic activities is shown by his own list of the subjects which he has treated in his plays. "I tried slum-landlordism [*Widowers' Houses*], doctrinaire Free Love (pseudo-Ibsenism) [*The Philanderer*], prostitution [*Mrs. Warren's Profession*], militarism [*Arms and the Man*], marriage [*Getting Married*], history [*Cæsar and Cleopatra, The Man of Destiny, The Devil's Disciple, Androcles and the Lion, Great Catherine*, and (later) *Saint Joan*], current politics [*John Bull's Other Island*], natural Christianity [*The Shewing up of Blanco Posnet*], national and individual character [*Captain Brassbound's Conversion, You Never Can Tell, Candida, John Bull's Other Island, Fanny's First Play, Heartbreak House*], paradoxes of conventional society [*You Never Can Tell, Candida, Misalliance, Over-ruled, Fanny's First Play, Heartbreak House*], husband-hunting [*Man and Superman*], questions of conscience, [*The Devil's Disciple, The Doctor's Dilemma, Mrs. Warren's Profession, Fanny's First Play*], professional delusions and impostures [*The Doctor's Dilemma, Pygmalion*], all worked into a series of comedies of manners in the classic fashion, which was then very much out of fashion, the mechanical tricks of Parisian "construction" being *de rigueur* in the theatre."—*Back to Methuselah*, Preface, p. Lxxxv; the additions in brackets are my own. This play, which is a vision of Creative Evolution, stands apart from the rest, though they may all be said to be summed up init.

following passage, which is of great importance for the right understanding not only of his own position but also of the whole trend of modern drama:—".....when conduct conflicts with creed, the question as to which of the two is in the wrong is an open one.....it is not alone humanity that is constantly on its trial, but the ethical, political, and religious systems that claim obedience from humanity.....a deliberate violation of these systems may be, not a weakness to be pitied and pardoned, but an assertion of human worth to be championed and carried to victory in the teeth of all constitutions, churches, principles, and ideals whatsoever.[1]" And his plays are constructed in accordance with this principle. "An interesting play cannot in the nature of things mean anything but a play in which problems of conduct and character of personal importance to the audience are raised and suggestively discussed.[2]" "In the new plays, the drama arises through a conflict of unsettled ideals rather than through vulgar attachments, rapacities, generosities, resentments, ambitions, misunderstandings, oddities and so forth as to which no moral question is raised.[3]" "Unity, however, desirable in political agitations, is fatal to drama, since every drama must be the artistic presentation of a conflict. The end may be reconciliation or destruction; or, as in life itself, there may be no end; but the conflict is indispensable: no conflict, no drama.[4]" Shaw's plays are thus seen to be linked up with his pamphleteering and speeches, his socialistic tracts, and his economic disquisitions by virtue of an inborn desire for revolt.

Shaw's criticism of modern society centres principally around three or four points—economic questions, sexual relationships, marriage, the family, and religion. He declares that society as at present constituted is based upon a set of false

[1] *Dramatic Opinions and Essays*, Vol. I, p. 448.

[2] *The Quintessence of Ibsenism*, p. 190.

[3] *Ibid.*, p. 194.

[4] *Plays Pleasant*, Preface, p. vii.

romantic conventions to which he gives, somewhat arbitrarily the collective name of "idealism." He uses the term "ideal" much in the sense of "illusion," to denote a mask deliberately invented to disguise the inconvenient, brutal, and terrible things of life. The man who is brave enough to strip off the mask and look things in the face is the "realist." The whole of Ibsen's work is interpreted from this point of view, and it must be admitted that Shaw sometimes lays violent hands on Ibsen's plays in order to make them fit the theory. The realist, in Shaw's sense, is not Zola or De Maupassant, but Plato[1]. In the preface to *Plays Pleasant* the question is dealt with at some length, and Shaw repudiates the assumption that because the realistic morality of his plays clashes with the romantic morality in vogue, he is therefore necessarily either a cold, calculating materialist or a wrecker of society. "I do not see moral chaos and anarchy as the alternative to romantic convention," he says[2], and even if he regards romance as "the great heresy to be swept off from art and life—as the food of modern pessimism and the bane of modern self-respect,[3]" it does not follow, as we have already seen, that he despises poetry, art, and imagination. Care, too, should be exercised in regard to his use of the term "immorality." When, in the famous *Rejected Statement* which so seriously disturbed the Parliamentary Committee set up to investigate the question of the Censorship, he describes himself as "a specialist in immoral and heretical plays," it is to be noted that on the very next page he defines as immoral "whatever is contrary to established manners and customs. An immoral act or doctrine is not necessarily a sinful one: on the contrary, every advance in thought and conduct is by definition immoral until it has converted the majority.[4]" These quotations will help to explain the fact to which attention has often been called, and sometimes

[1] Cp. *The Quintessence of Ibsenism*, pp. 19 ff.
[2] *Plays Pleasant*, Preface, p. xviii.
[3] *Ibid.*, p. xiv.
[4] *The Shewing-up of Blanco Posnet*, pp. 318-9.

with surprise, that Bernard Shaw, who in his plays appears to advocate the widest license in questions of sex, politics, and religion, is in private life an ordinary law-abiding citizen, a man, it is said, of great personal charm, and one against whose stainless, ascetic character none of his enemies has ever been able to breathe a word. There must always be "a large liberty to shock conventional people, and a well-informed sense of the value of originality, individuality, and eccentricity,[1]" and Shaw believes that the British public needs shocking pretty often and pretty thoroughly, "about three times a week on one subject or another," he says in a paper to the Academy.[2]

The picture of English society given in the plays is by no means a flattering one. Shaw believes that in our domestic and family relations, in our conventional ideas upon marriage and the position of woman, in our social and political organisation, in the Church, in the industrial system of England, there is much that is wrong and foolish, and he has laid his finger upon some undoubtedly weak spots in our social system. 'In the history of every country it has been necessary for some teacher to arise—a Rousseau, a Carlyle, a Tolstoi, a Bernard Shaw—to awake society to the necessity of revising the outworn codes and standards to which men are apt to cling long after the conditions under which they were first created have passed away, and there is much in his denunciations to which every intelligent English observer cannot but assent, even though it may not be necessary to concur whole-heartedly in the view that "we are very badly governed and are, on the whole, an ugly, mean, ill-bred race[3]." 'Two points in particular are emphasised: first, that a rigid adherence to an artificial and purely conventional standard of respectability has led, in the case of the bulk of the middle and upper classes of England, to a fairly complete

[1] *Saint Joan*, preface, p. XLV.

[2] *The Solution of the Censorship Problem*, *The Academy*, June 29, 1907. Quoted by Howe, pp. 66-7.

[3] *Getting Married*, Preface, p. 142.

atrophy of the intellectual and artistic faculties,[1] and secondly, that the average English mind is essentially not that of an adult but of a child.[2] An Englishman's eating is "unhealthy," his drinking "intemperate," his smoking "filthy," his domesticity "licentious," his elections are "corrupt," his commerce is "murderously greedy," his prisons are "cruel," and his streets "merciless."[3] This is a pretty wholesale indictment, but when all allowance has been made for whim and eccentricity, it must be admitted that a good deal in it is true. The play of *Heartbreak House* represents, not England alone this time but cultured leisured Europe before the war as a ship drifting upon the rocks, with the captain lying drinking in his bunk and vaguely trusting to Providence. But the clearest and most detailed exposition of Shaw's views is given in the famous passage of *The Man of Destiny*, too long to quote here, in which Napoleon "explains the English" to the Lady.[4] This is of course a dramatic utterance, but it nevertheless strips the mask from some of our national hypocrisies and pretences with a masterly and powerful hand.

Of the social evils which Shaw attacks in his plays the most prominent are poverty, slum-landlordism, prostitution, capitalism, and the laws relating to crime and punishment.[5] He is a whole-hearted follower of Butler and roundly denounces poverty as "the greatest of evils and the worst of crimes,"[6] though not, of course, a personal crime. Undershaft has saved his daughter's soul because, being rich, he has been able to give

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[1] There is a delicious touch of satire in *Cæsar and Cleopatra*, Act II (p. 138), where Britannus, Cæsar's British secretary, is speaking: "Blue is the color worn by all Britons of good standing. In war we stain our bodies blue; so that though our enemies may strip us of our clothes and our lives, they cannot strip us of our respectability."

[2] Cp. *Back to Methuselah*, pp. 128 and 134.

[3] *John Bull's Other Island, Preface for Politicians*, p. xxxvii.

[4] *The Man of Destiny*, pp. 200-1.

[5] All these questions are dealt with in Duffin's excellent summary of Shaw's ideas and general philosophy. See Biblio graphical Note.

[6] *Major Barbara*, p. 154.

her the luxuries of life, so that she can develop it. He has saved her from "the seven deadly sins, food, clothing, firing, rent, taxes, respectability, and children," which things are "millstones about man's neck."[1] Ellie Dunn, in *Heartbreak House*, makes the same point when she insists that her soul is an expensive thing to keep. "It eats music and pictures and books and mountains and lakes and beautiful things to wear and nice people to be with. In this country you can't have them without lots of money: that is why our souls are so horribly starved."[2] There is a truth in this that needs to be faced. The remedy Shaw proposes is an equal distribution of incomes and the insistence by the State that every man shall produce, by work of his own, an equivalent in value to the sum allotted him, with a surplus to allow for superannuation and the paying back of the costs incurred by his upbringing. His views on economic questions are perhaps most clearly set out in the preface to *Androcles and the Lion.* He has two finished studies of prostitutes, Mrs. Warren in the play which bears her name, and Dora in *Fanny's First Play.* The central thesis of *Mrs. Warren's Profession*, that "the only way for a woman to provide for herself decently is for her to be good to some man that can afford to be good to her,"[3] is fortunately less easy to maintain to-day than it was at the time (1893) when this play was written, yet no one can fail to be struck by the painful truth and vividness of the characters which Shaw has drawn. The evils of the modern legal and judicial system in its application to crime and punishment are dealt with in the preface to *Androcles and the Lion.* Shaw objects, not so much to the laws themselves as to the spirit in which they are administered.

When we come to Shaw's views upon women and marriage, and the mutual relations of parents and children, we touch

[1] *Ibid.*, p. 281.
[2] *Heartbreak House*, p. 76.
[3] *Mrs. Warren's Profession*, p. 197.

upon some of the cardinal features of his teaching and those for which he has been most bitterly attacked. Yet we should not allow our preconceived opinions and the romantic traditions in which we have been nurtured to blind us to the essential truth and sanity of his criticism. It cannot be too often repeated that Shaw too has his ideals (in the commonly accepted sense of the term), and that when we really probe to the bottom of his teaching we shall find that in essentials his views are entirely sane and reasonable, although at first sight the mode of their expression may seem paradoxical and absurd. He revolts, to begin with, against "the romantic convention that all women are angels when they are not devils; that they are better-looking than men; that their part in courtship is entirely passive; and that the human female form is the most beautiful object in nature."[1] The play in which these ideas are most fully developed is *Man and Superman*, which is conceived as "a stage projection of the tragi-comic love chase of the man by the woman."[2] The main thesis of the play is that the Life Force (the *Elan Vital* of Bergson) manifests itself in the opposite sexes in different ways, in woman as the procreative instinct, in the artist-man or man of genius as the passion for abstract creation. If, as sometimes happens, the matter is complicated by the fact that the person of genius is also a woman, the game becomes "one for a king of critics."[3] When Shaw wrote this play he was suffering from an acute attack of eugenics, and he proposes the abolition or at least the drastic modification of marriage as the solution of this and other difficult problems raised by the modern view of the relationship between the sexes. But the attack wore off, and in the later play, *Getting Married*, which, with its preface, contains Shaw's fullest treatment of the subject (and is, incidentally, one of the most amusing of his plays), he admits that, society being what it is at

[1] Preface to *Major Barbara*, p. 150.

[2] *Man and Superman, Epistle Dedicatory*, p. xvii.

[3] *Ibid.*, p. xix.

present, marriage is inevitable, and he turns his attention to the practical question of its reform. No very definite conclusion is reached, but one of the strongest points in Shaw's indictment of our marriage laws (now to some extent amended in this respect) is the impossibility of obtaining divorce for any other reason than adultery. The right to divorce, he maintains, ought to be free and unquestioned if either of the parties wishes it. In the Bishop's words, "unless the law of marriage (is) first made human, it (can) never become divine."[1] Several different views of marriage are given in this play. The Bishop and his wife are a happily married couple in the old-fashioned sense; Lesbia, a fastidious lady, wants children but objects to having to live in closest intimacy with a man as a necessary consequence; Edith claims her economic independence if she marries; Collins takes what might be called the sensible middle-class view of marriage itself, but suggests that, if the parties wish it, the marriage should be dissolved when all the children have grown up; the Bishop again prophesies that marriage, having long ago ceased to be a holy institution, will eventually give way to a deed of partnership. Shaw would insist, of course, that equal liberty in contracting and dissolving marriages should be given to both parties, and that the wife is entitled to claim a reasonable living wage for her work as mistress of the household. In his preface he advocates the State endowment of motherhood.

On the position of women in general Shaw has a good deal to say. An Indian, living in a country where (according to our Western ideas, at least) women have no rights at all, and regarding Western women, in all probability, as rather over than under-emancipated, may be surprised to find this dramatist declaring that the position of dependence to which women are reduced in England and the inequality of the laws regulating the relations between the sexes are a menace to

[1] *Getting Married*, p. 235.

society. Shaw, however, lays too much stress upon the predominatingly maternal aspect of woman and here, as in some other matters, he allows his sociological enthusiasm to carry him too far. He has said recently that the reason for the success of his women characters lies in the fact that he has always assumed that women think and act precisely as he himself thinks and acts. [1] There is a certain truth in this, but the principle is a little dangerous for a dramatist. However, there is no denying the excellence of many of his studies of women, especially young women like Ann Whitefield, Ellie Dunn, Hypatia Tarleton, Edith Bridgenorth, Vivie Warren, Norah Reilly, Margaret Knox, Barbara Undershaft, Eliza Doolittle. In these young people and their corresponding male counterparts (though the studies of these are far less numerous) Shaw seems to place his hope for the future of the race. Their predominant qualities are coolness and courage, a direct and practical manner of facing the problems before them, and an amazing energy and vitality. Shaw's entire dramatic work is indeed a glorification of youth, and herein chiefly lies its constructive value.

The most trenchant criticism of English family life will be found in the play of *Misalliance* and its preface, though attacks in the same direction are not wanting in other plays.[2] Shaw has nothing to say against the conventional ideal of domestic happiness except that it is by no means inevitable and possibly not even common. He protests against the tyranny exercised by many parents over their children: the child has its own rights which even well-intentioned parents often completely ignore. Moreover, what we call "natural affection" is very largely a delusion: there should be nothing unnatural in the fact which has caused such sorrow to many a mother, namely that her child may prefer

[1] Collis, p. 111.

[2] e.g. *Plays Unpleasant*, Preface, p. xvii; *You Never Can Tell*; *Getting Married*, pp. 196, 247, 254, and Preface.

the company of its nurse or even of a stranger to that of herself. "Every child has a right to its own bent. It has a right to be a Plymouth Brother though its parents be convinced atheists. It has a right to dislike its mother or father or sister or brother or uncle or aunt if they are antipathetic to it. It has a right to find its own way and go its own way, whether that way seems wise or foolish to others, exactly as an adult has. *It has a right to privacy as to its own doings and its own affairs as much as if it were its own* father."[1] Hypatia in this play is a carefully brought-up girl who revolts against the tediousness and inanity of a life spent in a round of sick-visiting and parties; her father, Tarleton, and his friend Lord Summerhays both, in different ways, feel the difficulties of parental responsibility. As Tarleton puts it, in a sentence which must have given many a parent pause, "I tell you there's a wall ten feet thick and ten miles high between parent and child."[2] The closely related question of the education of the young is also touched upon. Shaw has many hard things to say of the English public school and University system. It is true that like others (Mr. H. G. Wells, for instance) who have attacked the same system he sometimes criticises without full knowledge, but he is certainly in the right when he insists that the ordinary practical lessons of self-help and good citizenship should be more strongly inculcated than they are in the vast majority of our schools. The things which a child should be taught are those which will qualify it "to live in society without wasting other people's time,"[3]—a fairly comprehensive principle, when its meaning is fully worked out. Shaw's antipathy to scientific theories is well known, but unfortunately he often fails to distinguish between fads and genuine scientific facts.

His criticism of the Christian Church proceeds upon similar lines. Shaw himself is a man with a deep religious sense:

[1] *Misalliance*, Preface, p. xv (italics mine).
[2] *Misalliance*, p. 40.
[3] *Misalliance*, Preface, p. xxxvii.

it is said that he attends church regularly, though he always chooses a time when no priest is present and there are no other worshippers. But he maintains, with truth, that Christianity has never yet been given a fair trial, the simple social and economic, as well as the spiritual, principles which it teaches having been rendered abortive by the establishment of a highly complex ecclesiastico-political system, which has used the organisation of the Church for its own ends. Moreover, Christianity, a religion of the East, has been perverted, largely unconsciously perhaps, into a kind of private monopoly of the European nations, to be leased out again upon their own terms to the other nations of the world. "The test of a dogma is its universality. As long as the Church of England preaches a single doctrine that the Brahman, the Buddhist, the Mussulman, the Parsee, and all the other sectarians who are British subjects cannot accept, it has no legitimate place in the counsels of the British commonwealth."[1] He attacks the specific dogmas of the Anglican Church and the Church as an organisation; but he shows no hostility towards the clergy or other representatives of the Church, of whom several very favourable specimens appear in the plays—Bridgenorth, Keegan, Major Barbara, Anderson, Rankin, Morell. He has a profound sense of the spiritual in man, and his religion is a belief in the Life Force which is ever impelling the universe towards a fuller and more perfect life. He is even prepared to call this Life Force God. But men must not cling stubbornly to outworn creeds: "That is what is wrong with the world at present. It scraps its obsolete steam engines and dynamos; but it won't scrap its old prejudices and its old moralities and its old religions and its old political constitutions."[2] These sentences, written in 1905, explain Shaw's general attitude, although subsequent events have to some extent modified the force of their application.

[1] *Back to Methuselah*, Preface, p. lxxv. Shaw's religious views are expressed mainly in this preface and in the preface and concluding note to *Androcles and the Lion*.

[2] *Major Barbara*, p. 280.

Other topics dealt with in the plays must be passed over with a bare mention. In three plays[1] he has touched upon the question of war, and though he does not appear to know very much about military organisation and tradition, his general objection to militarism is sound. During the late war, Shaw was one of the few people in England who did not lose their heads, and he suffered much unpopularity in consequence. His impatience of scientific theory finds vent in one of the most delightful of all his plays, *The Doctor's Dilemma*, where various medical theories are satirised in the persons of a group of doctors of contrasting types. As a vegetarian Shaw objects to vaccination, and as a humanitarian to vivisection and to "sport," but these antipathies are not intruded into the plays.

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Wherein, then, lies the value of Shaw's criticism of society? Chiefly in the fact that he has clarified and braced our thinking. His plays are an intellectual tonic and it is not necessary to agree with all or any of his views in order to profit by his criticism. The element of sanity in the plays has been sufficiently insisted on, but it should not be forgotten that there is *vision* as well. Shaw's vision of the future of the race is proclaimed in *Back to Methuselah*, of that of the individual perhaps most clearly in *Man and Superman*, though it must be remembered that he would have every man a "superman," not one or two highly gifted individuals only. He insists upon the importance of instinct, and to follow instinct means for him the development of the individual not in and for himself, but in his relation to society. "We are to think and believe what we can, and do what nature prompts us to, but those things alone are worth thinking and doing which develop the individual, make the individual one with society, and urge society on towards its ultimate perfect form."[2] For Individualism, if it be sufficiently

[1] *Arms and the Man, The Man of Destiny, Back to Methuselah*, part IV. See also the preface to *John Bull's Other Island*, pp. xxxviii ff.
[2] Duffin, p. 220.

sincere and intense, leaves no room for egotism: "When a man is at last brought face to face with himself by a brave Individualism, he finds himself face to face, not with an individual, but with a species, and knows that to save himself, he must save the race. He can have no life except a share in the life of the community; and if that life is unhappy and squalid, nothing that he can do to paint and paper and upholster and shut off his little corner of it can really rescue him from it."[1] This noble ideal of self-abnegation, the sinking of self in the race, is Bernard Shaw's message to his age.

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HINDU SYSTEM OF MEASUREMENT

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In the Śilpaśātras the linear measurement is divided into six kinds, namely, *māna*, *pramāṇa*, *parimāṇa*, *lamba-māna*, *unmāna* and *upamāna*. The measurement from the foot to the top of the head is called *māna*. *Pramāṇa* is the measurement of breadth. *Parimāṇa* is the measurement of width or circumference. *Lamba-māna* is the measurement along the plumb-lines or the lines drawn perpendicularly through different parts of the body. *Unmāna* is the measurement of thickness or diameter. And *upamāna* is the measurement of interspace, such as that between the two feet of an image; this measurement is taken from one plumb-line to another. [1]

Of these sculptural measures *māna* or the measurement of height, when refers to an architectural object, is generally

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[1] मानं चापि प्रमाणं च परिमाणं लम्बमानकम् ।
उन्मानमुपमानं च मानं पञ्च समीरितम् ।
पादाङ्गुष्ठिससीमान्तं मानं चापि प्रकथ्यते ।
प्रमाणं विस्तृतं प्रोक्तं परितः परिमाणकम् ।
तत्सूत्राल्लम्बमानं स्यात्तन्मन्मुन्मानमुच्यते ।
अवान्तरोपमानं स्याद्विम्बोदयादिसर्वशः ।

(Mānasāra, LV. 3—8.)

Cf.

अतःपरं प्रवक्ष्यामि मानोन्मानं विशेषतः ।
(This is followed by the description of तालमान)

(Matsya-Purāṇa, chap. 258, v. 16.)

मानं तद्विस्तारं प्रोक्तमुन्मानं नाहमेव च ।

(Suprabhedāgama, XXXIV, 35.)

called *utsedha*. It is indicated by five proportions and is technically known as *śāntika*, *paushṭika*, *jayada*, *sarva-kāmika* or *dhanada*, and *adbhuta*. *Śāntika* is that which is peaceful; in this proportion the height of a building is equal to its breadth, and this is a graceful proportion. *Paushṭika* is that which is at once strong, eminent, rich, complete and perfect; in this proportion the height is $1\frac{1}{4}$ of the breadth, and this gives the building a good stability, eminence and perfection. *Jayada* is that which gives joy; in this proportion the height is $1\frac{1}{2}$ of the breadth, and this gives a pleasing appearance to a building. *Sarva-kāmika* is that which fulfils all desires; it is otherwise called *dhanada* or wealth-giving. In this proportion the height is $1\frac{3}{4}$ of the breadth, and this is intended to make a building strong as well as beautiful. *Adbhuta* is that which is marvellous; in this proportion the height is twice the breadth, and this gives a wonderful loftiness and gorgeous look to a building. [1]

The comparative heights of the component members of an architectural object generally and a sculptural object in special cases are known as *gaṇya-māna*. [2] When exclusively applied to images, it is called *tāla-māna*. [3] But when the height of

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परिमाणोन्मानमानं धार्यं राजविमुद्रितम् ।
गुणसाधनसंदत्ता भवन्ति निखिला जनाः ॥

(Professor Benoy Kumar Sarkar's translation of **परिमाण** by 'standard measurement for lands,' **उन्मान** by 'unit of measurement for liquids' and **मान** by 'unit of measurement for grains' is untenable.)

(Śukra-nītisāra, ed. Oppert, I. 310.)

[1] तद्विस्तारसमोत्तुङ्गं सपादार्धं तु तुङ्गकम् ।
त्रिपादाधिकमुत्सेधं विस्तारं द्विगुणोदयम् ।
प्रथमं शान्तिकोत्सेधं द्वितीयं पौष्टिकोदयम् ।
तृतीयं जयदोत्तुङ्गं चतुर्थं धनदोदयम् ।
पञ्चमं चाद्भुतोत्सेधं जन्मादि स्तूपिकान्तकम् ।

(Mānasāra, XXXV. 21—25.)

[2] See Mānasāra, XIII. 36—40; XXVII. 36—40; XXIX. 35—48; XXXIII. 134—145, 216—217, 248; XLV. 86, 97—101; LIII. 29—34, etc.

[3] See pp. 46—48.

an image is determined by comparing it with some other objects, it is called *ādimāna* or primary measurement.

There is another kind of measure taken by the exterior and the interior of a structure. It is called *ghana-māna* when the measurement is taken by the exterior, and *aghana-māna* when taken by the interior.[1]

The *ādimāna* or the primary measurement is divided into nine kinds as the height of an image is determined by comparing it with (i) the breadth of the main temple, (ii) the height of the adytum or sanctuary, (iii) the length of the door, (iv) the dimension of the basement, (v) the height of the worshipper, (vi) the height of the riding-animal of the deity, (vii) in accordance with the *tāla-māna*, and in (viii) cubit and (ix) aṅgula[2] (finger breadth).

Each of these nine measures is again divided into nine kinds, apart from the three divisions in accordance with the sizes, namely, large, intermediate, and small.[3]

The proportions under i—iv naturally vary in accordance with the variation of the objects mentioned thereunder. Under these heads no general rule has, therefore, been prescribed.

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[1] योगादि घनमानं च कृत्वा बाह्ये नवांशकम् ।

(Mānasāra, XXXIX 65.)

एवं तद्घनमानमुक्तमघनं वक्ष्यतेऽधुना ।

(*Ibid.*, XXXIII. 330, see for context 291—329, 331 f.)

[2] आदि मानविधिं सम्यग्लक्षणं च इहोच्यते ।
हर्म्यतारवशान्मानं गर्भगृहवशोदयम् ।
द्वारमानवशात्तुङ्गमधिष्ठानवशोदयम् ।
हस्तमानवशान्मानं तालमानवशोदयम् ।
अङ्गुलेनापि चोत्तुङ्गं यजमानवशोदयम् ।
मूलबेरवशान्मानमुत्तमादि त्रयं त्रयम् ।

(Mānasāra, LV. 10—15.)

[3] तस्मादेकं तु प्रत्येकं नवमानमिहोच्यते ।
.....उत्तमादि त्रयं त्रयम् ।

(Mānasāra, LV. 22, 15.)

The height of the image, when compared with the height of the worshipper, admits of nine kinds. It may be equal to the full height of the worshipper, may extend up to his hair-limit on the forehead or the eye-line, nose-tip, chin, arm-limit, breast, heart, navel, and the sex-organ.[1]

The height of the image, when compared with the height of its riding-animal, admits of the same nine kinds as in the case of the worshipper's height. But in case of the riding-animal the height is further divided into *utsavodaya* and *kautukodaya*, the latter being half of the former.[2] The *utsavodaya* is also measured by the aṅgula or finger-breadth of the idol.[3]

In the *tāla-māna* the face including the head is stated to be the unit of measurement.[4] But *tāla* is the technical name for the distance between the tips of the fully stretched

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[1] कन्यसादुत्तमान्तं स्याद्यजमानोदयं परम् ।
केशान्तं नासिकाग्रान्तं हृन्वन्तं बाहुसीमकम् ।
स्तनान्तं हृदयान्तं च नाभ्यन्तं मेढ्रसीमकम् ।
नवधा कन्यसान्तं स्यात्स्थावरजङ्गमोदयम् ।

(Mānasāra, LV. 30—33.)

[2] मूलबेरवशमानमुत्सवोदयमीरितम् ।
तदर्धं कौतुकोत्सेधं कन्यसादि त्रयं त्रयम् ।

(Mānasāra, LV. 34, LXIV. 28.)

एवं लिङ्गवशात्प्रोक्तं विष्णुबेरवशादुच्यते ।
मूलबेरसमं वापि नेत्रान्तं वा पुटान्तकम् ।
हृन्वन्तं बाहुसीमान्तं स्तनान्तं हृदयान्तकम् ।
नाभ्यन्तं मेढ्रसीमान्तं नवमानं चोत्सवोदयम् ।
तदर्धं कौतुकोत्सेधं कन्यसादि त्रयं त्रयम् ।

(Mānasāra, LXIV. 24—28, see also LXIV. 91—93 ; LXI. 1—5 ; LXII. 1—3, 9-10 ; LXIV. 27-28 ; LV. 35-36, 37-46.)

[3] मूलबेराङ्गुलं चैव मानयेदुत्सवोदयम् ।
तत्तन्मानवशात्केचिन्मूलबेरवशान्नयेत् ।
उत्सवे चोत्सवं प्रोक्तमङ्गुलं मानविश्रुतः ।

(Mānasāra, LV. 55, LXI. 21-22.)

[4] मुखमानेन कर्तव्या सर्वावयवकल्पना ।

(Matsya-Purāṇa, chap. 258, v. 19.)

thumb and middle finger.[1] In this system of measurement, the height of an image is determined in accordance with this unit. Thus an image is of eight-tāla measure when its whole height is eight times its face, and of seven-tāla measure when the height is seven times the face, and so forth.

The face which is the unit of measurement in this system is itself measured in aṅgula or finger-breadth. Thus it is stated, without any specification of any tāla-māna, both in the Matsya-Purāṇa, and the Bṛihat-Samhitā that according to one's own aṅgula (finger-breadth) the face of his own statue is twelve aṅgulas (nine inches) broad and long; but the latter authority adds that according to the architect Nagnajit the face should be (twelve aṅgulas broad and) fourteen aṅgulas long in the Drāviḍa style.[2] The Suprabhedāgama has, however, specified the particular tāla-māna in measuring the face. According to this authority, in the large type of ten-tāla the face should be 13½ aṅgulas, in the intermediate type 13 aṅgulas and in the small type 12½ aṅgulas; in the large type of nine-tāla the face should be 12 aṅgulas, in the intermediate type 11½ aṅgulas, and in the small type 11 aṅgulas, and so forth.[3] In the

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[1] तालो स्मृतो मध्यमया गोकर्णश्चाप्यनामया ।
(Brahmāṇḍa-Purāṇa, part 1, Anusaṁgapāda 2, chap. 7, v. 97.)
मध्यमाङ्गुष्ठसंयुक्तं तालमानमिति स्मृतम् ।
(Suprabhedāgama, XXX. 22.)

[2] स्वकीयाङ्गुलिमानेन मुखं स्याद्द्वादशाङ्गुलम् ।
(Matsya-Purāṇa, chap. 258, v. 19.)
स्वैरङ्गुलप्रमाणैर्द्वादशविस्तीर्णमायतं च मुखम् ।
नग्नजिता तु चतुर्दश दैर्घ्येण द्राविडं कथितम् ।
(Bṛihat-Saṁhitā, LVIII. 4.)
The commentary quotes Nagnajit in full:
विस्तीर्णं द्वादशमुखं दैर्घ्येण च चतुर्दश ।
अङ्गुलानि तथा कार्यं तन्मानं द्राविडं स्मृतम् ।

[3] त्रयोदशार्धं मुखं ज्येष्ठं त्रयोदशं तु मध्यमम् ।
तद्द्वादशार्धमधममुत्तमदशतालके ॥
नवतालोत्तमे चैव मुखं वै द्वादशाङ्गुलम् ।
अर्धार्धाङ्गुलहीनेन मध्यमाधममुच्यते ॥
(Suprabhedāgama, XXXIV. 35—37.)

Mānasāra the measure of the face together with its different parts is given separately in all the ten varieties, namely, one to ten tāla systems.[1]

The Bimbamāna has reference to twelve kinds of *tāla-māna*, each of which is again subdivided into three types, namely, large, intermediate and small. According to this authority the system of one tāla is used for measuring the Vandukas (probably some insects or reptiles), two tāla for birds, three tāla for kinnaras (mythical beings with human body and horse's head), four tāla for goblins (bhūta), five tāla for Ganeśa (a deity with human body and elephant's head), six tāla for tigers, seven tāla for yakshas (demi-gods), eight tāla for man (male and female), nine tāla for demons (dānava), ten tāla for superhuman beings and Buddha, eleven tāla for gods, and twelve tāla for fiends (rākshasa).[2] According to the Suprabhedāgama the deities forming the Triad are measured in the three (large, intermediate and small) types of the ten-tāla system, other gods as well as the female deities in the nine-tāla, divine beings, sages and men in the eight-tāla, fiends and demons (rākshasa and asura) in the seven-tāla, heavenly musicians (gandharva) in the six-tāla, the deity with human body and elephant's head (Vighnaka, *i.e.*, Gaṇeśa) and Vāmana (dwarf Vishṇu) in the five-tāla, goblins (bhūta) in the four-tāla, beings with human body and horse's head (kinnara) in the three-tāla, fish in the two-tāla, other smaller beings and Kushmāṇḍa (?wife of Śiva) in the one-tāla, and piśācha (evil spirit) is stated to be of twenty aṅgulas.[3] The Aṁśumadbheda of

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[1] See pp. 49—68.

[2] Bimbamāna (British Museum, Mss. no. 558-5 292, Appendix).

The details of the large type of ten tāla system, plumb-lines and the horizontal measure of an idol, and the measures when the idol is made in the sitting and the recumbent postures are described (*ibid.*, v. 71-72 ; 73—91 ; 92—138).

For details see Mānasāra below.

[3] ईश्वरादिचतुर्मूर्तिं दशतालेन कारयेत् ॥
शक्तीनामन्यदेवानां नवतालेन प्रकीर्तितम् ।

Kāśyapa also has described the different varieties of the tāla-māna, but the objects measured in the systems are not clearly specified. [1]

In the Mānasāra the details of all the ten or rather nine tāla-māna, together with the different objects measured in these systems, are described elaborately and may be translated in full.

The largest type of the two-tāla system in which the goose, the riding-animal of Brahmā, is measured (M. LX. 6—35):

1.	Height of head	4 parts.
2-3.	„ „ neck	8
4.	Height (length) of heart (chest)	11
5.	(Below this) height of thigh ...	1¾
6.	Height of knee	1
7.	Length of leg	1¾
8.	Height of foot	1
9.	Breadth of face	3
10.	At the back of the head ...	2
11.	Length of face	4

दिव्यमार्षमनुष्याणामष्टतालेन कारयेत् ।
रक्षसामसुराणां च सप्ततालेनेहोच्यते ।
षट्तालेनैव गन्धर्वान्पञ्चतालेन विघ्नकम् ॥
वामनात् (वामनं) पञ्चतालैस्तु चतुस्तालैस्तु भूतकान् ।
त्रितालं किन्नराणां तु मत्स्यानां तु द्वितालकम् ॥
एकतालस्तु कुष्माण्डात् (?) पिशाचा विंशदङ्गुलाः ।
स्थूलसूक्ष्मप्रभेदांस्तु तालभेदमिहोच्यते ॥

In a slightly different way :

त्रिविधदशतालेन त्रिमूर्तीनां तु कीर्तिताः ॥
....
अनुजां तथैकं स्यात्पिशाचानां तु विंशतिः ॥

(Suprabhedāgama, XXX. 30—34 ; XXXIV. 37—40.)

This authority has also referred to the ten tāla systems but not in detail (*ibid.*, XXX. 3—40).

[1] Aṁśumadbheda of Kāśyapa (Ms., see reference in the Catalogue of Eggeling, 3012. fol. 251 f.).

12.	Neck at the root	1 part.
	It tapers from bottom to top and is furnished with two faces (beaks).	
13.	Length of belly (kukshi) ...	8 parts.
14.	Place of the stomach (udara-sthāna)	8
15.	From the belly to the root of the tail	16
16.	Breadth of wing	5
17.	Length of wing	8
18.	Height of wing	2
19.	„ „ wing at the edge (agra)	1
20.	Thickness of wing ...	1
21.	Length of arm (bāhu) ...	8
22.	Elbow	1
23.	Width at the forepart of the head	6
24.	„ „ root of the perfectly round thigh ...	$2\frac{1}{2}$
25.	Breadth at the forepart ...	$1\frac{1}{2}$
26.	„ of knee	$\frac{1}{4}$
27.	„ „ leg	1
28.	„ „ sole (palm) ...	2
29.	„ „ middle-finger at the forepart	4
30.	Each of two fingers on either side	2
31.	Length of face	3
32.	Breadth of face	1
33.	Length of eye	$\frac{1}{2}$
	and its breadth should be proportionate.	
34.	Distance between the eye-line and ear-line	2 yavas.
35.	The crest above the head ...	2 or 1 part.
36.	Its width ending by the back of head	6 parts.
37.	Its breadth	4

And the rest is left to the discretion of the artist:
Śeshaṁ yuktyā prayojayet (35).

In the seven-tāla system the whole height is divided into 84 equal parts which are distributed as follows:

1.	Crown of the head (mūrdhni) ...	2 parts.
2.	Face...	10
3.	Neck	3
4.	(From neck to) heart ...	10
5.	(From heart to) navel ...	10
6.	(From navel to) sex-organ ...	5
7.	Śuraga (? suraṅga, the hole)	pīṭhāṁśa (?)
8.	Thigh (ūru)	3
9.	Knee (jānu)	3
10.	Leg (pāda)	3
11.	Length of arm	20
12.	Elbow	1½
13.	Fore-arm (prakoṣṭha) ...	16
14.	Palm (including finger) ...	8
15.	Foot	11
16.	Breadth of the face ...	7
17.	Width of the neck... ...	5
18.	„ at the arm-joint ...	5
19.	„ of the chest between arm-pits	14
20.	„ by heart	12
21.	„ „ mid-belly ...	16
22.	„ „ loins (kaṭi) ...	12
23.	„ of thigh	8
24.	„ „ knee	5
25.	„ „ leg (jaṅghā)... ...	4
26.	„ at the ankle	3
27.	„ of the sole	4
28.	„ „ the forepart of arm ...	4
29.	„ „ fore-arm	4½
30.	Wrist	1

31. Width of palm $3\frac{1}{2}$ and length ... ... 4 parts.
32. Length of finger ... ... 1 part.

In the eight-tāla system the whole length is divided into 96 equal parts which are distributed as follows :

1. Head from the crown (ushṇīsha) to the end of the hair on the forehead ... ... 3 parts.
2. Thence to face (up to the chin) ... ... $10\frac{1}{2}$
3. Thence to neck 3
4. „ „ heart ... ... $10\frac{1}{2}$
5. „ „ navel ... ... $10\frac{1}{2}$
6. „ the mid-belly (up to sex-organ) ... ... $10\frac{1}{2}$
7. The thigh (below sex-organ to knee) 21
8. Knee 3
9. Leg 21
10. Foot (height) 3
11. Length of foot 14
12. Breadth of face 9
13. Width of neck 6
14. Shoulder (up to arm-joint) ... $4\frac{1}{2}$ (3 & $1\frac{1}{2}$)
15. Width at the root of arm ... 6
16. Length of arm 21
17. Elbow ... ... $1\frac{1}{2}$
18. (From elbow) forearm (half of face) ... ... $5\frac{1}{4}$
19. Palm including finger (equal to face) ... ... $10\frac{1}{2}$

The rest should be as before.

In the largest type of the nine-tāla system the whole length is divided into 112 equal parts (M. LIX. 14—64) :

1. Crown (head proper) ... 4 parts.

Face 12	2.	(Thence) forehead (up to the eye-line)	4 parts.
	3.	Thence to tip of nose ...	4
	4.	Thence to chin	4
	5.	Neck	4
	6.	Thence to heart	12
	7.	„ „ navel	12
	8.	„ „ sex-organ ...	12
	9.	Thigh (twice the face) ...	24
	10.	Knee (=neck)	4
	11.	Leg (=thigh)	24
	12.	Foot (=knee)	4
	13.	Palm (from thumb to forefinger)	16
	14.	Arm	24
	15.	Elbow	2
	16.	Forearm	12
	17.	Palm (up to the tip of middle finger)	12
	18.	Breadth of face	11
	19.	Width of neck	8
	20.	„ round the arm-joint ...	8
	21.	„ of knee	8
	22.	Shoulder	5
	23.	Chest between the arm-pits ...	20
	24.	Width (breadth) at the mid-belly	15
	25.	Width at buttocks ...	17
	26.	„ of the loins ...	19
	27.	„ at the root of the thigh	$10\frac{1}{2}$
	28.	„ „ „ leg ...	$7\frac{1}{2}$
	29.	„ „ middle of the leg	6
	30.	Breadth at the „ „ ...	4
	31.	Knee-tube	$1\frac{3}{4}$
	32.	Ankle	$1\frac{3}{4}$
	33.	Heel-breadth	$4\frac{1}{2}$

34. Breadth of prapada (fore-part of the foot) ... ... 17(?) parts.
35. Breadth of the palm (? sole) ... 5
36. Length of the largest toe ... 4
37. Breadth „ „ ... 2

Breadth of nails is half of their length.

38. Length of fore-toe (=thumb)... 4
39. Breadth „ „ ... 1 (? 2)
40. Middle toe ... 3 (breadth 7 yavas)
41. Fourth toe ... $2\frac{1}{2}$ (breadth 6 yavas)
42. Little toe ... 2 (breadth 5 yavas)

Breadth of nails is half the breadth of the fingers.

43. Width at the middle of the arm 7
44. Width at the elbow ... 7
45. „ „ forearm ... 4
46. „ „ wrist ... 3
47. Breadth at the root of the palm 6
48. „ „ fore-part of the palm... 4
49. Length of the palm ... 6

and the remainder is the middle finger (?)

50. Fore-finger ... ... $5\frac{1}{2}$
51. Ring-finger ... ... $5\frac{1}{2}$
52. Little finger ... ... $3\frac{1}{2}$
53. Breadth of thumb ... 1
54. „ fore-finger ... 6 yavas.
55. „ middle finger ... 7 „
56. „ ring finger ... 6 „
57. „ little finger ... 4 „

Fingers are made tapering from root towards the tip. The fore-part of the nails is $\frac{1}{3}$ or $\frac{1}{4}$ more than their length, and their breadth at the tip is one, two, or three yavas. The thumb is divided into two parts (parvan) and the other fingers into three parts

(parvan). The line of wisdom and such other lines are drawn on the palm.

The eye-brow should extend from the eye-line to the hair (near the ear).

58.	Length of eye	2 parts.
59.	Breadth of eye	1
60.	Length of ear	4
61.	Drum of ear	4
62.	Breadth of ear	2

The rest should be as in the (uttama) daśa-tāla system :

Navatālottamaṁ proktaṁ śeshaṁ cha daśa-tālavat (64).

In the intermediate type of the nine-tāla system the whole length is divided into 108 equal parts :

1.	Head	3 parts.
2.	Neck	3
3.	Knee	3
4.	Foot	3
5.	Face	12
6.	Chest	12
7.	Belly	12
8.	Loins	12
9.	Thigh	24
10.	Leg	24
11.	Arm	24
12.	(From arm) forearm (including middle finger) ...	18
13.	Largest toe (up to heel, is equal to face)	12
14.	Foot	15

The rest should be discreetly made.

In the smallest type of the ten-tāla system the whole height is divided into 116 equal parts (M. LIX 67—100) :

1.	Head (from crown to hair in the forehead)	4 parts.

Face 12	2.	Thence to the eye-line (*i.e.*, forehead)	4½ parts.
	3.	Thence to the tip of the nose ...	4
	4.	Thence to the chin ...	3½
	5.	Neck-joint	1½ (?)
	6.	Neck	4
	7.	Thence to heart	12
	8.	Thence to navel	12
	9.	Thence to sex-organ ...	12
	10.	Thigh (from below sex-organ) ...	25
	11.	Knee	4
	12.	Leg	25
	13.	Foot	4
	14.	Length of foot from heel to largest toe	16½
	15.	Length of arm below the line of hiccough ...	25
	16.	„ elbow	2
	17.	„ forearm ...	19
	18.	„ palm (up to the tip of middle finger) ...	12½
	19.	Breadth of face	11½
	20.	Width of neck	8½
	21.	„ arm	8½
	22.	„ knee	8½
	23.	„ arm by root, elbow, wrist	6,6,1½
	24.	(Length of) shoulder ...	20½
	25.	Width of the mid-belly ...	15½
	26.	„ the buttocks ...	18½
	27.	Breadth of the loins ...	19
	28.	Width at the root of thigh ...	12½
	29.	„ of the knee (-cap) ...	6½
	30.	Breadth or width of knee-tube...	4
	31.	„ of ankle	5

32.	Prapada (tip of the toes) ...	6 parts.
33.	Length of largest toe ...	4
34.	„ fore-toe ...	4
35.	„ other toes (half a part less)	$3\frac{1}{2}$
	and their breadth or width is the same (? half of their length).	
36.	Breadth of elbow ...	$6\frac{1}{2}$
37.	„ forearm ...	5
38.	Breadth of wrist	4
39.	„ palm ...	5
40.	Length of palm	7
41.	„ middle-finger ...	$5\frac{1}{2}$
42.	„ fore-finger ...	5
43.	„ of ring-finger ...	5
44.	„ little-finger ...	$4\frac{1}{2}$
45.	„ thumb ...	$4\frac{1}{2}$
46.	„ ear ...	$4\frac{1}{2}$
47.	Height of ear-drum ...	$4\frac{1}{2}$

The rest not specified here should be as in case of the largest type of ten-tāla system.

In the intermediate type of the ten-tāla system the whole height of the image (of a female deity) is divided into 120 equal parts (M. LXVI. 2—78):

1.	Head (from crown to hair on the forehead)	4 parts.
2.	Forehead (up to eye-line) ...	5
3.	Nose (up to the tip) ...	4
4.	Thence to chin	$3\frac{1}{2}$
5.	Neck-joint	$\frac{1}{2}$
6.	Neck	4
7.	From hiccough to heart ...	13
8.	Thence to the limit of navel ...	13
9.	Thence to sex-organ ...	13
10.	Thigh below sex-organ ...	26

11.	Knee	4 parts.
12.	Leg	26
13.	Foot	4
14.	Length of foot (from heel to the tip of largest toe)... ...	16
15.	Length of arm below the line of hiccough	26
16.	Elbow	2
17.	Forearm	20
18.	Palm (up to the tip of middle-finger)	13
19.	Middle-finger	6
	and palm proper the remainder	7
20.	Thumb	4
21.	Fore-finger	$5\frac{1}{2}$
22.	Ring-finger	$5\frac{1}{2}$
23.	Little-finger	4
24.	Breadth of face up to ear ...	12
25.	„ „ (below this) from ear to ear	11
26.	Breadth of neck (at root, middle and top)	7
27.	Breadth of chest (between arm-pits)	15
28.	Width of each breast ...	$9\frac{1}{2}$
29.	Height of breast ...	$4\frac{1}{2}$
30.	Distance between breasts (nipples)	1
31.	Width of the nipple ...	2
32.	Breadth (below the breasts) by the heart	13
33.	Width of mid-belly ...	11
34.	Breadth (below this) by the navel	13
35.	Breadth (of lower belly) below navel	15
36.	Width of buttocks ...	20

37.	Width of loin	24 parts.
38.	Width at the root of each thigh	13
39.	Width by the mid-thigh ...	12
40.	Width at the fore-part of the thigh	9
41.	Width of knee	7
42.	Width at the root of leg ...	6
43.	Width at the mid-leg ...	5
44.	Breadth of knee-tube ...	4
45.	„ ankle ...	4½
46.	Width of sole	4
47.	Breadth of sole at the fore-part	5
48.	Breadth of heel	4
49.	Length of largest toe ...	4
50.	„ fore-toe ...	4
51.	„ middle toe ...	3½
52.	„ fourth toe ...	3
53.	„ little toe ...	2
54.	Width (breadth) of largest toe ...	2
55.	„ „ fore-toe 1 part=	8 yavas.
56.	„ „ middle toe ...	7 „
57.	„ „ fourth toe ...	6 „
58.	„ „ little toe ...	5 „
59.	Width at the root of arm is 3 and width of knee ...	10 parts.
60.	Width at mid-arm ...	6½
61.	„ „ fore part of arm ...	6
62.	„ „ elbow ...	5½
63.	„ „ root of forearm ...	5
64.	„ „ middle of forearm	4½
65.	„ „ fore-part of forearm	4
66.	„ „ wrist	3
67.	Width (breadth) of the palm (from thumb to little finger) ...	5

68.	Width (at the root) of the fore-finger	6 yavas.
69.	Width (at the root) of ring-finger (same)	6 „
70.	Width (at the root) of little-finger	5½ „
71.	Width (at the root) of middle finger	7 „

Eye-brows are placed between forehead and eye.

72.	Breadth of eye	1 part.
73.	Length of eye	3 parts.
74.	Breadth of nose up to end of the tip	2
75.	Width of nose at the middle ...	1 part.
76.	„ „ at the root ...	½
77.	Distance between the eyes ...	1¾
78.	„ „ „ eye-brows	1
79.	Length of eye-brow ...	9 parts.
80.	Breadth of eye-brow ...	2

The interior of the eye is divided into three (equal) parts (as before), of which the black sphere is one part; the rest of the details is stated to be found in the list of the largest type of the ten-tāla system.

81.	Breadth and height of nostril (each)	½ part.
82.	Width of face (up to the corner)	4 parts.
83.	Width of upper lip ...	5 yavas.
84.	Width of lower lip ...	6 „
85.	Length of lip	2 parts.
86.	Ear=mid-eye-brow ...	(?)
87.	Height of ear	4
88.	Length of the drum of ear ...	4
89.	Thickness (of the drum of ear)	½
90.	Width of sex-organ ...	4
91.	Length of sex-organ ...	7

92. Upper-breadth of sex-organ (is equal to length)... ... 7 parts.

The rest should be as in the case of the largest type of the ten-tāla system.

In the largest type of the ten-tāla system the whole height of a male person (god) is divided into 124 equal parts (M. LXV. 2—179):

1. Head (from crown to hair on the forehead) ... ... 4 parts.
2. Face (from hair on the forehead to chin) 13
3. Neck... ... ... $4\frac{1}{2}$
4. Neck to heart (chest) ... $13\frac{1}{2}$
5. Heart to navel ... ... $13\frac{1}{2}$
6. Navel to sex-organ ... $13\frac{1}{2}$
7. Thigh from below sex-organ ... 27
8. Knee 4
9. Leg 27
10. Foot 4

The length of face is divided into three parts, head to eye-line, eye-line to lip-line, lip-line to hiccough-line.

11. Length of arm from (below the line of) hiccough ... 27
12. Elbow 2
13. Forearm (extending to wrist-joint) 21
14. Length of palm (up to the tip of middle-finger) ... $13\frac{1}{2}$
    a. Palm proper 7
    b. Middle-finger ... ... $6\frac{1}{2}$
15. Length of foot 17
16. Largest toe (from heel) ... $4\frac{1}{4}$
    Its breadth ... ... $2\frac{1}{8}$
    Its nail ... ... $1\frac{1}{16}$
    Breadth of nail ... ... $\frac{81}{41}$

The nail is made circular and its fore-edge is fleshy and one part in extent.

17.	Fore-toe		4 parts less one yava.
	Its breadth		1 part and 1 yava.
18.	Middle toe		$3\frac{3}{4}$ parts.
	Its breadth		$1\frac{1}{2}$
19.	Fourth toe		3 parts plus one yava.
	Its breadth		1 part minus one yava.
20.	Little toe		$1\frac{1}{2}$ parts.
	Its breadth		$\frac{3}{4}$ parts plus 1 yava.

Their nails are half of their respective breadths.

21.	The middle line from ankle to the tip of sole	8 parts and 6 yavas.
22.	From this line to the root of heel	4 parts.
	Breadth of heel	5 parts and 1 yava.
23.	From side to heel... ...	$3\frac{1}{2}$ parts.
24.	Root of heel	6
25.	Width of mid-sole (below ankle)	6 parts and 6 yavas.
26.	Breadth of sole (at the fore-part)	6 parts.
27.	Its thickness	3
28.	Height of the mid-foot ...	$4\frac{1}{2}$

The toes have two parts.

29.	Breadth of ankle	$5\frac{1}{4}$
30.	„ the tube (above) ...	$4\frac{1}{4}$
31.	Breadth at the middle of leg ...	$6\frac{1}{2}$
32.	Width at the root of leg ...	8

33. Width of knee ... ... 9 parts.
34. „ mid-thigh ... 12
35. Width at the root of thigh ... 13½
36. Width of loins 20
37. „ buttocks (above) ... 18½ (?)
38. „ mid-belly ... 18½
39. Width at the heart ... 16
40. „ by the chest ... 18½
41. Distance between the arm-pits 21
42. Breadth above this ... 22
43. „ between the arms ... 24½
44. Breadth of neck 9
45. „ face in its fore-part 12
46. Breadth of head by the hair on the forehead 10

From the hair on the forehead to the eye-line there are two (equal) parts, one of which is the forehead, and the remainder is the eye-part.

Between the forehead and the eyes, the places for eye-brows are left.

47. Length of eye-brow ... 5
48. Breadth „ ... 2½

The breadth at the middle is half of this and the brows taper from root to the other end.

49. Distance between two brows ... ¼ part 6 yavas.
50. Length of eye ... ... 3 parts.
51. Breadth of eye ... ... 1 part.
52. Distance between two eyes ... 2 parts.

The interior of the eye is divided into three parts, of which the black sphere is one part and the remainder is the white sphere. The shiny sphere within the black sphere is one part. The sight (retina) proper is situated within the shiny sphere. The upper

and lower coverings (lids) of the interior of the eye are each two parts.

The eyes are shaped like the fish and the brows like a bow.

53.	Length of ear	4 parts.
54.	Drum of ear	4½
55.	Fore-part of ear (=mid-brow)	1¼
56.	Ear-hole, its length and breadth	2 and 1
57.	Distance between the drums ...	2
58.	Thickness (befitting the ear) ...	1
59.	Breadth of ear	2½
	The rest is left to the choice of the skilful.	
60.	Distance from eye to ear ...	7
61.	Width of nose	2½
62.	Tip of „	1
63.	Breadth of nostril ...	½
64.	Length of nostril	6 yavas.
65.	Hole of nostril	½ part.
66.	Its breadth	5 yavas.
67.	Height of nose-tip (pushkara or four-faced part)	1 part.
68.	Breadth of nose-tip ...	2 parts.
69.	Breadth of the middle of nose...	3
70.	„ at the root of nose ...	1½
71.	Height of nose	1½
72.	Height of nose (from goji to tip)	2
73.	Tip (below goji)	4 yavas.
74.	Drip	1 yava.
75.	Breadth	3 yavas.
76.	Circumference (above this) ...	1 yava.
77.	Breadth of upper lip below this	6 yavas.
78.	Lower lip	1 part.
79.	Width of upper lip ...	4 parts.
80.	Length of crescent-shaped lower lip	3½

81. Three-faced part (trivaktra) length and breadth each ... 2 parts.
82. Circumference (above) ... 2

Teeth numbering 32 are in both lower and upper jaws.

83. Chin below the lower lip ... 1
84. Length of jaw ... ... $3\frac{1}{2}$
85. From this (jaw) to ear-joint ... 10
86. Height of drip between the jaws 1
87. Breadth of semi-circular jaw ... $1\frac{3}{4}$
88. Goji (tip) from jaw ... 1 part and 2 yavas.
89. Mid-neck (from jaw to its root) 2 parts.
90. Its projection 1
91. The eye on the forehead (third eye) ... ... $\frac{1}{2}$ or $\frac{3}{4}$ of other eyes.

There should be 98 eye-lashes; the hairs on the neck and face should be discreetly made.

92. Width at mid-arm ... 8 parts and 2 yavas.
93. Width of elbow ... ... 7 parts.
94. Width at mid-forearm ... 5 parts and 1 yava.
95. Width of wrist ... ... $3\frac{1}{2}$ parts.
96. Breadth at the root of palm ... 7
97. Breadth of mid-palm ... $6\frac{1}{2}$
98. Breadth of fore-palm ... 5 parts and $\frac{1}{2}$ yava.
99. Back of palm up to wrist ... $6\frac{1}{2}$ parts.

Thence the length of the fingers should be proportionate as stated before.

100. Length of ring-finger and of middle-finger ... ... $4\frac{1}{4}$ each.
101. Length of fore-finger ... 5
102. „ „ thumb ... 4

103.	Length of little-finger	...	4 parts.
104.	Width at the root of thumb	...	$1\frac{1}{4}$
105.	„ „ „ „ „ fore-finger		1
106.	„ „ „ „ „ ring-finger		1
107.	„ „ „ „ „ middle finger		$\frac{3}{4}$

The width of (tapering) fingers at their tips is $\frac{3}{8}$ or one-fourth less than at the root.

The width of the nails is $\frac{2}{3}$ of the breadth of the respective finger-tips, and the length of the nails is $\frac{1}{4}$ greater than their width, and the fore-parts of the nails measure two yavas.

The four fingers (beginning with the fore-finger) are each divided into three parts, and the thumb into two parts.

108.	The portion between the roots of fore-finger and thumb	...	3 parts.
109.	Its thickness ...	...	2
110.	Thence to wrist ...	...	$4\frac{1}{2}$
111.	Thickness of the portion below the thumb ...	...	$2\frac{1}{2}$
112.	Its width ...	...	3
113.	Breadth of heel ...	...	4
114.	Its thickness ...	...	3
115.	Its fore-part ...	...	1 part and 2 yavas.
116.	Interior of the palm	...	2 parts.
117.	Its width ...	...	4 yavas.

The palm is lined with five marks like those of lotus, trident, conch, disc., etc. And the rest regarding the hand should be discreetly made by the wise artist.

Measurement by the back-side:

118.	Width at the back of head	...	9 parts.
119.	Thence to the end of ear	...	$13\frac{1}{2}$
120.	Thence to the end of nose	...	$13\frac{1}{2}$
121.	Shoulder (above the line of hiccough) from the neck-joint	...	4

122.	From neck-joint to hump ...	5 parts.
123.	Thence to the line of buttocks	27
124.	Thence to anus	13½
125.	Breadth to the left of it ...	21
126.	Width of the back of loins ...	17
127.	Width of the back or middle-body (madhya-kāya) above this	17
128.	Distance between the breadths above this	21
129.	Distance between the arm-pits ...	27
130.	Drip of the backbone ...	1
131.	Breadth of the loins-joint connected with the backbone ...	2

Thence should be measured the belly.

132.	Width (breadth) of ribs-plank ...	12
133.	Distance between ribs-planks ...	4
134.	Height from ribs-plank to shoulder	5½
135.	The portion between the breast and backbone (bṛihatī) ...	7
136.	Its length (up to arm-pit) ...	(?)
137.	Bṛihatī up to breast-limit ...	16½
138.	Breadth of loins-line ...	13
139.	Projection of the root of thigh	5
140.	Width of perfectly round or spherical balls	9
141.	Width at the back of perfectly round breast	2
142.	Drip or depth of hiccough ...	1 yava.
143.	„ „ „ heart ...	1 „
144.	Distance between the limits of breast	13½ parts.
145.	Distance between hiccough and arm-pit	13½

146.	Depth of navel	2 yavas.
	The navel-pit is made circular.	
147.	Length of lower belly from navel to loins	6 parts.
148.	Lower belly from navel to where cloth is attached to body	4
149.	Height from loins to the root of sex-organ	$7\frac{1}{2}$
150.	Breadth of sex-organ at the back	4
151.	Thence (? loins) the length of sex-organ	12
152.	Length (width) of testicles ...	$2\frac{1}{2}$
153.	Breadth of testicles ...	$2\frac{1}{2}$
154.	Breadth of sex-organ ...	1

The rest is left to the discretion of the artist : Śeshaṁ yuktito nyaset (M. LXV. 179).

This largest type of the ten-tāla measure is used in measuring the images of Brahmā, Vishṇu, Rudra and such other gods (M. LI. 29; XLV. 184-185) and of the statues of the devotees of the Sāyujya class (M. LIX. 12).

These measures are for general guidance, alternation being allowed for æsthetic reasons.[1]

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[1] तदेवाधिकहीनं वा शोभार्थं चैकमात्रकम् ।
उक्तमानाङ्गकैः सर्वैस्तत्र दोषो न विद्यते ॥

(Mānasāra, LXV. 180-181.)

See detailed sketches of these measures given in M. T. Gopinath Rao's 'Elements of Hindu Iconography' (Vol. 1. Appendix B).

See also Mr. W. S. Hadaway's 'Some Hindu Silpa Shastras in their relation to South Indian Sculpture' (Ostasiatische Zeitschrift, April—June, 1914, vol. II. no. 1).

The *ādimāna* or primary measurement asa foresaid comprises nine kinds.[1] But from the details given above of the first seven kinds, it is clear that they are in fact not primary in the ordinary sense of the term. Of the last two kinds, namely, the cubit (hasta) and aṅgula (finger-breadth), the former is but a multiple of the latter[2]. The aṅgula alone, therefore, is really intended to be the *ādimāna* or primary measurement although the aṅgula itself is divisible into still smaller units, namely, yava (barley-corn), yūka (louse), likshā (nit), vālāgra (hair's end), ratha-dhūli (car-dust), and paramāṇu (atom).[3] Thus the aṅgula measure has reference to both comparative and absolute measurements.

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[1] See p. 45

[2] Mānasāra (II. 48-52):

12	aṅgulas	=	1	vitasti.
2	vitastis or 24 aṅgulas	=	1	kikshu-hasta (small cubit).
25	aṅgulas	=	1	prājāpatya-hasta
26	aṅgulas	=	1	dhanur-mushṭi hasta.
27	aṅgulas	=	1	dhanur-graha-hasta.
4	hastats	=	1	dhanus (bow) or daṇḍa (rod).
8	ḍaṇḍas	=	1	rajju (rope).

But according to the Kauṭiliya-Arthaśāstra (ed. Sham Sastri, p. 107):

10	daṇḍas	=	1	rajju.
3	rajjus	=	1	nivartana.

[3]

8	paramāṇus	=	1	ratha-dhūli.
8	ratha-dhūlis	=	1	vālāgra.
8	vālāgras	=	1	likshā.
8	likshās	=	1	yūka.
8	yūkas	=	1	yava.
8	yavas	=	1	aṅgula (largest).
7	yavas	=	1	aṅgula (intermediate).
6	yavas	=	1	aṅgula (smallest).

(Mānasāra, II. 40-47; similar lists are found in other works also, and the smallest unit, paramāṇu, has been variously defined, see the writer's Dictionary of Hindu Architecture under *Aṅgula.*)

Four kinds of aṅgulas are distinguished:[1]

(*i*) *Berāṅgula*, otherwise called *liṅgāṅgula*, is the measure in which the finger-breadth of the idol to be measured is the unit.[2]

(*ii*) *Dehāṅgula*, otherwise called *deha-labdhāṅgula*, implies one of the equal parts into which the whole height of an idol is divided as in the tāla systems. This also refers to one of the equal parts into which the dimension of a building may be divided for some architectural measurement. It is also referred to by its usual designation, namely, *aṁśa* (part). In fact, *aṅgula* and *aṁśa* have frequently been indiscriminately used in the architectural treatises.[3]

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[1] अथातः संप्रवक्ष्यामि-अङ्गुलानां तु लक्षणम् ।
मानाङ्गुलं तु प्रथमं स्यान्मात्राङ्गुलं द्वितीयकम् ॥
देहलब्धप्रमाणं तु तृतीयमङ्गुलं स्मृतम् ।
यस्मात्परमणुर्नास्ति परमाणुस्तदुच्यते ॥
परमाणुरध(? ष्ट)श्चैवापि च केशाग्र एव च ।
रि(लि)क्षायूकावयवास्तत्र क्रमशोऽष्ट गुणैर्मतम् ॥
मानाङ्गुलमितिप्रोक्तं ततो मात्राङ्गुलं शृणु ।
आचार्यदक्षिणे हस्ते मध्यमाङ्गुलिमध्यमे ॥
पर्वमात्राङ्गुलं ज्ञेयं देहलब्धाङ्गुलं शृणु ।
प्रतिमायास्तथोत्सेधे तालगण्येन भाजिते ॥
तेष्वेकं भागवन्मानं देहलब्धाङ्गुलं स्मृतम् ।
(Suprabhedāgama, XXX. 1—6.)

[2] अंशकैर्मानमेवोक्तमङ्गुलैर्मानमुच्यते ।
यल्लिङ्गतुङ्गं संग्राह्य चतुर्विंशच्छतान्तकम् ।
लिङ्गाङ्गुलमिति प्रोक्तं बेरं तालवशादपि ।
कृत्वा बेराङ्गुलं प्रोक्तं मानाङ्गुलमिहोच्यते ।
यवताराष्टमात्रं स्याद्देवानामङ्गुलं भवेत् ।
(Mānasāra, LXIV. 49—53.)

[3] त्रयस्त्रिंशच्छतान्तं स्याद्देहलब्धाङ्गुलेन वा ।
(*Ibid.*, LXIV. 64.)

(*iii*) *Mātrāṅgula* is the measure, of which the unit is the digit or width of the middle finger in the right hand of the master of a sculptural or architectural object[1].

(*iv*) *Mānāṅgula* or the aṅgula (finger) for the purpose of measurement (of an object) is the finger-unit proper, which is stated to be equal to eight barley-corns (put side by side) in the large type, seven barley-corns in the intermediate type and six barley-corns in the small type.[2] This is really intended to be the *ādimāna* or primary measurement proper.

This *mānāṅgula*, which is the unit of measurement proper, is stated to be used in measuring edifices (prāsāda), pavilions (maṇḍapa), enclosures, gate-houses, villages, roads, and lands. *Mātrāṅgula* is used in measuring the sacrificial objects such as kuśa-grass, and ladles, etc.; but *mānāṅgula* as well may be used in measuring such objects. *Deha-labdhāṅgula* is used in measuring images, and is exclusively a sculptural measurement.[3]

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[1] कर्तुर्दक्षिणहस्तस्य मध्यमाङ्गुलमध्यमे ।
पर्वदैर्घ्यं तु वा नाहं मात्राङ्गुलमुदीरितम् ।

(Mānasāra, II. 57—58.)

[2] यवताराष्टमात्रं स्यान्मानाङ्गुलमिति स्मृतम् ।

(*Ibid.*, II. 56; see also LXIV. 52-53, under *berāṅgula*, footnote 2, p. 70.)

[3] प्रासादमण्डपांश्चैव प्राकारान् गोपुरानपि ।
ग्रामाध्वक्षेत्रगण्येषु मानाङ्गुलविधानतः ।
आचार्यदक्षिणाङ्गुलिभिर्मिते व्यासे मिताधिकैः (?) ॥
कूर्चे पवित्रके चैव स्रुवे स्रुग्भिरथान्यकैः ।
यागे प्रयोजितानिह मात्राङ्गुलिविधिश्चरेत् ॥
अथ मानाङ्गुलैर्वापि कारयेद्यागकर्मणि ।
देहलब्धाङ्गुलेनैव प्रतिमां कारयेद्बुधः ॥

(Suprabhedāgama, XXX. 6—9.)

Directions are also given with regard to the use of the four different kinds of *hasta* (cubit) which is the chief multiple of *aṅgula*. The cubit of 24 aṅgulas is used for measuring conveyances (yāna) and couches, of 25 aṅgulas for measuring temples (vimāna), of 26 aṅgulas for measuring *vāstu* which includes building-lands, edifices (harmya), conveyance (yāna) and couches (paryaṅka), and of 27 aṅgulas for measuring villages, towns, and forts, etc. But the cubit of 24 *aṅgulas* may be used in measuring all these objects.[1]

This aṅgula measure is mentioned throughout the Vedic and post-Vedic literature.[2] Thus in the Śatapatha-Brāhmaṇa *aṅgula* or finger is stated to be the lowest measure.[3] *Prādeśa* or span is also mentioned as a measure of length in the Śatapatha and Aitareya Brāhmaṇas as well as in the Chhāndogya-Upanishad.[4]

The Śulva-Sūtra of Baudhāyana defines *aratni* as equal to 2 *prādeśas*, each of 12 *aṅgulas*, and so makes it equal to 24 *aṅgulas*.[5]

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[1] याने च शयने चैव किष्कुहस्तेन मानयेत् ।
विमानस्य तु सर्वेषां प्राजापत्येन मानयेत् ।
मानयेद्वास्तुयन्मानं धनुर्मुष्टिकरेण च ।
ग्रामादीनां च सर्वेषां मानयेत्तद्धनुर्ग्रहम् ।
किष्कुहस्तेन यन्मानं मानयेद्विश्वतस्तु वा ।

(Mānasāra, II. 54—58.)

[2] The Buddhist literature as well as the epigraphical records contain copious references to the *aṅgula* measure. They however do not give any full tables. Besides, owing to the limitation of space they are left out in this article. Fuller details will be found in the writer's Dictionary of Hindu Architecture under *Aṅgula*.

[3] तस्यैषावमा मात्रा यदङ्गुलयः ।

" This is his lowest measure, namely, the finger."

(Śatapatha-Brāhmaṇa, X. 2, 1, 3.)

[4] Śatapatha-Brāhmaṇa (III. 5, 4, 5, etc.)
Aitareya-Brāhmaṇa (VIII. 5, etc.)
Chhāndogya-Upanishad (V. 18, 1, etc.)
(See Vedic Index, Macdonell and Keith, II. 50.)

[5] Śulva-Sūtra (see J.R.A.S., 1912, p. 231, note 2)

The Kauṭilīya-Arthaśāstra starts with *paramāṇu* or atom, and takes its measures as in the other tables up to *aṅgula* of different *yavas* or barley-corns. It makes 12 *aṅgulas* equal to 1 *prādeśa* and 2 *prdeśas* to 1 *aratni* which is usually called *hasta* or cubit. Next it makes 4 *aratnis* equal to 1 *daṇḍa* (rod) or *dhanus* (bow).[1]

Frequent mention of *aṅgula* and its multiples *prādeśa* (span), *hasta* (cubit) also occurs in the epics (Rāmāyaṇa, and Mahābhārata) and the Manusaṁhitā.[2]

Like the Mānasāra referred to above, all the other avowedly architectural treatises contain detailed accounts of the whole system of measurement. Their treatment of the subject is similar. Reference to the Vāstu-vidyā may serve as an illustration.[3]

The astronomical works have also frequently referred to the subject. The tables are, however, similar in all these works. The Siddhānta-śiromaṇi, for instance, contains a table identical to the one given from the Mānasāra.[4] The Bṛihat-saṁhitā has got

[1] Kauṭilīya-Arthaśāstra (ed. Shama Sastri, p. 106 f.)

[2] न ह्यविद्धं तयोर्गात्रे बभूवाङ्गुलमन्तरम् ।
(Rāmāyaṇa, VI. 20, 22, etc.)
तथा च जालान्तरगतभानौ यत्सूक्ष्मं दृश्यते रजः ।
प्रथमं तत्प्रमाणानां त्रसरेणुः प्रचक्ष्यते ।
त्रिंशेण्याऽयोमयं शङ्कुर्यवलक्षास्थे दशाङ्गुलः ।
(Manusaṁhitā, VIII. 132, 271, etc.)

[3] तत्रादौ संप्रवक्ष्यामि सर्वेषां मानसाधनम् ।
मानेनैवाखिलं लोके वस्तु संसाध्यते यतः ॥
परमाणुक्रमाद्वृद्धो मानाङ्गुल इति स्मृतः ।
परमाणुरिति प्रोक्तो योगिनां दृष्टिगोचरः ॥
परमाणुरष्टाभिस्त्रसरेणुरिति स्मृतः ।
त्रसरेणुश्च रोमाग्रं लिक्षायूकायवास्तथा ॥
(Vāstu-vidyā, ed. Ganapati Sāstri, I. 3-5.)

[4] वेश्मान्तः पतितेषु भास्करेष्वालोक्यते यद्रजः ।
स प्रोक्तः परमाणुरष्टगुणैस्तैरेव रेणुर्भवेत् ॥
तैर्वालाग्रमथाष्टभिः कचमुखैर्लिक्षा च यूकाष्टभिः ।
स्यात्तिभिश्च तदष्टकेन च यवोऽष्टाभिश्च तैरङ्गुलम् ॥
(Siddhānta-śiromaṇi, ed. Bapudeva, p. 52.)

a similar table.[1] According to Dr. Kern the *aṅgula* or digit mentioned in the Bṛihat-saṁhitā "has no absolute but a relative value; it is the module and equal to $\frac{1}{108}$ of the whole height of the idol, or $\frac{1}{180}$ of idol and seat together."[2]

The tables given in the Purāṇas are also similar. The Matsya-Purāṇa contains such a list.[3] The Brahmāṇḍa-Purāṇa contains a little more details: according to this Purāṇa *yojana* is the highest measure, which is used in measuring settlements.[4]

The Rāja-vallabha-maṇḍana has supplied an important list of the multiples of *aṅgula*:[5]

1	aṅgula	is	called	...	Mātrā (unit).
2	aṅgulas	are	„	...	Kalā (a digit of the moon).
3	„	„	„	...	Parvan (a digit of finger).
4	„	„	„	...	Mushṭi (fist).
5	„	„	„	...	Tala (span).
6	„	„	„	...	Kara-pāda (the palm of the hand).
7	„	„	„	...	Dṛishṭi (the eye).
8	„	„	„	...	Tūṇi (quiver).
9	„	„	„	...	Prādeśa (span).

[1] Bṛihat-saṁhitā (LVIII. 1-2); its commentary quotes Manusaṁhitā (VIII. 133, see above) for the definition of paramāṇu and then explains the table as given in the aforesaid Siddhānta-śiromaṇi.

[2] J. R. A. S. (new series) vol. VI., p. 323, notes 1, 2.

[3] Matsya-Purāṇa (chap. 258, v. 17—19).

[4] चतुर्हस्तो धनुर्दण्डो नालिकायुगमेव च ।
धनुःसहस्रे द्वे तत्र गव्यूतिस्तैः कृतास्तदा ॥
अष्टौ धनुःसहस्राणि योजनं तैर्विभावितम् ।
एतेन योजनेनेह सन्निवेशास्ततः कृताः ॥

(Brahmāṇḍa-Purāṇa, part 1, Anusaṁgapāda 2, chap. 7, v. 100-101.)

[5] Rāja-vallabha-maṇḍana (ed. Nārāyaṇa and Yaśovanta Bhāratī, Introduction).

10	aṅgulas are called ...	Śaya-tāla (the stretched) palm.
11	„ „ „ ...	Gokarṇa (cow's ear).
12	„ „ „ ...	Vitasti (span).
16	„ „ „ ...	Anāha-pāda (? stretched foot).
21	„ „ „ ...	Ratni (cubit).
24	„ „ „ ...	Aratni (cubit).
42	„ „ „ ...	Kishku (cubit).
84	„ „ „ ...	Purusha (height of a man).
96	„ „ „ ...	Dhanus (bow).
106	„ „ „ ...	Daṇḍa (rod).

The Suprabhedāgama which gives a very elaborate account of the whole system contains a large variety of alternatives for the multiples of *aṅgula* as given in the preceding list:[1]

1	aṅgula is called ...	Bindu and moksha.
2	aṅgulas are „ ...	Kalā, kolaka, padma, akshi, and aśvinī.
3	„ „ „ ...	Rudrākshi, agni, guṇa, śūla, and vidyā.
4	„ „ „ ...	Yuga, bhāga, tur(ī)ya, and veda.
5	„ „ „ ..	Rudrānana, indriya, and bhūta.
6	„ „ „ ..	Karman, aṅga, ayana, and rasa.
7	„ „ „ ..	Pātāla, muni, dhātu, and abdhi.
8	„ „ „ ...	Basu, loka (for dik-pāla), and mūrti.
9	„ „ „ ...	Dvāra, sūtra, graha, and śakti.
10	„ „ „ ...	Diś, nāḍī, āyudha, and prādur-bhāva.
20	„ „ „ ..	Trishu, and vishku.
30	„ „ „ ...	Gati.
40	„ „ „ ...	Tri-jagat.
50	„ „ „ ...	Śakvari.

[1] Suprabhedāgama, XXX. 10—16.

60	aṅgulas are called ...	Ati-śakvari.
70	„ „ „ ...	Yashṭi.
80	„ „ „ ...	Atyashṭi.
90	„ „ „ ...	Dhṛiti.
100	„ „ „ ...	Ati-dhṛiti.

This Āgama also supplies in this connection an interesting list of the cardinal numbers which now-a-days do not go beyond *laksha* (100,000, one lac) in the Indian counting and 'million' (10,00,000, ten lacs) in the Western system:[1]

Eka	1.
Daśa	10.
Śata	100.
Sahasra	1,000.
Ayuta	10,000.
Niyuta (otherwise called laksha) ...	100,000.
Prayuta	10,00,000.
Koṭi (kroḍa or kror)	10,000,000.
Vṛinda	1000,00,000.
Kharva	10,000,00,000.
Nikharva	100,000,00,000.
Śaṅkha	1000,000,00,000.
Padma	10000,000,00,000.
Samudra or Sāgara	100,000,000,00,000.
Madhyantara	1000,000,000,00,000.
Para	10,000,000,000,00,000.
Apara	100,000,000,000,00,000.
Parārdha	1000,000,000,000,00,000.

[1] Suprabhedāgama, XXX. 17—20.

Figures even larger than 'parārdha' are still used in counting revenues, population, etc., but they are referred to by the multiples of lac, or kror in India and 'million' in the Western countries. So out of the eighteen cardinal numbers seven or eight are now in actual use. Whether or not all the eighteen numbers were ever actually used in counting is altogether a different question and need not be discussed here. Nor would any useful purpose be served in discussing here the comparative value of the ancient and the modern methods of counting.

" Now the *aṅgula* or finger-breadth may be the theoretical unit; it may well have been originally the actual unit and the source of other measures. But we can hardly doubt that the *hasta* or cubit eventually took its place as the practical unit, and that a correct scale was maintained by keeping in public offices a standard *hasta* marked off into 2 *vitastis* and 24 *aṅgulis*. At any rate, the *hasta* is the practical measure to which we must attend in estimating all the others." Dr. Fleet[1] also following Colebrooke[2] takes *hasta* for easy computation at exactly 18 inches, which gives $\frac{3}{4}$ inch as the value of the *aṅgula*[3].

[1] J. R. A. S., 1912, p. 231, note 2.

[2] Essays, I. 540, note.

[3] The Brahmāṇḍa-Purāṇa gives a curious origin of the *aṅgula* measure. It is stated that people at first used to reside in caves, mountains, and rivers, etc. They began to build houses in order to protect themselves from cold and heat. Then they built *kheṭas* (settlements), *puras* (houses), *grāmas* (villages) and *nagaras* (cities). And to measure their length, breadth and the intermediate distance between two dwellings (*sanniveśa*) the people instinctively employed their own fingers. Thenceforward the *aṅgula* is used as the unit of measurement.

(Brahmāṇḍa-Purāṇa, part 1, 2nd Anushaṁgapāda, chap. 7, v. 91—95.)

THE DATE OF KĀLIDĀSA

CORRIGENDA

Page	Line	For	Substitute
82	32	or rather "pricking, etc...	or rather on "pricking, etc.
83	18	बुद्ववा	बुद्वा
85	17	शुद्धैर्मनाभिः	शुद्धैर्मनोभिः
	28	शेषेन्द्रियवृत्तिरासां ...	शेषेन्द्रियवृत्तिरासां
86	17	व्रीडादमुं	व्रीडादमुं
91	20	सत्वेष्वधिको	सत्त्वेष्वधिको
	21	Kṣudra-mṛgas ...	Kṣudra-mṛgas
	22	*Mṛgas*	*Mṛgas*
		Mṛga	*Mṛga*
93	15	क्षतः।	क्षतः।
	22	व्रजतोः	व्रजतोः
98	8	Kāilāsa	Kailāsa
100	23	क्वचित्	"क्वचित्
101	20	पित्तृणां	पितृणां
	25	गगणतलादभ्युगम्य ...	गगणतलादभ्युपगम्य
102	2	षणमुख	षणमुख-
	34	*Bandhana-Mocana* ...	*Bandhana-mocana*
109	28	Bhāsa	Bhāsa,
110	14	M. S.	Ms.
	19	11 *a* 3)	11 *a* 3(
	26	उस्समिदं	उष्णमिदं
111	24	Karpuramañjarī ...	Karpūramañjarī
113	8	not impossible? ...	not impossible in that country?
	27	contemporary, Kuṣān ...	contemporary Kuṣān
123	32	Hariṭ	Harit
124	4	V. 61	v. 61

Page	Line	For		Substitute
128	23	Hun ...	...	Han
130	35	Pvṣkaraṇa	...	Puṣkaraṇa
131	36	Sāstra ...	...	Śāstra
132	40	कोशलांश्चान्ध्रपौण्ड्रांश्च	...	" कोशलांश्चान्ध्रपौण्ड्रांश्च
133	21	व्याप्य ...	...	व्याप्य
136	5	Verses ...	...	verses
		Verse ...	...	verse
146	37	Śakadvipa	...	Śakadvīpa
148	3	Suṣea ...	...	Suṣeṇa
149	31	Lüder ...	...	Lüders
161	20	Bāveru Jātaka (the	...	Bāveru Jātaka, (the
	32	Lagidea ...	...	Lagidai
163	26	χηλαί ...	...	χηλαι
164	27	सभिप्रायत्वं ...	...	साभिप्रायत्वं
	28	दिष्टया ...	...	दिष्टया
167	24	Ārāyadeva	...	Āryadeva
	29	sthūla-hastā = valepa	...	sthūla-hastā'-valepa
	32	रद्यहिभयं ...	...	रागाद्यहिभयं
169	25	in Ku., that	...	in Ku. that

THE DATE OF KĀLIDĀSA[1]

KṢETREŚACHANDRA CHAṬṬOPĀDHYĀYA, M.A.,

Lecturer in Sanskrit.

कालीं देवीं मनसि निहितां पूजयित्वा मयादौ
कालस्तस्य प्रथितयशसः कालिदासाह्वयस्य ।
सभ्यत्वं वै खलु गतवतो विक्रमादित्यनाम्नो
राज्ञो दिष्टः सुललितकवेस्तथ्यमीमांसनेन ॥
अश्वाख्यो यो जिनवरकविर्बुद्धकाव्यादिकर्ता
पूर्वं जातो नहि रघुकवेर्निश्चयोऽसौ दृढो मे ।
शृण्वन्त्वेतद् विबुधनिकराः पक्षपातं विसृज्य
तुष्टः स्याद्यन् मयि किल गुरुः श्रीमहानन्ददेवः ॥

Mr. K. G. Sankara has tried to show in the second number of the Indian Historical Quarterly (vol. I, pp. 309—316) that in spite of the almost unanimous view of scholars to the contrary, Kālidāsa should be assigned to the first century before Christ, and he seems to me to have made a strong case. Mr. Sankara has before this expressed himself in favour of the usually assigned date of 4th—5th century A.D.,[2] and his present change of view seems remarkable. When I was first acquainted with Aśvaghoṣa's Saundarananda and its concluding

[1] The following abbreviations, besides those most usual, are used here :—*Bu.* for Buddhacarita, *Sau.* for Saundarananda, *Ku.* for Kumārasambhava, *Ra.* for Raghuvaṃśa, *Me.* for Meghadūta, *E.H.I.* for Smith's Early History of India (4th edition), *C.H.I.* for Cambridge History of India, *D.K.A.* for Pargiter's Dynasties of the Kali Age, *I.H.Q.* for Indian Historical Quarterly, *Q.J.M.S.* for Quarterly Journal of the Mythic Society, Bangalore, *J.B.O.R.S.* for Journal of the Bihar and Orissa Research Society, *A.B.I.* for Annals of the Bhandarkar Institute, *A.H.D.* for G. Jouveau-Dubreuil's Ancient History of the Deccan.

[2] Quarterly Journal of the Mythic Society, vol. VIII pp. 278—292, vol. IX, 17—56, X, 188—190, and Annals of the Bhandarkar Institute, vol. II, pp. 189—191.

verses in my undergraduate days I formed an impression that Aśvaghoṣa was the borrower and not Kālidāsa. Later studies confirmed me in my opinion. I am therefore fully in accord with what Mr. Sankara now says about the relations between Kālidāsa and Aśvaghoṣa on p. 312 of this article. Some four years ago when lecturing to my class on the history of Sanskrit literature I began a thorough study of the question, which, unfortunately, could not be finished at the time. My studies having now taken an altogether different line, I can no more hope to be able to return to it. But as some new facts had come to my notice or new interpretations occurred to me, which could probably be utilised by specialists in the field, I take this occasion of publishing them, *unequivocally admitting the incompleteness and other deficiencies of my work.* The present paper should be taken as a supplement to Mr. Sankara's and should be read with it.

Since Cowell published the Buddhacarita and wrote in its preface (pp. x, xi, xii) about the relation between Kālidāsa and Aśvaghoṣa, scholars have assumed that the former had borrowed from the latter. And this is but natural, for has not Darwin made evolutionists of us all? The "finished picture" must be later than and have come out of the "rude sketch." There is no inherent improbability in this assumption, for Buddhist tradition knows Aśvaghoṣa as a great poet, and if Dr. Thomas is right in identifying him with Āryaśūra and Mātṛceṭa,[1] the number of works written by him was very large. Such a prolific writer would hardly lack in originality. One fragmentary drama has been discovered in Central Asia, claiming to be written by Aśvaghoṣa, and two more found with this manuscript have been ascribed to him.[2] That Aśvaghoṣa

[1] Kavīndravacanasamuccaya, Introduction, p. 25 (also Album Kern, pp. 405—8, and Indian Antiquary, pp. 345—360.).

[2] The Śāriputraprakaraṇa of Aśvaghoṣa published by Professor H. Lüders in the Sitzungsberichte der königlich preussischen Akademie der Wissenschaften, Berlin, 1911, pp. 388—411 (with two plates) and Bruchstücke buddhistischer Dramen, hrsg. v. H. Lüders, Berlin, 1911.

was invited, according to Paramārtha,[1] to give a literary form to the Vibhāṣā compiled by Kātyāyanīputra and others, clearly establishes his fame as a writer. There is also nothing incongruous in the great Kālidāsa's borrowing here and there from this "Buddhist Ennius," for can it in any way detract from the great merits of our poet Rabindranath Tagore, says a certain scholar, that his poems show the influence of the Vaiṣṇava poets of mediæval Bengal? I fully admit that this assumption of scholars has nothing unnatural about it, but is it grounded on so strong evidence that we must take it as correct? Is not Hemacandra's position in Jaina literature somewhat similar to that of Aśvaghoṣa in Buddhist and is not Hemacandra under a deep debt of gratitude to a whole host of preceding writers? The analogy of our Rabindranath also seems to me to be inappropriate, but I shall not discuss it here. I compared some of the similar passages in Kālidāsa and Aśvaghoṣa, and many of them clearly indicated who borrowed from whom—the uniform indication being that it was Aśvaghoṣa who had borrowed. I had wanted to make a detailed study of all the works of Aśvaghoṣa and to trace the development of his literary style, but inaccessibility of sources and the diversion of my own studies to other channels prevented me from doing all that I wanted to. But I present my unfinished picture before scholars in the hope that if they are convinced of its correctness in main features in spite of deficiencies, somebody better equipped than myself may some day take it up, finish it and remove its shortcomings.

[1] Life of Vasubandhu, translated by J. Takakusu ("T'oung-pao," 1904—p. 12 of its reprint). Dr. Takakusu published in the J.R.A.S. for 1905 a summary of Paramārtha's Life of Vasubandhu and a discussion of its contents. Scholars who are not satisfied with his views about Vindhyavāsa and his identification with the author of the Sāṅkhyakārikās will do well to read his translation of Paramārtha's Life of Vasubandhu in the "T'oung-pao," whose careful study led me to reject Dr. Takakusu's own inferences.

The concluding verses of the Saundarananda, referred to above, which set me on this track, are:—

इत्येषा व्युपशान्तये न रतये मोक्षार्थगर्भाकृतिः
श्रोतॄणां ग्रहणार्थमन्यमनसां काव्योपचारात्कृता ।
यन्मोक्षात्कृतमन्यदत्र हि मया तत्काव्यधर्मात् कृतं
पातुं तिक्तमिवौषधं मधुयुतं हृद्यं कथं स्यादिति ॥
ग्रायेणालोक्य लोकं विषयरतिपरं मोक्षात् प्रतिहतं
काव्यव्याजेन तत्त्वं कथितमिह मया मोक्षपरमिति ।
तद्बुद्ध्वा शामिकं यत् तदवहितमितो ग्राह्यं न लज्जितं
पांशुभ्यो धातुजेभ्यो नियतमुपकरं चामीकरमिति ॥

These verses show that Aśvaghoṣa does not claim to be a professed poet. Actually he is more of a metaphysician (or a monk) than a poet, in spite of what Mr. Nariman says of him,[1] for he is seldom so eloquent, so impressive, as when he writes on religious or philosophical topics. He has written this work "for the extinction of desire and not for enjoyment of pleasures" "in the form of a kāvya," "but making it contain teachings of salvation," that its "readers (lit. listeners), who are by nature turned to other thoughts, may understand it (and take it to heart)"; "what has been written elsewhere in the form of a religious text" is being repeated by our author "in the way of a kāvya, as a bitter medicine is mixed with honey when given to a patient to drink that it may be acceptable to him." This at once shows that Aśvaghoṣa writes under a constraint. He would rather write directly about *mokṣa*, as he says he has done already, but men are "mad after things of enjoyment and averse to salvation"; he has therefore no help but "to teach salvation (which involves abandonment of all enjoyments) under the cloak of a (pleasant) kāvya." One should carefully ponder over these words. Would we expect originality here? Aśvaghoṣa was out on paying the world in its own coin, or rather "pricking out the thorn with another," as the Sanskrit expression goes. He will charm men with the

[1] Literary History of Sanskrit Buddhism, 1st ed. (1920), p. 32.

poetic form they are accustomed to, but he will charm them out of their passions. Such a writer would best achieve his end by taking up the popular work or works of some professed poet or poets and modelling his work thereon and it seems to me that Aśvaghoṣa has actually done this. I can never deny that Aśvaghoṣa had the gifts of a true poet, that his Saundarananda and Buddhacarita[1] abound in highly poetical passages which can rank with any other in Sanskrit literature and, whatever may be the ordinary expectation, he is not wanting in originality in his poetry. If a philosopher is constrained to write poetry, he will naturally read and try to imitate poems of professed poets; but if he is himself not blessed by the Muses, his attempt will be a poor caricature. Such could not be the case with Aśvaghoṣa who had the gifts of a real poet but whose lines were cast in other fields. He too seems to have turned to other models but his genius enabled him to transcend them soon. The last half of the concluding verse of the Saundarananda, "तद्बुद्ध्वा शमिकं यत् तदवहितमितो ग्राह्यं न ललितं पांशुभ्यो धातुजेभ्यो नियतमुपकरं चामीकरमिति," "therefore discriminating, what is there conducive to the extinction of desires in this work should be accepted by readers and not what is about enjoyment, as pure gold is always accepted after separating it from the dross that adheres to it in the ore," clearly indicates Aśvaghoṣa's models. Is not the reader at once reminded of Kālidāsa's "तं सन्तः श्रोतुमर्हन्ति सदसद्व्यक्तिहेतवः। हेम्नः संलक्ष्यते ह्यग्नौ विशुद्धिः श्यामिकापि वा॥" (Raghuvaṃśa, I. 10), "Good men who can discriminate between good and bad should listen to this *kāvya*, for it is in fire that the purity or otherwise of gold is tested," which in spite of differences shows a genetic connexion? That Kālidāsa could have taken the idea from Aśvaghoṣa and expressed it in a happy context is *a priori* not impossible, but some of the other passages agreeing in the two authors clearly prove Aśvaghoṣa's indebtedness. 'रतये' "for

[1] I omit from consideration the Gaṇḍī-stotra and the other religious works.

enjoyment," is certainly a good description of Kālidāsa's poems, which are all lavish in their erotism, the bigger, the Raghuvaṃśa and the Kumārasambhava,[1] both "ending in the sweetness of erotics."

Since the publication of what Cowell wrote in his preface to the Buddhacarita (pp. x, xi), it has been customary to point out the great similarity between Buddhacarita, III, 13—24, and Raghuvaṃśa, VII, 5—12, but Mr. Sankara has done very well in pointing out that the similarity extends to two more verses (16 and 17) of the Raghuvaṃśa and that Kālidāsa has said the self-same words in Kumārasambhava, VII, 56—70. I am in complete agreement with what Mr. Sankara says and I need not repeat his words. But a few sentences of the late Mr. Sāradāranjan Ray on this subject deserve quotation: "When an author repeats in one book what he has written in another, it is sure sign that he is repeating his favourite ideas. On this consideration, the presumption is that *Kālidāsa is the author of these common ideas.* If he were not, he would not have paraded them this way. The thief does not make a display of stolen goods."[2] Another remark of Principal Ray, made with reference to the rising from sleep of Aśvaghoṣa's damsels to see the prince (ताः स्रस्तकाञ्चीगुणविभ्रिताश्च सुप्तप्रबुद्धाकुललोचनाश्च । वृत्तान्तविन्यस्तविभूषणाश्च कौतूहलेनापि भृताः [हृताः ?] परीयुः ॥ Bu., III. 14), may be quoted: "The prince did not pass at midnight, and it is difficult to understand this sleep in high quarters."[3] Aśvaghoṣa was obviously

[1] I believe that Kālidāsa wrote only the first eight cantos and the rest came from another hand. What made the poet leave Kumārasambhava (a work certainly earlier than the Raghuvaṃśa and therefore not the last writing of the author) unfinished cannot be determined now. Did the impropriety of *jaganmātāpitṛ-sambhogavarṇana* occur to him and made him leave aside his pen? If so, the Kumāra must be a posthumous publication. Such a supposition would explain the verbatim repetition of some lines of the poem in the later Raghuvaṃśa. For another possible explanation see below.

[2] Śakuntalā, 5th ed., Calcutta, 1920, Introduction, p. 24.

[3] *Ibid.*, p. 25.

thinking of the two descriptions in Kālidāsa of bridegrooms going to the marriage, which is nowadays held at night. But some doubt about similar custom in Kālidāsa's days is cast by Ku., VII. 63, "तावत्पताकाकुलमिन्दुमौलिरुत्तोरणं राजपथं प्रपेदे। प्रासादशृङ्गाणि दिवापि कुर्वञ्ज्योत्स्नाभिषेकद्विगुणद्युतीनि ॥," where Mahādeva is described as going by day.[1] Be that as it may, the fourth line of Aśvaghoṣa's verse, "कौतूहलेनापि भृताः (वृताः ?) परीयुः।," "they went about surrounded on all sides by curiosity," clearly betrays the influence of Ku., VII. 62, and Ra., VII. 11, "तासां मुखैरासवगन्धगर्भैर्व्याप्तान्तराः सान्द्रकुतूहलानाम्। विलोलनेत्रभ्रमरैर्गवाक्षाः सहस्रपत्राभरणा इवासन् ॥" *Kautūhala* (mentioned also in Kālidāsa's verse) is conceived by Aśvaghoṣa as surrounding [2] the damsels in imitation of the *netra-bhramara* of Kālidāsa's beauties buzzing over their lotus-like faces. The simile of the lotus has not been forgotten by Aśvaghoṣa as I shall presently show. The last half of Bu., III. 23, "धन्यास्य भार्येति शनैरवोचन् शुद्धैर्मनोभिः खलु नान्यभावात्," "they said slowly *with pure hearts and not from any other motive* 'Blessed is his wife,'" completely proves, as Mr. Sankara has pointed out, [3] that Aśvaghoṣa was thinking of a similar occasion where the damsels did feel the dart of love. That Aśvaghoṣa had Kālidāsa's description in mind, is proved without the possibility of any doubt when we compare the passages in the Raghuvaṃśa and the Kumārasambhava, particularly the following verses :—

Ra.	Ku.
ता राघवं दृष्टिभिरापिबन्त्यो	तमेकदृश्यं नयनैः पिबन्त्यो
नार्यो न जग्मुर्विषयान्तराणि।	नार्यो न जग्मुर्विषयान्तराणि।
तथा हि शेषेन्द्रियवृत्तिरासां	तथाहि शेषेन्द्रियवृत्तिरासां
सर्वात्मना चक्षुरिव प्रविष्टा ॥१२॥	सर्वात्मना चक्षुरिव प्रविष्टा ॥६४॥

[1] Was Aśvaghoṣa misled by the mention of ज्योत्स्ना ? Probably he places the prince's journey very early in the morning.

[2] वृताः, my emendation for भृताः which hardly makes any sense.

[3] Similarly, Mr. Dhanapati Banerji, in Q. J. M. S., X., p. 87, and S. Ray, Śakuntalā Intro., pp. 27-8. I am indebted to Professor Dr. Radhakumud Mukherji for having drawn my attention to Mr. Banerji's paper.

Ra.	Ku.
स्थाने वृता भूपतिभिः परोक्षैः	स्थाने तपो दुश्चरमेतदर्थम्
स्वयंवरं साधुममंस्त भोज्या ।	अपर्णया पेलवयापि तप्तम् ।
पद्मेव नारायणमन्यथासौ	या दास्यमप्यस्य लभेत नारी
लभेत कान्तं कथमात्मतुल्यम् ॥१३॥	सा स्यात्कृतार्था किमुताङ्कशय्याम् ॥६५
परस्परेण स्पृहणीयशोभं	परस्परेण स्पृहणीयशोभं
न चेदिदं द्वन्द्वमयोजयिष्यत् ।	न चेदिदं द्वन्द्वमयोजयिष्यत् ।
अस्मिन् द्वये रूपविधानयत्नः	अस्मिन् द्वये रूपविधानयत्नः
पत्युः प्रजानां वितथोऽभविष्यत् ॥१४॥	पत्युः प्रजानां विफलोऽभविष्यत् ॥६६॥
रतिस्मरौ नूनमिमावभूतां	
राज्ञां सहस्रेषु तथा हि बाला ।	
गतेयमात्मप्रतिरूपमेव	
मनो हि जन्मान्तरसङ्गतिज्ञम् ॥१५॥	(Compare Sakuntalā, V, भावस्थिराणि जननान्तरसौहृदानि)
	न नूनमारूढरुषा शरीरम्
	अनेन दग्धं कुसुमायुधस्य ।
	व्रीडादमुं देवमुदीक्ष्य मन्ये
	संन्यस्तदेहः स्वयमेव कामः ॥६७॥
	अनेन सम्बन्धमुपेत्य दिष्ट्या
	मनोरथप्रार्थितमीश्वरेण ।
	मूर्धानमालि क्षितिधारणोद्यम्
	उच्चैस्तरं वक्ष्यति शैलराजः ॥६८॥

Kālidāsa seems to make the damsels smitten with love at the bridegroom's beauty and envious of the bride's (and bride's father's) fortune.[1] This is altered by Aśvaghoṣa because Buddha is not a bridegroom going to marry and it also hurts his puritanism that the city damsels should thus feel attracted to a *parapati* (another woman's husband); hence his "**शुद्धैर्मनोभिः खलु नान्यभावात्.**" A certain want of restraint seems manifest in Kālidāsa's beauties, but the damsels in Aśvaghoṣa's poem are made to go out to see the prince 'with the permission of the elders'

[1] See the portions in thick type above and also 'विवेश नारीमनसीव चतुष्कलक्ष्मः in Ra., VII. 17, and अग्राह्य नार्थं वनिताकटाक्षैः in the following verse —नारी and वनिता refer to the other women and not to the वधू Indumatī to whose presence Aja is carried after this (VII. 19).

(जनेन मान्येन कृताभ्यनुज्ञाः Bu., III. 13*d*). Does not this expression when contrasted with Kālidāsa's "इत्थं बभूवुः...त्यक्तान्यकार्याणि विचेष्टितानि (improved into विलोकनानि in Ra.)" 'they thus behaved (or went out to see) leaving all other work' show that the puritan is seeking to improve on his predecessor? Mr. Sankara has rightly drawn attention to the unnecessary repetitions in Aśvaghoṣa and these clearly indicate a novice's hand. There is a slight indelicacy in Ku., VII. 60 (and Ra., VII. 9) "जालान्तरप्रेषितदृष्टिरन्या प्रस्थानभिन्नां न बबन्ध नीवीम्। नाभिप्रविष्टाभरणप्रभेण हस्तेन तस्थावलम्ब्य वासः॥" which is in characteristic[1] Kālidāsean style and Aśvaghoṣa has avoided it by combining this verse and the following one ("अर्धाचिता सत्वरमुत्थितायाः पदे पदे दुर्निमिते गलन्ती। कस्याश्चिदासीद्रशना तदानीमङ्गुष्ठमूलार्पितसूत्रशेषा॥") into his own "ताः स्रस्तकाञ्चीगुणविप्लिताश्च सुप्तप्रबुद्धाकुललोचनाश्च। वृत्तान्तविन्यस्तविभूषणाश्च कौतूहलेनापि भृताः (वृताः?) परीयुः॥" (Bu., VII. 14). Is not "शीघ्रं समर्थापि तु गन्तुमन्या गतिं निजग्राह ययौ न तूर्णम्। ह्रिया प्रगल्भानि निगूहमाना[2] रहःप्रयुक्तानि विभूषणानि"॥ of Bu., III. 17 somewhat obscure and intelligible only in the light of "ताः स्रस्तकाञ्चीगुणविप्लिताश्च," etc., of Kālidāsa, just quoted? In Kālidāsa's description, the bridegroom passes when the ladies are at their toilets which they leave at once. Aśvaghoṣa makes the damsels rise from their sleep [3] to see the prince pass by. Reference to finished or unfinished toilet is therefore impossible; but Aśvaghoṣa has repeatedly spoken of the ornaments of

[1] My apologies to the author of the প্রাচীন সাহিত্য for this expression.

[2] Kern's emendation ह्रिया प्रगल्भा विनिगूहमाना, quoted with approbation by A. Gawronski (Rocznik Oreyantalistyczny, I., p. 23), is an unhappy one. How can one be *pragalbha* (=shameless) through *hrī* (=shame)? The text as it stands gives quite good sense: the damsels felt ashamed of the jingling noise of the ornaments (*mekhalā*) worn near the privates. But that Aśvaghoṣa makes the damsels *hide* (निगूहमाना) these ornaments—an ineffective way of stopping their noise—and not take them off shows how much he was obsessed by the ideas of Kālidāsa. Aśvaghoṣa's attempts at varying his models often launches him in ludicrous situations.

[3] Probably there is nothing incongruous in Aśvaghoṣa's सुप्तप्रबुद्धाकुललोचनाः—he may have made the prince pass very early in the morning when all persons had left not their beds.

the ladies, which do suggest the toilet chamber. Kālidāsa's texts therefore must have been before Aśvaghoṣa. The idea in Kālidāsa's single verse "तासां मुखैरासवगन्धगर्भैर्व्याप्तान्तराः सान्द्रकुतूहलानाम् । विलोलनेत्रभ्रमरैर्गवाक्षाः सहस्रपत्राभरणा इवासन् ॥" (Ku., VII. 62; Ra., VII. 11) is repeated twice by Aśvaghoṣa: "वातायनेभ्यस्तु विनिःसृतानि परस्परोपासितकुण्डलानि । स्त्रीणां विरेजुर्मुखपङ्कजानि सक्तानि हर्म्येष्विव पङ्कजानि ॥१६॥ वातायनानामविशालभावादन्योन्यगण्डार्पितकुण्डलानि । मुखानि रेजुः प्रमदोत्तमानां बद्धाः कलापा इव पङ्कजानाम् ॥२१॥." Does not this clearly indicate who is the plagiarist here? The puritanic monk has taken care to omit "the fragrance of wine." And "अयं किल व्यायतपीनबाहू रूपेण साक्षादिव पुष्पकेतुः" (Bu., III. 24 *a*, *b*) clearly betrays the influence of Ra., VII. 15, and Ku., VII. 67, quoted above.

Professor Cowell said about these agreements: "We must not forget here that in Kālidāsa the description only belongs to an episode in the main poem,—in the Buddhist author it is a natural incident in one of the most important chapters of the whole work. Kālidāsa merely brings in a few characteristic details, as he is hurrying on to the marriage and the subsequent attack by the disappointed rivals; Aśvaghoṣa dwells in a more leisurely way on the various attitudes and gestures of the women, in order to bring out in bolder relief the central figure of the hero." These statements seem very strange to us. The description in Kālidāsa has as great connexion with the main theme as in Aśvaghoṣa, or rather it may be said that the latter's description is highly inappropriate. It should be noted that the object of feminine curiosity in Kālidāsa is a bridegroom going to marry. Women still flock to windows and roofs of houses, everywhere in India, when a bridegroom passes through the streets in procession. Therefore Kālidāsa's is not a hurried description but an indispensable thing in an Indian poem. For Aśvaghoṣa no justification can be shown; what the women did is altogether out of place there. His only motive seems to have been to tread in the path of professed poets and then to introduce his religious suggestions; this he does in

v. 24 *c*, *d*—"त्यक्ता श्रियं धर्ममुपेष्यतीति तस्मिन् हिता गौरवमेव चक्रुः," but unfortunately with some abruptness. The very fact that Kālidāsa's is a short description and Aśvaghoṣa's a "leisurely" one should indicate, unless anything is known or can be established to the contrary, that the latter is the later writer. Is not Aśvaghoṣa more lavish in his expressions in both his works than the renowned master of *Vaidarbhī* style? And are we not aware of the increase in verbosity in Sanskrit literature with the progress of time? One such late poet felt constrained to say in a moment of self-realisation, "मुदे मुरारेरमरैः सुमेरोरानीय यस्योपचितस्य शृङ्गैः। भवन्ति नेदामगिरां कवीनामुच्छ्रायसौन्दर्यगुणा मृषोद्याः." [1] What the Professor says about the impending attack by the disappointed rivals becomes altogether meaningless the moment we substitute the Kumārasambhava in the place of the Raghuvaṃśa, for no such incident awaits the bridegroom in the former poem. Professor Cowell (p. xi of his Preface) did not shrink from tracing Aśvaghoṣa's influence in Rāmāyaṇa (V. 9-11), but a more sensible writer makes Aśvaghoṣa the imitator.[2] I am fully conscious of possible Buddhist influences[3] over Kālidāsa's mind, but what the learned Professor has put down as a Buddhist idea (Preface, xi) fails to appear to me as such. Buddhism seems to have become a name to conjure with and we often find things soberly put down under its especial label, which are neither Buddhist nor Jaina, nor even Brāhmanical, but simply Indian.

In comparing Aśvaghoṣa and Kālidāsa, the Buddhacarita is generally placed by the side of the Raghuvaṃśa. But a careful study has convinced me that the Buddhacarita agrees more with the Kumārasambhava than with the Raghuvaṃśa which resembles the Saundarananda more. The editor of the

[1] Śiśupālavadha, IV. 10.

[2] Keith, "Classical Sanskrit Literature," p. 23.

[3] In an *ahiṃsā* tendency. Are the influences Buddhist or Jaina? There was a strong Jaina settlement in Western India in the first century B.C. when, as I shall show below, our poet lived.

Saundarananda has suggested (Preface, iv) that the Buddhacarita was written earlier than the Saundarananda, but I have little hesitation in rejecting this view. Any one who reads the two books carefully will feel convinced that MM. Pandit H. P. Shastri has here gone wrong. Professor Keith [1] rightly considers the Buddhacarita to be the later work. It is because the Saundarananda is his first *kāvya* that Aśvaghoṣa wrote those apologetic lines at the end of the work. When writing the Buddhacarita, his fame as a poet must have been established and he needed no apology. But, of course, we have no means now to determine what were exactly the last words of the Buddhacarita. The Chinese translation [2] seems to be a condensed version. "To sing the praises of the lordly monk, and (declare) his acts from first to last, 2309; without self-seeking or self-honour, without desire for personal renown, but following what the scriptures say, to benefit the world...2310" [3] seems to be connected with the first half of verse 2309, *viz.*, "And having shown the way to all the world, who would not reverence and adore him?" and Beal's supposition that 'has been my aim' is to be supplied to complete the sense seems unwarranted. I shall now give some of the grounds on which I have guessed the especial connexion between the Saundarananda and the Raghuvaṃśa and between the Buddhacarita and the Kumārasambhava. The parallels I adduce below will not all convince my readers but I doubt not that some will and that the cumulative effect of the evidence will establish my case.

To begin with the Saundarananda, in the third verse of its first canto, "इक्ष्वाके यश्च स्वात्मार्थं गामभुक्त वशिष्ठवत्। तपःशिष्टेषु शिष्येषु गामधु(धो)क्त वशिष्ठवत्॥" said about the sage Gotama, seems to have been suggested by "दुदोह गां स यज्ञाय..." Ra., I. 26, and the reference to Vasiṣṭha in the latter half of the first canto of Ra. and to his cow in that and the following cantos. The sixth

[1] "Classical Sanskrit Literature," p. 22.

[2] Translated into English by Beal, S.B.E. XIX, Oxford, 1883.

[3] S.B.E., XIX, p. 338.

verse "चारुबीरुत्तरुवनः प्रस्निग्धमृदुशाद्वलः। हविर्धूमवितानेन यः सदाभ्र इवाबभौ ॥" has some agreements with Ra., II. 17, "स पल्वलोत्तीर्ण-वराहयूथान्यावासवृक्षोन्मुखबर्हिणानि, ययौ मृगाध्यासितशाद्वलानि श्यामायमानानि वनानि पश्यन् ॥." Sau., I. 10 "नीवारफलसन्तुष्टैः स्वस्थैः शान्तैरनुत्सुकैः। आकीर्णोऽपि तपोभृद्भिः शून्यशून्य इवाभवत्॥" has certainly a resemblance with Ra., I. 50, "आकीर्णमृषिपत्नीनामुटजद्वारगेरुधिभिः। अपत्यैरिव नीवार-भागधेयोचितैर्मृगैः॥" and Ra., I. 52, "आतपात्ययसंक्षिप्तनीवारासु निषादिभिः। मृगैर्वर्तितरोमन्थमुटजाङ्गनभूमिषु ॥" (also, Śak., I Act, "नीवाराः शुकगर्भकोटरमुखभ्रष्टास्तरूणामधः प्रस्निग्धाः क्वचिदिङ्गुदीफलभिदः सूच्यन्त एवोपलाः। विश्वासोपगमादभिन्नगतयः शब्दं सहन्ते मृगास्तोयाधारपथाश्च वल्कलशिखानिस्यन्दरेखाङ्किताः ॥"). There is reference to the sacred fires in Sau., I. 11 and also in Ra., I. 53. Ra., I. 50 and 52, just quoted, seem also to have some connexion with Sau., I. 12, "विरेजुः हरिणा यत्र सुप्ता मेध्यासु वेदिषु। सलाजैर्माधवीपुष्पैरुपहाराः कृता इव ॥." The following verse of the Saundarananda, "अपि क्षुद्रमृगा यत्र शान्ताश्चेरुः समं मृगैः। शरण्येभ्यस्तपस्विभ्यो विनयं शिक्षिता इव ॥" seems to contain matter from two different verses of the Raghuvaṃśa: "(लताप्रतानोद्ग्रथितैः स केशैरधिज्यधन्वा विचचार दावम्।) रक्षापदेशान्मुनिहोमधेनोर्वन्यान् विनेष्यन्निव दुष्टसत्त्वान्।" II. 8 and "(शशाम वृष्ट्यापि विना दवाग्निरासीद्विशेषा फलपुष्प-वृद्धिः।) ऊनं न सत्त्वेष्वधिको बबाधे तस्मिन् वनं गोप्तरि गाहमाने ॥" II. 14. Aśvaghoṣa makes the Kṣudra-mṛgas ('small animals') roam in peace with *mṛgas*. But *mṛga*, by itself, does not mean only the big animal or the ferocious animal, either of which must have been meant by the poet, as शान्ताः ('peaceful') and विनयं शिक्षिताः ('taught lessons of gentleness') unmistakably indicate. Kālidāsa has expressly mentioned the ferocious and big animals ('दुष्टसत्त्वान्' 'अधिकः') and he has also made them and not the weak animals taught lessons of gentleness. This shows that in spite of his attempts at variation, Aśvaghoṣa has betrayed his indebtedness to Kālidāsa. "निगूढज्ञानपौरुषम्" in Sau., I. 52, may have some connexion with Ra., I. 20, "तस्य संवृतमन्त्रस्य गूढाकारेङ्गितस्य च। फलानुमेयाः प्रारम्भाः संस्काराः प्राक्तना इव ॥." Similarly Sau., I. 56, "यस्मादन्यायतस्ते च कश्चिन्नाचीकरत्करम्। तस्मादल्पेन कालेन तत्तदापुपुरन् पुरम् ॥" may have been suggested by Ra., I. 18, "प्रजानामेव भूत्यर्थं स ताभ्यो बलिमग्रहीत्। सहस्रगुणमुत्स्रष्टुमादत्ते हि रसं रविः ॥"

The last verse of Saundarananda, canto I, "आचारवान् विनयवान् नयवान् क्रियावान् धर्माय नेन्द्रियसुखाय धृतातपत्रः। तद्भ्रातृभिः परिवृतः स जुगोप राष्ट्रं संक्रन्दनो दिवमिवानुसृतो मरुद्भिः॥" has *certain* resemblances, in words, ideas or allusions, to three consecutive verses in Raghuvaṃśa, canto I (24-26): "प्रजानां विनयाधानाद्रक्षणाद्भरणादपि। स पिता पितरस्तासां केवलं जन्महेतवः॥ स्थित्यै दण्डयतो दण्ड्यान् परिणेतुः प्रसूतये। अप्यर्थकामौ तस्यास्तां धर्म एव मनीषिणः॥ दुदोह गां स यज्ञाय शस्याय मघवा दिवम्। सम्पद्विनिमयेनोभौ दधतुर्भुवनत्रयम्॥." It should be noticed that the order has been preserved by Aśvaghoṣa.

Before I pass on to the next canto of the Saundarananda, I must draw the attention of my readers to a particular feature of these resemblances. One may object about my inferences that such coincidences are natural when there is agreement in the subject-matter and they do not necessarily imply borrowing. But would resemblances extend so far and be also almost in the same order without a genetic connexion? I have shown that some passages in Aśvaghoṣa can be explained only in the light of Kālidāsa's words. Kālidāsa therefore must have written first. Then the pre-history of the Śākyas and their wanderings in the forest (the subject-matter of Sau., I.) which gave occasion to Aśvaghoṣa to write those passages resembling Ra., I, properly form no part of his real story. His main theme is the conversion of Nanda, half-brother of the Buddha, and all that is directly connected with it—including Nanda's birth and ancestry. What comes before canto II is therefore irrelevant. But Kālidāsa is writing the whole history of the Raghus and he must start from the very beginning. Then, his sending of the king Dilīpa to the forest has an artistic significance[1] and is intimately connected with the poet's own deep love of nature.

Let us now proceed with the second canto of the Saundarananda. We notice the similarity of verse 4, "वपुष्मांश्च न च स्तब्धो दक्षिणो न च नार्जवः। तेजस्वी न च न क्षान्तः कर्ता च न च

[1] The greatest prince in the line is Rāma. He had to live long in the forest before he became king. Daśaratha obtained Rāma after hunting in the woods. Dilīpa's forest life for progeny at the beginning of the story prepares us for all this.

विस्मितः ॥" with Ra., I. 21-22 " जुगोपात्मानमत्रस्तो भेजे धर्ममनातुरः । अगृध्नुराददे सोऽर्थमसक्तः सुखमन्वभूत् ॥ ज्ञाने मौनं क्षमा शक्तौ त्यागे श्लाघाविपर्ययः । गुणा गुणानुबन्धित्वात्तस्य सप्रसवा इव ॥." It is difficult to avoid connecting v. 6, " यः पूर्वैं राजभिर्यातां धियासुर्धर्मपद्धतिम् । राज्यं दीक्षामिव वहन् वृत्तेनाम्वगमत्पितॄन् ॥" with Ra., I. 17, " रेखामात्रमपि क्षुण्णादा मनोर्वर्त्मनः परम् । न व्यतीयुः प्रजास्तस्य नियन्तुर्नेमिवृत्तयः ॥" and the next verse, "यस्य सुव्यवहाराच्च रक्षणाच्च सुखं प्रजाः । शिश्यिरे विगतोद्वेगाः पितुरङ्कगता इव ॥" with Ra., I. 24, " प्रजानां विनयाधानाद्रक्षणाद् भरणादपि । स पिता पितरस्तासां केवलं जन्महेतवः ॥"; Sau., II. 7 seems an almost exact but none-the-less a puritanic paraphrase of Ra., I. 24. One verse of the Raghuvaṃśa (I. 28) " द्वेष्योऽपि सम्मतः शिष्टस्तस्यार्तस्य यथौषधम् । त्याज्यो दुष्टः प्रियोऽप्यासीदङ्गुलीवोरगक्षता ॥" seems to have supplied matter to two verses of the Saundarananda, II. 22-23, " (आक्रक्षत् वपुषा दृष्टीः प्रजानां चन्द्रमा इव) । परस्वं भुवि नामृक्षत् महाविषमिवौ (वो) रगम् ॥ नाक्रक्षत् विषये तस्य कश्चित् कैश्चित् क्वचित् क्षतः । [1] अदिक्षत् तस्य हस्तस्थमार्तेभ्यो ह्यभयं धनुः ॥." I cannot help thinking that Aśvaghoṣa wrote the second verse "नाक्रक्षत्" because the other ideas connected with उरग (क्षत and आर्त) in Kālidāsa's verse could not be given a place in Sau., II. 22. *This passage ought to decide Aśvaghoṣa's debt to Kālidāsa.* The first half of Sau., II. 22, may have been suggested by Ra., I. 46, " काप्यभिख्या तयोरासीद् व्रजतो : शुद्धवेशयोः । हिमनिर्मुक्तयोर्योगे चित्राचन्द्रमसोरिव ॥." In Sau., II. 53, "सूर्यरश्मिभिरक्लिष्टं पुष्पवर्षं [:] पपात खात्। दिग्वारणकराधूताद् वनाद्धैत्ररथादिव ॥," there may be some influence of Ra., II. 60, "तस्मिन् क्षणे पालयितुः प्रजानामुत्पश्यतः सिंहनिपातमुग्रम् । अवाङ्मुखस्योपरि पुष्पवृष्टिः पपात विद्याधरहस्तमुक्ता ॥," though, of course, one cannot be sure. But Sau., II. 54, " दिवि दुन्दुभयो नेदुर्दीव्यतां मरुतामिव । दिदीपेऽत्यधिकं सूर्यः शिवश्च पवनो ववौ ॥" has too much in common with Ra., III. 14, " दिशः प्रसेदुर्मरुतो ववुः सुखाः प्रदक्षिणार्चिर्हविरग्निराददे । बभूव सर्वं शुभशंसि तत्क्षणं भवो हि लोकाभ्युदयाय तादृशाम् ॥ " to allow of chance coincidence. In Sau., II. 58, "दीर्घबाहुर्महावक्षाः सिंहांसो वृषभेक्षणः । वपुषाऽनेन (यो नाम सुन्दरोपपदं दधे) ॥" is noticeable persistent influence of

[1] The reading कृतः of the paper manuscript conveys no sense and the editor seems justified in preferring the reading of the palm-leaf manuscript.

Kālidāsa, in spite of a conscious effort at variation; *cf.* Ra., I. 13, "व्यूढोरस्को वृषस्कन्धः शालप्रांशुर्महाभुजः (आत्मकर्मक्षमं देहं क्षात्रो धर्म इवाश्रितः) ॥." Or, may we think that the variation[1] in Aśvaghoṣa is due to wrong memory?

After Aśvaghosa had written two cantos a flow must have set in in his style, and his obligations to Kālidāsa diminish after this. But the seventh verse of canto 4, "तां सुन्दरीं चेन्न लभेत नन्दः सा वा निषेवेत न तं नतभ्रूः। द्वन्द्वं ध्रुवं तद् विकलं न शोभेतान्योन्यहीनाविव रात्रिचन्द्रौ ॥" has a sure genetic connexion with Ra., VII. 14, and Ku., VII. 66, "परस्परेण स्पृहणीयशोभं न चेदिदं द्वन्द्वमयोजयिष्यत्। अस्मिन् द्वये रूपविधानयत्नः पत्युः प्रजानां वितथोऽभविष्यत् ॥." That Kālidāsa is original is proved by the fact that the idea recurs again and again in his works, so much so, that *it seems to have been connected with the poet's own philosophy of life.* Compare Ra., I. 33, "तस्यामात्मानुरूपायामात्मजन्मसमुत्सुकः etc.," Ku., I. 18, "... मेनां मुनीनामपि माननीयाम् आत्मानुरूपां विधिनोपयेमे" and Śakuntalā V "त्वमर्हतामग्रसरः स्मृतोऽसि नः शकुन्तला मूर्तिमतीव सक्रिया। समानयंस्तुल्यगुणं वधूवरं चिरस्य वाच्यं न गतः प्रजापतिः ॥."[2] These and other similar passages in Kālidāsa make one infer that the poet had personal experience of the blessings of an *anurūpa* wife. To continue, the first line of Sau., IV. 8, "कन्दर्परत्योरिव लक्ष्मभूतम् (प्रमोदनान्ध्योरिव नीडभूतम्। प्रहर्षतुष्ट्योरिव पात्रभूतं) द्वन्द्वं सहारंस्त मदान्धभूतम् ॥," may have been suggested by the verse following Ra., VII. 14 quoted above, *viz.*, "रतिस्मरौ नूनमिमावभूतां (राज्ञां सहस्रेषु तथाहि बाला। गतेयमात्मप्रतिरूपमेव मनो हि जन्मान्तरसङ्गतिज्ञम् ॥")। Passing on to Sau., IV. 42, "तं गौरवं बुद्धगतं चकर्ष भार्यानुरागः पुनराचकर्ष। सोऽनिश्चयान् नापि ययौ न तस्थौ तरंस्तरङ्गेष्विव राजहंसः ॥" may seem to be the model of Kālidāsa's famous "तं वीक्ष्य वेपथुमती सरसाङ्गयष्टिर्निक्षेपणाय पदमुद्धृतमुद्वहन्ती। मार्गाचलव्यतिकराकुलितेव सिन्धुः शैलाधिरा-

[1] Of the উদোর পিণ্ডি বুদোর ঘাড়ে type, as we would put it in Bengali. It is a bull's shoulder and not a lion's that can be an object for comparison. Aśvaghoṣa has made Nanda have the shoulders of a lion and the eyes of a bull! Kālidāsa does not mention the eyes of Dilīpa but his shoulders are likened to those of a bull. Poor Aśvaghoṣa attempted variation but betrayed his plagiarism.

[2] My friend Pandit Nārāyaṇa Śāstrī Khiste of Benares would probably have me add here Me., II. 54, "...ना भूदेवं जगनपि च ते विद्मु ता विप्रयोगः."

जतनया न ययौ न तस्थौ ॥" (Ku., V. 85) as the editor of the Saundarananda probably believes.[1] But when we turn to the Buddhacarita we find Aśvaghoṣa trying to introduce the famous expression "न ययौ न तस्थौ" in an unhappy setting. The tenth canto of the Buddhacarita begins with a description of the Prince's entrance into Rājagṛha and we have a verse here, "गाम्भीर्यमोजश्च निशम्य तस्य वपुश्च दीप्तं पुरुषानतीत्य । विसिस्मिये तत्र जनस्तदानीं स्थाणुव्रतस्येव वृषध्वजस्य ॥" (Bu., X. 3). The simile in the last line, to have any meaning, must refer to something well-known. But it is not well known that Śiva was "the cynosure of neighbouring eyes." I cannot therefore help inferring that Aśvaghoṣa was alluding to Kumārasambhava, VII. 51, "तस्योपकण्ठे घननीलकण्ठः कुतूहलादुन्मुखपौरदृष्टः । स्वबाणचिह्नादवतीर्य मार्गादासन्नभूपृष्ठमियाय देवः ॥," where Śiva attracts peoples' eager eyes, because he is a bridegroom coming to marry. But our author is then reminded, by the association of ideas, of Ku., V. 84, "इतो गमिष्याम्यथवेति वादिनी चचाल बाला स्तनभिन्नवल्कला । स्वरूपमास्थाय च तां कृतस्मितः समाललम्बे वृषराजकेतनः ॥" and he cannot resist the temptation of once more imitating the famous expression "न ययौ न तस्थौ" in the following verse of Kumāra (V. 85) and he forcibly brings it in in his next verse, "तं प्रेक्ष्य, योऽन्येन ययौ स तस्थौ यश्चात्र तस्थौ पथि सोऽन्वगच्छत् । द्रुतं ययौ यः सदृशं सधीरं यः कश्चिदास्ते स्म स चोत्पपात ॥." The fact that न here belongs to another word and the second न had to be substituted by स (ः) shows the effort of Aśvaghoṣa. "तं प्रेक्ष्य" in Aśvaghoṣa, it should be noticed, corresponds to Kālidāsa's "तं वीक्ष्य." I have no hesitation therefore in concluding that Sau., IV. 42, has been suggested by Ku., V. 85, a conclusion in which I am confirmed by the fact that its last line, "तरंस्तरङ्गेष्विव राजहंसः" is rather inappropriate: the swan when *swimming* through the waves does not seem stationary. *This passage is thus decisive in showing Aśvaghoṣa's posteriority.*

Any further resemblance with the Raghuvaṃśa I have not noted yet, but I suspect that a detailed comparison may reveal

[1] Preface, p. v.

the continued influence of Kālidāsa over the Saundarananda. Its sixth canto, for example, describing the laments of Sundarī, may have been influenced by the fourth canto (*Rativilāpa*) of the Kumārasambhava. In spite of characteristic differences, due to Kāma's death in the Kumārasambhava and Nanda's accepting of the order in the Saundarananda, we have some agreement in their structure. Rati laments by herself, then Vasanta comes, her sorrow is increased and she wants to die *Satī* with Kāma's remains ; but a voice from the sky commands her to desist from her purpose and assures her of a reunion with her lord. In the Saundarananda, Sundarī too laments by herself, and when she is joined by another woman, she thinks her husband is coming, but she realises her mistake and her sorrow is increased, particularly when she learns her husband's fate. A sensible attendant now admonishes her that as a queen of the Ikṣvāku family she should exult over her husband's retirement to the forest ("इक्ष्वाकुवंशे ह्यभिकाङ्क्षितानि दायाद्यभूतानि तपोवनानि" VI. 39) and should not be sorrowful ("वीतस्पृहो धर्ममनुप्रपन्नः किं विक्लवा रोदिषि हर्षकाले" VI. 43).[1] This makes the parallelism complete, so far as the circumstances could permit. But (false) hope of reunion with Nanda (which is really impossible) was also thought necessary by our author to be given to Sundarī by another maid (verses 45—48). Does not this indicate that Aśvaghoṣa wrote after Kālidāsa? The thought in Ku., IV. 19, "विबुधैरसि यस्य दारुणैरसमाप्ते परिकर्मणि स्मृतः। तमिमं कुरु दक्षिणेतरं चरणं निर्मितरागमेहि मे ॥" could be taken to have

[1] I cannot help reading in Sau., VI. 39,40 (राजर्षिवंश्यास्तव नानुरूपो धर्माश्रिते भर्तरि जातु कोपः। इक्ष्वाकुवंशे ह्यभिकाङ्क्षितानि दायाद्यभूतानि तपोवनानि ॥प्रायेण मोक्षाय विनिःसृतानां शाक्यर्षभाणां विदिताःस्त्रियस्ते। तपोवनानीव गृहाणि यासां स्वाध्यायवन्ति कामवद्दाग्रितानाम् ॥) an influence of and an improvement on Ra., III. 70 (अथ स विषयव्यावृत्तात्मा यथाविधि सूनवे नृपतिकुदं दत्त्वा भूमे सितातपवारणम्। मुनिवनतरुच्छायां देव्या तया सह शिश्रिये गलितवयसामिक्ष्वाकूणामिदं हि कुलव्रतम् ॥). The idea of heritage in Aśvaghoṣa is probably suggested by "सूनवे...दत्त्वा...सितातपवारणम्" in Kālidāsa and Sau., VI. 40 probably attempts an alteration from "मुनिवनतरुच्छायां देव्या तया सह शिश्रिये," necessitated by the difference of the situation. Kālidāsa repeats the idea of Ikṣvākus retiring to the forest in Ra., VIII. 11, etc.

been suggested by canto IV of the Saundarananda (particularly verse 34, "नाहं त्रियासेर्गुरुदर्शनार्थम् अर्हामि कर्तुं तव धर्मपीडाम्। गच्छार्यपुत्रेहि च शीघ्रमेव विशेषको यावदयं न शुष्कः॥"), because Kālidāsa has not informed us ere this of Kāma's having been called away from Rati's presence only after he had painted her right foot.[1] But that conclusion is barred by the exact nature of the parallelism between Ku., IV. and Sau. VI, indicated above, and by the two or three decisive cases of Aśvaghoṣa's obligation to Kālidāsa mentioned already. I therefore suppose that Aśvaghoṣa himself derived some suggestions from Ku., IV. 19, for his own story and he made his hero leave his beloved when she had just painted her cheeks.[2] Similarly there may be some influence of Raghuvaṃśa, canto VIII (*Aja-vilāpa*), over the seventh canto of the Saundarananda, where Nanda laments over his separation from Sundarī.

In the Saundarananda, Aśvaghoṣa speaks of some princes, believed to have been descended from the Ikṣvākus, and it is natural that he should turn to the Raghuvaṃśa of Kālidāsa which describes the early Ikṣvākus. My studies have led me to the conclusion that Aśvaghoṣa had before him the Kumārasambhava of Kālidāsa, when he next took up the Buddhacarita. The reason is not far to seek: both Śiva and Buddha are *mārajits*, *i.e.*, conquerors of Māra, with this difference that Aśvaghoṣa's hero conquers Māra for ever and does not come under him again as Śiva does—we have therefore a simile here of the अधिक

[1] Nor does Kālidāsa tell us in the third Act of Śakuntalā of the incident about the deer (Dīrghāpāṅga) Śakuntalā refers to in the fifth. He was the least prosaic of poets.

[2] Kālidāsa makes Kāma dye the feet of Rati with lac, but our puritanic author would improve by making Sundarī paint her cheeks and that herself. But is it an improvement? Tradition has it that when Jayadeva had written, "स्मरगरलखण्डनं मम शिरसि मण्डनं देहि पदपल्लवमुदारम्" his piety began to torment him and the poor Brahmin felt constrained to pen through the line "देहि पदपल्लवमुदारम्" but the Lord, so the story says, Himself came in Jayadeva's absence and re-wrote what Jayadeva wanted to remove. But, of course, these are ideas of a different plain of thought.

class.[1] Though Aśvaghoṣa mostly used the Kumārasambhava when writing the Buddhacarita, the Raghuvaṃśa was not altogether forgotten. I give below my reasons for this view.

We have references to the Kailāsa in verses 3 and 21 of the first canto of the Buddhacarita in not very happy settings and they seem to suggest that Kailāsa has been unnecessarily mentioned only because the author was thinking of the Lord of Kāilāsa, described in the Kumārasambhava; the second half of v. 21, "**सर्वत्र भान्तोऽपि हि चन्द्रपादा भजन्ति कैलासगिरौ विशेषम्**" is particularly suggestive. But these references are not decisive and I do not want to press them. But verse 11 of the same canto, "**भुजेन यस्याभिहताः पतन्तो द्विषद्द्विपेन्द्राः समराङ्गणेषु। उद्भ्रान्तमुक्ता-प्रकरैः शिरोभिर्भक्त्येव पुष्पाञ्जलिभिः प्रणेमुः॥**" certainly suggests Kumārasambhava, I. 6, "**पदं तुषारक्षतिधौतरक्तं यस्मिन्नदृष्ट्वापि हतद्विपानाम्। विदन्ति मार्गं नखरन्ध्रमुक्तैर्मुक्ताफलैः केसरिणां किराताः॥.**" The fact that Kālidāsa speaks of actual elephants and actual *gajamotis* and Aśvaghoṣa figuratively of enemy-kings as elephants and of pearls in their crests as *gajamotis* conclusively proves that Aśvaghoṣa was influenced by Kālidāsa and not the other way. *Udvānta* in Aśvaghoṣa is inappropriate and seems to be simply due to Kālidāsa's *muktair*. [In verse 22, "**मायापि तं कुक्षिगतं दधाना विद्युद्विलासं जलदावलीव। दानाभिवर्षैः परितो जनानां दारिद्र्यतापं शमयाञ्चकार॥**," we may have some influence of Ra., III. 12, "**कुमारभृत्याकुशलैरनुष्ठिते भिषग्भिराहैरथ गर्भभर्मणि। पतिः प्रतीतः प्रसवोन्मुखीं प्रियां ददर्श काले दिवमभ्रितामिव॥**" and, may be, also of Ra., I. 18 *c*, *d*., "**सहस्रगुणमुत्स्रष्टुमादत्ते हि रसं रविः**"]. It is true

[1] I am glad to quote the following from Mr. Dhanapati Banerji: "Asva Ghosha has another fling at Kalidasa in a different place. Siva succumbed to the influences of Mara or Madana. But Buddha could not be subdued, and Mara wonders at the fact. This is certainly an improvement according to Asva Ghosha. It seems that Bharavi took his revenge on Asva Ghosha, for in his epic, not only the tempters fail to overcome Arjuna but are themselves overcome. These elaborations, in my opinion, settle the chronology of the poets beyond any doubt" (Q. J. M. S., X, p. 88). The story in the Sūtrālaṅkāra of Aśvaghoṣa (pp. 263—73)about the tussle of Upagupta with Māra, preserved in the Divyavadāna shows the influence of the Kumārasambhava, in that Buddha is there said to have tolerated Māra.

that there is nothing in the Tibetan and Chinese versions of the Buddhacarita corresponding to the first 24 verses of Cowell's Sanskrit text,[1] but we should not conclude on that account the late date of this portion, for the Chinese version is throughout much shorter than the Sanskrit text and leaves out a good deal of important matter; the same may be also true of the Tibetan rendering.[2] Verses 25 and 26 of the Buddhacarita, "ततः प्रसन्नश्च बभूव पुष्यस्तस्याश्च देव्या व्रतसंस्कृतायाः। पार्श्वात्सुतो लोकहिताय जज्ञे निर्वेदनं चैव निरामयं च॥ प्रातः पयोदादिव तिग्मभानुः समुल्लवन् सोऽपि च मातृकुक्षेः। स्फुरन्मयूखैर्विहितान्धकारैश्चकार लोकं कनकावदातम्॥," have a strong resemblance with Ku., I. 23-24, "प्रसन्नदिक् पांसुविविक्तवातं शङ्खस्वनानन्तरपुष्पवृष्टि। शरीरिणां स्थावरजङ्गमानां सुखाय तज्जन्मदिनं बभूव॥ तया दुहित्रा सुतरां सवित्री स्फुरत्प्रभामण्डलया चकासे। विदूरभूमिर्नवमेघशब्दादुद्भिन्नया रत्नशलाकयेव॥" and Ra., III. 14, "दिशः प्रसेदुर्मरुतो ववुः सुखाः प्रदक्षिणार्चिर्हविरभिराददे। बभूव सर्वं शुभशंसि तत्क्षणं भवोहि लोकाभ्युदयाय तादृशाम्॥"; of course, who is the borrower, Aśvaghoṣa or Kālidāsa, cannot be decided in the present case. We have another resemblance between Bu., I. 28, "सुरप्रधानैः परिधार्यमाणो देहांशुजालैरनुरञ्जयंस्तान्। सन्ध्याभ्रजालोपरि संनिविष्टं नवोडुराजं विजिगाय लक्ष्म्या," and Ku., I. 25, "दिने दिने सा परिवर्धमाना लब्धोदया चान्द्रमसीव लेखा। पुपोष लावण्यमयान् विशेषान् ज्योत्स्नान्तराणीव कलान्तराणि॥." In Bu., I. 32, "स हि स्वगात्रप्रभयोज्ज्वलन्त्या दीपप्रभां भास्करवन्मुमोप। महार्हजाम्बूनदचारुवर्णो विद्योतयामास दिशश्च सर्वाः॥," we have the influence of Ra., III. 15, "अरिष्टशय्यां परितो विसारिणा सुजन्मनस्तस्य निजेन तेजसा। निशीथदीपाः सहसा हतत्विषो बभूवुरालेख्यसमर्पिता इव॥" and Ra., X. 68, "रघुवंशप्रदीपेन तेनाप्रतिमतेजसा। रत्नगृहगता दीपाः प्रत्यादिष्टा इवाभवन्॥," both suggested probably by "प्रभामहत्या शिखयेव दीपस्त्रिमार्गयेव त्रिदिवस्य मार्गः। संस्कारवत्येव गिरा मनीषी तया स पूतश्च विभूषितश्च॥," of the Kumārasambhava (I. 28); in "पाण्डरमातपत्रम्" of Bu., I. 37 *c* too we may have the influence of "शशिप्रभं छत्रम्" of Ra., III. 16 *d*. The fortieth verse of Buddhacarita, Canto I, "यस्मिन् प्रसूते

[1] Cowell's Buddhacarita, p. 4, n. 1.

[2] I tried to secure some information about the Tibetan translation but I did not succeed.

गिरिराजकीला वाताहता नौरिव भूश्चचाल। सचन्दना चोत्पलपद्मगर्भा पपात वृष्टिर्गगनादनभ्रात् ॥," has two verbal agreements (in the same order) with Kumārasambhava, I. 46, " प्रवातनीलोत्पलनिर्विशेषमधीरविप्रेक्षितमायताक्ष्या। तया गृहीतं नु मृगाङ्गनाभ्यस्ततो गृहीतं नु मृगाङ्गनाभिः ॥" and agreement in thought with Ku., I. 23 *b*, "शङ्खस्वनानन्तरपुष्पवृष्टि." It should be noted that in Aśvaghoṣa's verse we have an unusual conceit, the coming down of lilies and lotuses, both water flowers, from the heavens, which could have been suggested only by the उत्पल of Kumārasambhava, I. 46, coming after वात in the same verse and utilised by our author in the second line. When Aśvaghoṣa had written the first half of the verse, his own words गिरिराज and वात probably suggested to him the beautiful verse in Kumārasambhava, (I. 46) describing the eyes of Girirāja's daughter and also the one (I. 23) describing the effects of her birth. So much was our author's imagination haunted by the beautiful verses of the popular poet that in the next verse (Bu., I. 41), " वाता ववुः स्पर्शसुखा मनोज्ञा दिव्यानि वासांस्यवपातयन्तः। सूर्यः स एवाभ्यधिकं चकाशे जज्वाल सौम्यार्चिरनीरितोऽग्निः ॥," he put in some of the unutilised ideas of Ra., III. 14, " दिशः प्रसेदुर्मरुतो ववुः सुखाः प्रदक्षिणार्चिर्हविरग्निरादद्दे। बभूव सर्वं शुभशंसि तत्क्षणं भवो हि लोकाभ्युदयाय तादृशाम् ॥." The following verses of the Buddhacarita are but continuations of these ideas.

We also notice in Bu., I. 45, क्वचित् क्वणत्तूर्यमृदङ्गगीतैर्वीणामुकुन्दामुरजादिभिश्च। स्त्रीणां चलत्कुण्डलभूषितानां विराजितं चोभयपार्श्वतस्तत् ॥," some verbal agreement with a verse in Kumārasambhava, (" किञ्चित्क्वणत्किन्नरमध्युवास " I. 54), and agreement in thought and language with Raghuvaṁśa, III. 19, " सुखश्रवा मङ्गलतूर्यनिस्वनाः प्रमोदनृत्यैः सह वारयोषिताम्। न केवलं सद्मनि मागधीपतेः पथि व्यजृम्भन्त दिवौकसामपि ॥." It is possible that the introduction of Asita Devala's prophecy of the Prince's future greatness was suggested by Nārada's prophecy of Pārvatī's marriage with Śiva in the Kumārasambhava ; but of course one cannot be sure for the story recurs in the other biographies of the Buddha. Aśvaghoṣa's borrowing is, however, rendered possible by the fact that the other biographies of Buddha are not earlier than Aśvaghoṣa's

Buddhacarita.[1] In any case, some influence of Kumārasambhava, I. 50, "तां नारदः कामचरः कदाचित्कन्यां किल प्रेक्ष्य पितुः समीपे। समादिदेशैकवधूं भवित्रीं प्रेम्णा शरीरार्द्धहरां हरस्य ॥," over the concluding verse of the Asita Devala episode, "अथ मुनिरसितो निवेद्य तत्त्वं सुतनियतं सुतविक्लवाय राज्ञे। सबहुमानमुदीक्ष्यमाणरूपः पवनपथेन यथागतं जगाम ॥" (Bu., I. 85), where Asita is made to fly through space like Nārada (a real denizen of the celestial regions) is just possible.[2] The passage in the Buddhacarita (I. 46—51) culminating in "तस्मात्प्रमाणं न वयो न कालः कश्चित्कचिच्छ्रैष्ठ्यमुपैति लोके। राज्ञामृषीणां च हितानि तानि कृतानि पुत्रैरकृतानि पूर्वैः ॥" may have been suggested by "पुराणमित्येव न साधु सर्वं न चापि काव्यं नवमित्यवद्यम्" in the Prologue of the Mālavikāgnimitra; but I am not sure on the point. Again in Bu., I. 70, "अप्यक्षयं मे यशसो निधानं कच्चिद्ध्रुवो मे कुलहस्तसारः। अपि प्रयास्यामि सुखं परत्र सुतेऽपि पुत्रेऽनिमिषैकचक्षुः", we notice some influence of Raghuvaṃśa, III. 17, "निवातपद्मस्तिमितेन चक्षुषा नृपस्य कान्तं पिबतः सुताननम्। महोदधेः पूर इवेन्दुदर्शनाद् गुरुः प्रहर्षः प्रबभूव नात्मनि ॥;" and in Bu., I. 87, "नरपतिरपि पुत्रजन्मतुष्टो विषयमतानि विमुच्य बन्धनानि। कुलसदृशमचीकरद्यथावत्प्रियतनयं तनयस्य जातकर्म ॥," an improvement over Ra., III. 20, "न संयतस्तस्य बभूव रक्षितुर्विसर्जयेयं सुतजन्महर्षितः। ऋणाभिधानात् स्वयमेव केवलं तदा पितॄणां

[1] The Lalitavistara, despite the view of some to the contrary, must be placed after the Buddhacarita, the Mahāvastu contains much that is very late and the Pāli Nidāna Kathā probably belongs to the fifth century A.D.

[2] "अथ खल्वसितो महर्षिः सार्धं नरदत्तेन भागिनेयेन राजहंस इव गगनतलादभ्युद्गम्य सनुरुद्गत्य येन कपिलवस्तु महानगरं तेनोपसङ्क्रामदुपसंक्रम्य ऋद्धिं प्रतिसंहृत्य पद्भ्यामेव कपिलवस्तु महानगरं प्रविश्य, etc." in the Lalitavistara (Lefmann's edition, p. 102) proves nothing, for that work is later than the Buddhacarita and has the additional defect of belonging to the Lokottaravāda school so notorious for its exaggerations. By "कामचरः" Kālidāsa may have meant simply 'passing at his pleasure by that way,' (यदृच्छया चरन्) and not 'able to roam anywhere at will,' but there was nothing to prevent Aśvaghoṣa from understanding a reference to the celestial flight of Nārada which Kālidāsa certainly believed in. Asita Devala was a mortal, and power to fly would be attributed to him only in very late times, and this makes me infer the influence of Kālidāsa in Aśvaghoṣa's story. Post-Aśvaghoṣean writers would but follow him, adding their own elaborations.

मुमुचे स बन्धनात् ॥." [1] Lastly the ninety-third verse of Buddhacarita, canto I, "भवनमथ विगाह्य शाक्यराजो भव इव षण्मुख-जन्मना प्रतीतः। इदमिदमिति हर्षपूर्णवक्त्रो बहुविधपुष्टियशस्करं व्यधत्त ॥," shows Aśvaghoṣa's acquaintance with the Kumārasambhava story and with the text of Ra., III. 23, "उमावृषाङ्कौ शरजन्मना यथा यथा जयन्तेन शचीपुरन्दरौ। तथा नृपः सा च सुतेन मागधी ननन्दतुस्तत्सदृशेन तत्समौ ॥."

After the first canto of the Buddhacarita, the influence of the Kumārasambhava and the Raghuvaṃśa diminishes, but it does not disappear altogether. In Bu., II. 26, "यशोधरां नाम यशोविशालां तुल्याभिधानां श्रियमाजुहाव," we may read some influence of Ku., I. 18, ".....मेनां मुनीनामपि माननीयामात्मानुरूपां विधिनोपयेमे" and Ra., I·33 "तस्यामात्मानुरूपायाम्....," and in the following verse, "अथापरं भूमिपतेः प्रियोऽयं सनत्कुमारप्रतिमः कुमारः। सार्धं तथा शाक्यनरेन्द्रवध्वा शच्या सहस्राक्ष इवाभिरेमे ॥" the influence of the verse following Ku., I. 18, viz., "कालक्रमेणाथ तयोः प्रवृत्ते स्वरूपयोग्ये सुरतप्रसङ्गे ....." Does not Aśvaghoṣa remind us of his deep acquaintance with the Kumārasambhava of Kālidāsa, in Bu., II. 30, "कलैर्हि चामीकरवद्रकर्चैर्नारीकराभिहतैर्मृदङ्गैः। वराप्सरोनृत्यसमैश्च नृत्यैः कैलासवत् तद्भवनं रराज ॥"? But the two following verses of the Buddhist monk, "वाग्भिः कलाभिर्ललितैश्च हारैर्मदैः सखेलैर्मधुरैश्च हासैः। तं तत्र नार्यो रमयांबभूवुर्भ्रूवल्गितैरर्धनिरीक्षितैश्च ॥ ततश्च कामाश्रयपण्डिताभिः स्त्रीभिर्गृहीतो रतिकर्कशाभिः। विमानपृष्ठान्न महीं जगाम विमानपृष्ठादिव पुण्यकर्मा ॥", have certainly drawn inspiration from the nineteenth canto of the Raghuvaṃśa, particularly from Verses 16 and 17, "तस्य सावरणदृष्टसन्धयः कामवस्तुषु नवेषु सङ्गिनः। वल्लभाभिरुपसृत्य चक्रिरे सामिभुक्तविपयाः समागमाः ॥ भङ्गलीकिसलयाप्रतर्जनं भ्रूविभङ्गकुटिलञ्च वीक्षितम्। मेखलाभिरसकृच्च बन्धनं वल्लयन् प्रणयिनीरवाप सः ॥"; "विमानपृष्ठान्न महीं जगाम" is certainly due to Ra., XIX. 7.

[1] Kings release prisoners on joyous occasions ; *cf.* Mālavikāgnimitra, Act V. The successful monarch Dilīpa (Ra., I 17, 27), had no prisoner in his realm whom he could release ; he therefore had to console himself with the idea that he was himself released from 'the debt to the ancestors.' But the monk Aśvaghoṣa finds room for *Bandhana-Mocana*—he makes his Śuddhodana free himself from the bonds of his own passion.

Sufficient has been said already by myself and also by my predecessors, Mr. Dhanapati Banerji, Mr. S. Ray and Mr. K. G. Sankara, about the debt of Aśvaghoṣa to Kālidāsa for Bu., III. 13—24, and I need not add anything more here. Bu., IV. 3, "तस्थुश्च परिवार्यैनं मन्मथाक्षिप्तचेतसः। निश्चलैः प्रीतिविकचैः पिबन्त्य इव लोचनैः।" again shows the influence of Kālidāsa; c.f. Ku., VII. 64, "तमेकदृश्यं नयनैः पिबन्त्यो नार्यो न जग्मुर्विषयान्तराणि। तथाहि शेषेन्द्रियवृत्तिरासां सर्वात्मना चक्षुरिव प्रविष्टा॥" and Ra., VII. 12, "ता राघवं दृष्टिभिरापिबन्त्यो नार्यो न...प्रविष्टा॥." Bu., IV. 4, "तं हिता मेनिरे नार्यः कामो विग्रहवानिति। शोभितं लक्षणैर्दीप्तैः सहजैर्भूषणैरिव॥," may have been influenced by Ra., VII. 15, "रतिस्मरौ नूनमिमावभूताम् etc.". Bu., IV. 7, "एवं ता दृष्टिमात्रेण नार्यो ददृशुरेव तम्। न व्याजहुर्न जहसुः प्रभावेणास्य यन्त्रिताः॥" may have been suggested by Ku., III. 51, "स्मरस्तथाभूतमयुग्मनेत्रं पश्यन्नदूरान्मनसाप्यधृष्यम्। नालक्षयत्साध्वससम्भ्रमस्तः स्रस्तं शरं चापमपि स्वहस्तात्॥" and Bu., IV. 24-25, "इत्युदायिवचः श्रुत्वा ता विद्धा इव योषितः। समारुरुहुरात्मानं कुमारग्रहणं प्रति॥ ता भ्रूभिः प्रेक्षितैर्भावैर्हसितैर्ललितैर्गतैः। चक्रुराक्षेपिकाश्चेष्टा भीतभीता इवाङ्गनाः॥," by Ku., III. 52, "निर्वाण-भूयिष्ठमथास्य वीर्यं सन्धुक्षयन्तीव वपुर्गुणेन। अनुप्रयाता वनदेवताभ्याम् अदृश्यत स्थावरराजकन्या॥". Verses 27—53 of this canto, which describe the various attempts of the damsels to capture the Prince's heart, show a thorough influence of the nineteenth canto of the Raghuvaṃśa, but I do not like to bring out the parallelisms here for obvious reasons. Let readers, who may hesitate to accept my statement, compare the two texts and draw their own conclusions, and I doubt not that they will come to my view. I have already spoken of the decisive character of Aśvaghoṣa's obligation to Kālidāsa for Bu., X. 4. The twenty-third verse of the same canto, "आदित्यपूर्वं विपुलं कुलं ते नवं वयो दीप्तमिदं वपुश्च। कस्मादियं ते मतिरक्रमेण भैक्षाक एवाभिरता न राज्ये॥," has an obvious connexion with Ra., II. 47., "एकातपत्रं जगतः प्रभुत्वं नवं वयः कान्तमिदं वपुश्च। अल्पस्य हेतोर्बहु हातुमिच्छन् विचारमूढः प्रतिभासि मे त्वम्॥" Aśvaghoṣa altered "एकातपत्रं जगतः प्रभुत्वम्" because Siddhārtha never ascended the throne and "आदित्य" in the altered first line suggested the change of "कान्तम्" in the second to "दीप्तम्". We notice in Bu., XII. 117, "तत: स पर्यङ्कमकम्प्यमुत्तमं बबन्ध

सुखोरगभोगपिण्डितम् भिनद्मि तावद्भुवि नैतदासनं न यामि तावत् (यावत् ?) कृतकृत्यतामिति ॥," the influence of Ku., III. 45, 46, "पर्यङ्कबन्धस्थिरपूर्वकायमृजवायतं संनमितोभयांसम् । उत्तानपाणिद्वयसंनिवेशात्प्रफुल्लराजीवमिवाङ्कमध्ये ॥ भुजङ्गभोगप्रतिमौ जटाकलापं कर्णावसक्तद्विगुणाक्षसूत्रम् । कण्ठप्रभासङ्गविशेषनीलां कृष्णत्वचं ग्रन्थिमतीं दधानम् ॥." We have "पर्यङ्कं बबन्ध" in the first line of Aśvaghoṣa corresponding to पर्यङ्कबन्ध of Kālidāsa's first verse. But Buddha could have no connexion with a real snake, as his predecessor Śiva is said to have had in Kālidāsa's second verse; we are therefore told in Aśvaghoṣa's second line that Buddha's body was coiled so closely as the hood of the sleeping serpent—a rather odd conceipt! The last verse of the canto, "ततो ययुर्मुदमतुलां दिवौकसो ववासिरे न मृगगणा न पक्षिणः । न सस्वनुर्घनतरवोऽनिलाहताः कृतासने भगवति निश्चलात्मनि", again shows the influence of the Kumārasambhava. The first line says that the gods were pleased and we would expect to hear in the second and third lines of the joy of nature as well; but we find instead the whole nature struck dumb. Does not this suggest the influence of those beautiful verses in the Kumārasambhava (III. 41-42), "लतागृहद्वारगतोऽथ नन्दी वामप्रकोष्ठार्पितहेमवेत्रः मुखार्पितैकाङ्गुलिसंज्ञयैव मा चापलायेति गणान्व्यनैषीत् ॥ निष्कम्पवृक्षं निभृतद्विरेफं मूकाण्डजं शान्तमृगप्रचारम् । तच्छासनात्काननमेव सर्वं चित्रार्पितारम्भमिवावतस्थे ॥ ?" The next canto of the Buddhacarita describes the would-be Buddha's conquest of Māra. Professor Cowell[1] has suggested that Kālidāsa was indebted to this portion of the Buddhacarita for some ideas in his Kumārasambhava, canto III. What has been said already will make this impossible. But Aśvaghoṣa's indebtedness to Kālidāsa is also not certain; the two stories are different. One verse, however, "शैलेन्द्रपुत्रीं प्रति येन विद्धो देवोऽपि शम्भुश्चलितो बभूव । न चिन्तयत्येष तमेव बाणं किं स्यादचित्तो न शरः स पुष्पः ॥" (Bu., XIII. 16), clearly shows that the author was thinking of the Kumārasambhava; for the story of Kāma's hitting at Śiva in the presence of Pārvatī is certainly Kālidāsa's own invention. Bu., XIII. 30, 31, "महीभृतो धर्मपराश्च नागा महामुनेर्विघ्नममृष्यमाणाः । मारं प्रति क्रोधविवृत्तनेत्रा निःश्वासधूमैश्चय जजृम्भिरे च ॥ शुद्धाधिवासा विबुधर्षयस्तु

[1] Buddhacarita, Preface, xii.

सद्धर्मसिद्ध्यर्थमिव प्रवृत्ताः। मारेऽनुकम्पां मनसा प्रचक्रुर्विरागभावात्तु न रोषमीयुः ॥," may show some influence of Ku. III. 71-72, "तपःपरामर्शविवृद्धमन्योर्भ्रूभङ्गदुष्प्रेक्ष्यमुखस्य तस्य। स्फुरन्मुदर्चिः सहसा तृतीयादक्ष्णः कृशानुः किल निष्पपात ॥ क्रोधं प्रभो संहर संहरेति यावद्गिरः खे मरुतां चरन्ति। तावत्स वह्निर्भवनेत्रजन्मा भस्मावशेषं मदनं चकार ॥." Śiva burns Madana himself. But the passionless Buddha cannot do that; he sits quiet (v. 33). It is others whose eyes burn with rage (v. 30). The "अनुकम्पा" ('compassion') of the Devarṣis (v. 31) is inappropriate in the Buddhacarita and can be explained only as a reflection of the compassionate exclamation of the Maruts in Kumārasambhava III. 72. Another verse (65) of Buddhacarita, Canto. XIII, "क्षमाशिफो धैर्यविगाढमूलश्चारित्रपुष्पः स्मृतिबुद्धिशाखः। ज्ञानद्रुमो धर्मफलप्रदाता नोत्पाटनं ह्यर्हति वर्धमानः ॥" shows obvious influence of Ku., II. 55, "इतः स दैत्यः प्राप्तश्रीर्नेत एवार्हति क्षयम्। विषवृक्षोऽपि संवर्ध्य स्वयं छेत्तुमसाम्प्रतम् ॥."

I have not attempted comparison of the fourteenth and following chapters of Cowell's Buddhacarita, because they are nineteenth century compositions. Beal's translation of chapters 14—28 of the Chinese version also seems unsuited for comparison on account of its extreme brevity and the many deviations from the original added to the usual shortcomings of a translation of a translation. I must, therefore, take leave of the Buddhacarita, only reminding the readers that the author again and again used the Kumārasambhava, with whose story his had something in common, and that he could not shake off from his memory the Raghuvaṃśa utilised already for his maiden *Kāvya*, the Saundarananda.

Before taking leave of the poems of Aśvaghoṣa I must once again draw the attention of my readers to the nature of the above agreements. Some people may say[1] that they only prove that of Kālidāsa and Aśvaghoṣa one borrowed from the other but the borrower may well be the former and not the latter. But a little reflection ought to convince one that the

[1] As my friend Mr. Beni Prasad of our History Department said when he read some part of this paper in proof.

resemblances conclusively prove Aśvaghoṣa's indebtedness. Apart from the few decisive cases mentioned already, the extent and the limit of his agreements with Kālidāsa show that he came later. It is his first *Kāvya*, the Saundarananda, which agrees verbally with Kālidāsa more—and that chiefly at the beginning —than the later work, the Buddhacarita. The Raghuvaṃśa, the work of Kālidāsa which the Saundarananda resembles so much, is, on the other hand, the maturest production of Kālidāsa, at least from among his poems. Would a poet in the fulness of his powers turn to another writer for drawing inspiration when he could write so long without help? A writer who never before tried his hands at poetry would rather begin with a good model but would discard it when his own powers would begin to develop. When writing the Buddhacarita, Aṣvaghoṣa is more original and the points of verbal contact with Kālidāsa are much fewer now. We should notice that though the agreement in subject-matter makes him occasionally draw inspiration from the Kumārasambhava, he has not forgotten the Raghuvaṃśa which he has already utilised so well. Lastly, the still later Sūtrālaṅkāra, to judge from the three passages preserved in the Divyāvadāna (pp. 357-64, 382-4, 430-3),[1] is a first rate work with very little obligation to Kālidāsa. Professor Keith has said[2] about Kālidāsa that he was a poet "not so much of inspiration and genius as of perfect accomplishment based on a high degree of talent." But in my humble opinion, and I hope in the opinion of all other Indian students of Kālidāsa, the remark is not

[1] The third passage, containing a touching story of Aśoka's liberality towards the Saṅgha may have been influenced by the story of Raghu's liberality in Ra., V.

My informations about the Sūtrālaṅkāra are drawn from Huber's preface and French version, translated for me by my friend Mr. Priyaranjan Sen of the Calcutta University, from Nariman's Sanskrit Buddhism and from Winternitz, Geschichte d. ind. Literatur.

[2] Classical Sanskrit Literature, p. 33.

just.[1] It is our Aśvaghoṣa who can be thus described. Anybody who has ever versified with effort in his school boy days, with models constantly before him, will appreciate the force of my arguments about Aśvaghoṣa's indebtedness.

Aśvaghoṣa finding that he could write well and catch the hearts of people through his *Kāvyas* tried his hands at the other important class of literature, the drama, and we have the Śāriputraprakaraṇa. It is much to be regretted that a complete manuscript of the drama could not be discovered.[2] But the other fragmentary drama[3] found with its manuscript and most probably hailing from the same author [4] gives us an unexpected light on the condition of the Sanskrit Drama in this period. Their perusal shows us that the regular form of the classical drama had been established by this time. [5] We have here two Buddhist dramas, but even here the Vidūṣaka appears, and strangely enough, the hetaera too. This proves that Aśvaghoṣa had enough classical models to go by, a conclusion already made probable by the many references to dramatic works in the Mahābhāṣya of the second century before Christ.[6] After carefully going through the fragments published by Professor Lüders I came to the conclusion that Aśvaghoṣa had before him the Mṛcchakaṭika of Śūdraka. Professor Keith has

[1] I have here the full support of my uncle Rai Bahadur Bipin Bihari Mukherji, a great lover of Kālidāsa.

[2] Professor Lüders has given us an account of the fragments with such extracts as could be made out in the Sitzungsberichte der königlich preussischen Akademie der Wissenschaften for 1911, pp. 388—409.

[3] Printed in Lüders' Bruchsclüke buddhistischer Dramen (Berlin, 1911), pp. 67—89 and Sitzungsberichte d. K. P. Akademie, Berlin, 1911, pp. 409—11. The short allegorical drama in the Bruchstücke, pp. 66-67, is left out of consideration here.

[4] Keith, Sanskrit Drama, p. 83 (end).

[5] See *ibid.*, pp. 80—90.

[6] As also by the now discovered reference to the Vāsavadattā-Nāṭyadhārā of Subandhu, contemporary of Candragupta, and Bindusāra in Abhinavagupta's commentary on the Nāṭya Śāstra (Rangaswami Saraswati in the Proceedings of the Calcutta Oriental Conference, pp. 203- 213, and I.H.Q.,I. pp. 261—264).

already[1] noticed some resemblances with that drama but my study adds a genetic connexion, the borrower being Aśvaghoṣa in this case as well. I have no space here for a full discussion of the question and I reserve that for a separate paper. This Mṛcchakaṭika has been believed by many people to be an early drama and it may belong to the first century before or after Christ, for all that is known.[2] The tradition contained in the Avantisundarīkathā of Daṇḍin (7th century A.D.) makes its author Śūdraka a contemporary of the Andhra King Svāti.[3] This Andhra prince may have been either Meghasvāti or Svāti or Skandasvāti, and Śūdraka should therefore be placed somewhere in the first century B.C., or in the beginning of the following century, and would be anterior to Aśvaghoṣa. The Mṛcchakaṭika seems to me to be the work of some court poet (or poets[4]), as the Ratnāvalī, the Nāgānanda and the Priyadarśikā are by Harṣavardhana's court poets.[5]

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[1] Sanskrit Drama, pp. 84-5.

[2] My Professor the late Dr. T. K. Laddu used to point out some influence of Kālidāsa and I believe he was right.

[3] M. R. Kavi in Proceedings of the Calcutta Oriental Conference, p. 197. See Avantisundarī-Kathāsāra, Ch. IV, vv. 175 ff. The tradition is repeated in some other works; see Keith, Sanskrit Drama, p. 129.

[4] If "तौ शूद्रकक्षयाकारौ रन्ध्रौ रात्रिलसीनिलौ । काव्यं ययोर्द्वयोरासीद्दर्शनारीश्वरोपमम् ॥" refers to the composition of the Mṛcchakaṭikam. "शूद्रकेणासकृज्जित्वा स्वच्छया खड्गधारया । जगद्भुयोऽभ्यवहृत्यं वाचा स्वचरितार्थया ॥" of the Avantisundarīkathā (pp. 1-2) makes the incidents of the Mṛcchakaṭikam resemble some incidents in Śūdraka's own life.

[5] *Cf.* "श्रीहर्षादेरिव भावकादीनां धनम्" in Kāvyaprakāśa, I. 2 (see Keith, Sanskrit Drama, p. 171). Rudradāman may have been another king who laid claim to, or was allowed to claim the writings of, his court poets (Junnagarh Rock Inscription, l. 14). This interesting inscription shows, as the Head of my Department, Professor Dr. Acārya, emphasises, the full development of Sanskrit literary form by that time. Kālidāsa may easily be placed before it. [The usual neglect of the early Sanskrit inscriptions by our students of Sanskrit literature is much to be regretted.]

Some part of the prologue may have been added after the king's death. "शूद्रकोऽग्निं प्रविष्टः" may be simply an euphemism for 'Śūdraka died,' but if it must mean suicide, I may cite the parallel of a similar incident of the first century B.C., mentioned by Strabo; among the persons and things sent by King Pandion to Augustus was a gymnosophist who immolated himself in prosperity in Rome.[1] The large number of Prakrits used by the author of the Mṛcchakaṭikam should not necessarily make him late, for no late drama exhibits so many Prakrits as this one, and Bharata's injunctions about the use of different Prakrits for different classes of people presuppose previous usage of this sort.[2] I do not believe now that the Trivandrum dramas hail from Bhāsa and I do not therefore feel disposed to accept the usual view[3] that the Mṛcchakaṭika is based on the Cārudatta.[4] So I make Aśvaghoṣa indebted to Śūdraka

[1] Strabo's Geography XV. 73 (MacCrindle, India as described by Classical Writers, p. 78). An earlier incident of a similar character is on record about Kalanos, contemporary of Alexander.

[2] The inscriptions of Aśoka show the formation of different Prakrits in different localities as early as the third century before Christ. And the author of the Ṛk-prātiśākhya (II. 16) indicates by the names Prācya-padavṛtti and Pāñcāla-padavṛtti for the hiatus of *a* after *e* and *o* respectively the presence even in that early age of one characteristic difference between Śaurasenī and Māgadhī.

[3] *E.g.*, Keith in Sanskrit Drama, pp. 128, 130.

[4] This is not the place to discuss the vexed question of the authorship of Pandit Gaṇapati Śāstri's dramas but one thing may be mentioned. Bāṇabhaṭṭa says about Bhāsa "सूत्रधारकृतारम्भैर्नाटकैर्बहुभूमिकैः। सपताकैर्यशो लेभे भासो देवकुलैरिव॥," whereas the Trivandrum dramas have no *patākā* in them and hardly any *patākāsthānaka*. The Cārudatta is certainly an abridged version of the Mṛcchakaṭikam and not its original. Sajjalaka's humorous statement about the utility of his sacred thread, "नष्टमिदं दिवा ब्रह्मसूत्रं रात्रौ कार्पाससूत्रं भविष्यति" in the Third Act of the Cārudatta (p. 56), must be containing an allusion to the contrast between the Pūrvamīmāṃsā Sūtra and the Vedānta Sūtra which can be understood only after Śaṅkara's refutation of the *Jñānakarmasamuccaya* theory. Vasantasenā's remonstrance "इदाणिं णाहु वड्ढावेहि" after

and not to an earlier Bhāsa. Aśvaghoṣa's preference of the Mṛcchakaṭikam over the dramas of Kālidāsa may be due to greater acquaintance, the reputed author being a king, or the work being nearer in point of time. A better reason may lie in the greater '*viṣaya-rati-para*' character of Śūdraka's drama:[1] Aśvaghoṣa's purpose was to rescue man from *viṣaya-rati* and he would best serve his purpose by making his characters begin with enjoyment and end with renunciation, as in the case of the Saundarananda. But the fragments are not sufficient to indicate the total absence of Kālidāsa's influence in the dramas of Aśvaghoṣa. "विदू०—भो धानञ्जय सिग्घं मिट्ठामिट्ठम्" soon after "अथ स्नानोदकम्" for example, in the hetaera drama of Aśvaghoṣa (fragments 13 and 109 of the Kuṣān M. S.)[2] might suggest the influence of Mālavikāgnimitra, Act II, "देवी—णिवुट्टेदु अज्जउत्तो मज्जणविहिम्। विदूषकः—भोदि, विसेसेण पाणमोअणं तुवरावेहि।." The characterisation of the hero (Somadatta) and his mistress (the hetaera Magadhavatī) as *Cakravākamithuna* by Dhānañjaya, during their love quarrel, in Frag., 10*a* 3 and 11*a* 3) "न मे प्रियं यच्चक्रवाकमिथुनस्थ [कलहः?]" etc.) may be due to Śakuntalā, Act III, "नेपथ्ये—चक्कवाकवहु आमन्ते हि सहअरं णं उअत्थिदा रअणी." It should be remembered that a pair of Cakravākas habitually separates everyday, whereas Somadatta and Magadhavatī seem to have separated but once. "पारावतमिथुनस्य ब्रूहि कथं विग्रहो जातः ?" in 10*b* 3 is more appropriate and this makes me infer the influence of Kālidāsa in the

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the Ceṭi's "एदं पुण अहिसारिआसहायभूदं दुद्दिणं उल्लणिदं," (Cārudatta, Act IV, end), certainly shows knowledge of the descriptions by Vasantasenā and the Viṭa, drawn out to an inartistic length in the Fifth Act of the Mṛcchakaṭikam. The Pishārodis are not the only persons in India to challenge Gaṇapati Śāstrī's theory. See "Bhāsa; another side" in the Zeitschrift für Indologie und Iranistik II, 247—264 by C, Kunhan Raja, another native of Malabar.

[1] No quotations from the Mṛcchakaṭika are needed to establish the point. But one from the Śāriputraprakaraṇa will prove of interest: "*(ma)hato khu āmodo gaṇikākule*" (K., IV. r. s., l. 3, p. 394).

[2] Lüder's Bruchstücke, p. 70 and Sitzungsberichte, p. 410.

expression *Cakravākamithuna*. The meagre character of these tantalising fragments is much to be regretted.

Some people will here object that the dramas of Kālidāsa show a Prakrit much later than the Prakrit of Aśvaghoṣa. This I answer by a question—have we a single manuscript of any of Kālidāsa's works even half as old as the Palm-Leaf Manuscripts of these fragments discovered in Turfan ? Thanks to the efforts of the grammarians and the uniform usage throughout India, the Sanskrit language has remained unchanged for centuries and the scribe or the Pandit never requires to alter the Sanskrit text he is copying or using *to his own contemporary or local type*. Not so has been the fate of Prakrit. The Prakrit language had more or less of the vernacular in it and it has changed so much as to make Prakrit of one period or locality almost unintelligible in another. Prakrit manuscripts or Prakrit portions in manuscripts of Sanskrit dramas have therefore suffered hard in the hands of these scribes or scholars, with the result that the same Prakrit text will be found in bewilderingly different forms in different manuscripts. Is not the difference between the Prakrit of the Bengali recension of the Śakuntalā and the Prakrit of its other recensions well known? A glance at the profuse *variae lectionis* at the bottom of any page of Professor Sten Konow's Karpuramañjarī will give an ocular demonstration of the great freedom that has been taken with Prakrit texts by transcribers. Mārkaṇḍeya in his Prākṛtasarvasva [1] has said that Rājaśekhara has sometimes used in his Mahārāṣṭrī verses forms like पढई or पढए instead of the only correct पढदि or पढदे but in the Harvard text of the Karpūramañjarī, we find all words levelled down to the regular types recognised by grammarians. That an acute philologist like Professor Konow, fully acquainted with the best principles of western text scholarship, had occasionally to abandon the evidence of all his manuscripts for the sake of consistency or agreement with the grammarian's

[1] Granthapradarśani text, p. 54.

dicta [1] should make us ponder. I shall therefore hear of any argument about date based on the character of Prakrit only if contemporary manuscripts are compared. *Is it proper to compare the Prakrit of a manuscript written in Kuṣān script* [2] *with the Prakrit of our modern manuscripts and draw conculsions about the relative age of their authors?* We should remember that no Prakrit is illustrated by the fragments in the Central Asian script,[3] and our information about Aśvaghoṣa's Prakrit is based on the manuscript in Kuṣāṇ script. There can also be difference of opinion about the antiquity of Aśvaghoṣa's Prakrit; Professor R. L. Turner, for example, has not seen eye to eye with Professor Keith on the subject. [4] Lastly I may draw attention to the archaic character of the Prakrit portions of Mahendra-vikrama-varman's Matta-vilāsa-prahasana, noticed by Professor Keith himself,[5] resembling the Prakrit of the so-called Bhāsa whom the Professor would not assign the late date of the seventh century. All this proves that the antique character of the Prakrit of a drama depends more on the age of the manuscripts or the province of their circulation[6] than on the age of the author.

I have shown above that some passages in Aśvaghoṣa's writings show certain influence of Kālidāsa, and the cumulative effect of the other agreements will certainly support my contention. Kālidāsa is therefore earlier than Aśvaghoṣa. His writings were also so very popular in the first or second century

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[1] Karpūramañjarī, Preface, p. xxii.

[2] Lüder's, Bruchstücke buddhistischer Dramen, pp. 3—11. The concluding sentence, "Auf jeden Fall aber bleiben sie die ältesten Handschriftenreste, die uns überhaupt aus Indien erhalten sind," should be particularly kept in mind.

[3] Lüder's C. 1, 2 and 4, Sitzungsberichte, pp. 390—2.

[4] See his review of Keith's Sanskrit Drama in J.R.A.S., 1925, pp. 174—6.

[5] Sanskrit Drama, p. 185.

[6] The manuscripts of the Trivandrum dramas hail from the extreme south, where Prakrit would be best preserved among non-Prakritic vernaculars.

A.D.[1] even in distant Sāketa, that the monk Aśvaghoṣa, wishing to convey lessons of religion, had to go out of his way and write in the form of Kāvyas (and also of Nāṭakas).[2] This makes Kālidāsa earlier than Aśvaghoṣa by at least a century or two. Why should we then refuse to place Kālidāsa in the first century B.C., the traditional date for our greatest poet, when the presence of a Vikramāditya, King of Ujjayinī, is now seeming to be not impossible?[3] I have no faith in tradition unsupported by other evidence, but I accept this particular tradition because there are some indications in favour of its correctness. That the Jain story makes the presence of a Śaka-extirpating Vikramāditya probable in the first century B.C. whose historical and geographical setting it conforms to, does not necessarily place Kālidāsa in that century. But the comparison between Aśvaghoṣa and Kālidāsa has indicated some such date for the latter and his works, particularly the Raghuvaṃśa, point in this direction, as I shall show below. I believe with most scholars that there is a background of contemporary history and geography in the Raghuvaṃśa and that

[1] *i. e.*, the date of Aśvaghoṣa, which has to depend on that of Kaniṣka for Buddhist tradition is unanimous in making him Kaniṣka's contemporary. Some scholars make Kaniṣka begin his reign in 78 A.D., and others would have him reign from 120 A.D. I shall not enter into any discussion of this vexed question here nor shall I mention my own preference. It is sufficient for my purposes to suppose that Aśvaghoṣa must have lived about 100 A.D. in either case. His contemporary, Kuṣān king would be Kaniṣka II according to Mr. R. Kimura (I.H.Q., Sept. 25, pp. 415-422).

[2] Students of Vedānta Literature will recollect the necessity Madhusūdana Sarasvatī, the author of the Advaitasiddhi, felt for writing in the terminology and form of Navya Nyāya, without which he would not have been heard in Bengal in that age.

[3] Rapson in Ancient India, p. 143 and later, in Cambridge History of India, Vol. I, pp. 532-3. I have given below (pp. 146-8n.) two extracts from the C.H.I. on the subject. The legend of Kālakācārya, Gardabhilla and Vikramāditya is contained, besides the Prakrit text published by Professor Jacobi in Z.D.M.G., vol. 34, pp. 258—278 (Vikramāditya mentioned on p. 267), in the Sanskrit Prabhāvakacarita of Candraprabhasūri (N.S.P., Bombay, 1909), pp. 36-46, and in the Kālakācārya Kathā published by the Āgamodaya Samiti as appendix to the Kalpa Sūtra (Bombay, 1920).

conclusions about the author's age can be drawn from the work. But others have read this background differently. Though few scientific scholars have placed the Raghuvaṃśa in the first century before Christ, I do not lose heart for the 4th or 5th century theory is not universal. Though some scholars would place Kālidāsa in the reign of Samudra-Gupta and Candra-Gupta II, others would make him contemporaries of Kumāra-Gupta or Skanda-Gupta, and some will have him in the time of Yaśo-dharman. But all these gentlemen follow the same principles and have worked on much the same lines. I therefore venture to attempt below a comparison between the political and geographical settings of the Raghuvaṃśa and the conditions of the first century B.C., following the self-same method.

The fact that Kālidāsa omits in the sixth canto of the Raghuvaṃśa some kings described as conquered by Raghu in the fourth and mentions some omitted there shows a purpose and certainly indicates that the two cantos were considerably influenced by contemporary history. In the fourth canto the following countries or peoples are described as conquered by Raghu :—"The eastern provinces" (v. 34), Suhma (35), Vaṅga (36-37), Kaliṅga (38-43), Pāṇḍya (49-50), possibly Kerala (54), Aparānta (58), Pārasīkas (60-64), Hūṇas (68), Kāmbojas (69-70), Mountaineers of Utsavasaṅketa (77-78), and Prāgjyotiṣa (81-84).[1] In the sixth canto the following provinces are represented as sending suitors for Indumatī's hand:—Magadha (21—25), Aṅga (27—30), Avanti (31—36), Anūpa (37—44), Śūrasena (45—52), Kaliṅga (53—58), Pāṇḍya (59—66) and Uttara Kośala (68—79); of course, "आर्ये व्रजामोऽन्यतः" of v. 82 lets us know that there were other princes besides, but as they have not been named, Kālidāsa must have had a reason[2] for their omission. Kālidāsa does not describe in detail Raghu's conquest of Magadha or Aṅga but

[1] *Not* Prāgjyotiṣa (81-82) *and* Kāmarūpa (83-84).

[2] Their want of importance ?

he slurs over it in only half a verse; his actual words are "पौरस्त्यानेवमाक्रामन् तांस्तान् जनपदान् जयी। प्राप तालीवनश्याममुपकण्ठं महोदधेः॥." The vagueness of expression should be particularly noted. Kālidāsa, therefore, did not want to offend the reigning princes of Magadha and Aṅga. For both he seems to have had great regard, as I shall show below. The only kings who appear on both the lists are those of Kaliṅga and Pāṇḍya. I shall show that Kālidāsa had some pique against them or at least no love for them.

Let us study the two lists a little carefully and let us proceed canto-wise. The kings of Magadha and Aṅga are mentioned explicitly only in the sixth canto and I may omit them for the present. Suhma and Vaṅga are separately mentioned. They were therefore distinct principalities and were not included in the home province of Magadha which was certainly the case in the Gupta period.[1] In IV. 38, we are told that Raghu marched towards Kaliṅga, being shown the way by the Utkalas. There was therefore no fight with the Orissans who may have had no separate kingdom in Kālidāsa's time or have been too insignificant for conquest. But Samudra-Gupta "subdued all the chiefs of the forest countries, which still retain their ancient wildness, and constitute the tributary states of Orissa."[2] The Red-Arm (foreign ?) dynasty reigned in Orissa from 323 A.D. to 474 A.D., after which came the Keśaris who reigned in glory till 1132 A.D.[3] But there is a blank before 323 A.D. and Kālidāsa seems to have lived before this date. Kaliṅga comes next and in discussing its historical bearing I may include the corresponding portion of the sixth canto.

[1] See R. D. Banerji's History of Bengal (in Bengali), Vol. I, Ch. 4 (also ch. 3 for the condition of Bengal during the centuries intervening between the decline of Maurya power and the rise of the Guptas).

[2] Smith, E.H.I.[4], p. 300.

[3] Hunter's Orissa, Vol. I, pp. 206, 232, and Vaidya's History of Mediæval India, Vol. I, pp. 319, 326.

That the Kaliṅga chief is mentioned in the sixth canto indicates that Kaliṅga was a principality of some note in Kālidāsa's time. But his defeat at the hands of Raghu indicates Kālidāsa's lack of sympathy for the Kaliṅgans: Kālidāsa did not scruple to wound the family pride of the reigning king. Why, he must have had some grudge against him or his family as Ra., VI. 58, "प्रलोभिताप्याकृतिलोभनीया विदर्भराजावरजा तयैनम्। तस्माद्-पावर्तत दूरकृष्टा नीत्येव लक्ष्मीः प्रतिकूलदैवात्॥," indicates. Not only is the appearance of the king suggested to be non-attractive, he is himself likened to adverse fortune, a punishment that our poet has not inflicted on any other unsuccessful suitor. Kālidāsa's attitude may be due to personal reasons—he may have experienced ill-treatment at the hands of the king of Kaliṅga; or to political reasons—there may have been some long-standing quarrel between the Kaliṅgans and Kālidāsa's own province.[1] Which explanation is more correct is certainly impossible to decide. But if we are permitted to consider the political explanation, some indication of date may be obtained. No political quarrel between Malwa and Kaliṅga is known in the Gupta period. But such a quarrel is intelligible in the first century B.C. Ujjayinī was at that time included within the empire of the Andhras or was closely

[1] I follow MM. H. P. Shastri (J.B.O.R.S., 1915, pp. 197 ff.) and others in believing Malwa to have been our poet's home. I do not believe in Pandit Manmathanāth's theory of Bengal as the home of Kālidāsa. A Bengali, to use an expression of my late colleague at Rangpur, Professor Suresh Chandra Datta Gupta, M.A., would not say "वङ्कान् उत्खाय तरसा," etc. (Ra., IV. 36). The Paṇḍit's arguments do not stand criticism, and non-refutation by serious scholars do not make them plausible. "वक्रः पन्था यदपि भवतः प्रस्थितस्योत्तराशां सौधोत्सङ्ग-प्रणयविमुखो मास्म भूरुज्जयिन्याः," etc. (Me., I. 28), too, to quote another friend, Mr. Sudhāṃśu Kumār Sen-Gupta, M.A., of the same College, shows the province of Kālidāsa's love and habitual residence. Lastly, even Bengali tradition, as my grandfather Dr. Sir P. C. Banerji was emphasising the other day, is uniform in associating the name of Kālidāsa with Ujjayinī. The statement that the solar calendar has been peculiar to Bengal, and that throughout her history, shows a lamentable ignorance of facts or wilful neglect thereof. The puerile argument that the name of Kālidāsa is characteristic of Bengal does not even deserve refutation.

connected with them[1] and the Andhras and the Kaliṅgans were neighbouring peoples and rivalry and frequent mutual aggressions would be natural in such cases. One Kaliṅga king of the preceding century, Khāravela, made much mischief in neighbouring territories and Puṣyamitra[2] of Magadha (with whom Kālidāsa was certainly in sympathy) and the Andhras and their feudatories, the Rāṣṭrikas of the Marāṭhā country and *the Bhojakas of Berār* (*the kinsmen of Indumatī, Kālidāsa's heroine*) felt the steel of his arms.[3] Kālidāsa may have had Khāravela in mind when he likened a remote ancestor of the reigning king of Kaliṅga to "**प्रतिकूलदैव**" *for the Vidarbha princess Indumatī.* There was hardly any Kaliṅga kingdom of note in the fourth or fifth century A.D. Samudra-Gupta seems to have marched through the same province but he had to encounter several chieftains and the province was divided into petty principalities.[4] I would therefore consider Kālidāsa's description truer to the conditions of the first or second century B.C. Ra., VI. 54, "**असौ महेन्द्राद्रिसमानसारः पतिर्महेन्द्रस्य महोदधेश्च। यस्य प्रतस्थे गजसैन्यघण्टाच्छलेन यात्रासु यातीव पुरो महेन्द्रः॥**" with its repetition of *Mahendra,* might suggest to the Gupta period theorists that Kālidāsa was thinking of Mahendra of Kośala or Mahendra (Mahendragiri?)[5] of Piṣṭapura of Samudra-Gupta's Allahabad Inscription. But such a conclusion is barred by the fact that Hariṣeṇa mentions

[1] C.H.I., I, pp. 531—4.

[2] If Bahasatimitra of the Hāthigumphā Inscription is identified with Bahasatimitra of the Pabhosā Inscription, the king of Magadha cannot be Puṣyamitra, but must be some successor of his. In any case, he was a Śuṅga and Kālidāsa seems to have been in sympathy with the whole house.

[3] Hāthigumphā Inscription of Khāravela, ll. 4, 6, 12 (J.B.O.R.S., 1917, pp. 454—7); Rapson, C.H.I., I, pp. 535—7, and Smith, E.H.I.[4], pp. 209, 219.

[4] Allahabad Inscription, ll. 19-20 (Corpus Inscriptionum Indicarum, Vol. III, p. 7).

[5] Mahendra according to Jouveau-Dubreuil (A.H.D., p. 59), and Fleet (C.I.I., III., p. 7, n. 2, ll. 34—6). But Professor Dr. Bhandarkar (I.H.Q., I., p. 252) prefers to connect *giri* with *Mahendra* and not with *Kauṭṭūraka.* [But differently G. Ramdas in *ibid.,* 679ff.]

two Mahendras between whom we cannot possibly choose the man Kālidāsa could have referred to and they are both too far removed from the Mahendra hill to be rightly called "पतिर्महेन्द्रस्य"; and the former could not be also called "(पतिः) महोदधेश्च." Besides, a poet of Kālidāsa's type would hardly be so prosaic as to mention Samudra-Gupta's adversary by his real name and not by a synonym. The verse rather suggests to my mind an indirect allusion to the Mahā-Megha-vāhana (=Mahendra) dynasty to which Khāravela belonged.[1] If Mr. Jayaswal is justified in identifying these Mahā-Megha-vāhanas with the Purāṇic Meghas of Kośala (whence Khāravela's family certainly came), the dynasty must have passed away in the first century A.D.; for the Purāṇas mention only nine kings in the line[2] and they could hardly reign for more than a little over two centuries.

The next king mentioned as conquered is that of the Pāṇḍyas. Some people, believing in the first century B.C. theory, want to make capital of the non-mention of the Pallavas, who reigned in the province between Kaliṅga and the territories of the Pāṇḍyas from the end of the second century A.D. till the ninth century, or, as an insignificant power, much later. In Samudra-Gupta's time the Pallavas were an important people and *Kāñcika-Viṣṇugopa*, whom Samudra-Gupta is represented as having defeated, was certainly a Pallava. In Yuan Chwang's time too the Pallavas were an important power. But I do not feel disposed to draw any conclusion from the non-mention of the Pallavas by Kālidāsa for he also

[1] Hāthigumphā Inscription, l. 1 (J.B.O.R.S., III, pp. 435, 453, 461). The fact that an inscription at Khaṇḍagiri (Lüder's 1347 ?) mentions another king of Kaliṅga, Kudepa-siri (Lüder's Vakadepa-sīri=Vakradeva-Srī) with the title Mahā-Megha-vāhana shows that it was a family epithet; see R.D. Banerji's note in *ibid.*, p. 505.

[2] "कोशलायां तु राजानो भविष्यन्ति महाबलाः। मेघा इति समाख्याता बुद्धिमन्तो नवैव तु॥" (Pargiter, D.K.A., p. 51). That Mr. Pargiter puts this (and some other dynasties) in the third century A.D. does not go against us for Mr. Jayaswal (J.B.O.R.S., III, p. 484 n.) has shown that some of these dynasties were contemporaneous with the Andhras and that Mr. Pargiter has not here understood the Purāṇas correctly.

omits the Colas who were certainly an important power as early as Aśoka's time and as late as the twelfth century A.D. Kālidāsa may have omitted to mention other South Indian states because they were unimportant or because he himself wanted to avoid prolixity. अनाशास्यजयः in Ra., IV. 44, as interpreted by Mallinātha and others, may indicate that the southern powers were too insignificant for Raghu's steel. In any case, our poet had not set out to write history and what allusions he makes are only incidental. Kālidāsa has, however, suggested Pāṇḍya to be the most important king of the South in his day: "दिशि मन्दायते तेजो दक्षिणस्यां रवेरपि। तस्यामेव रघोः पाण्ड्याः प्रतापं न विषेहिरे॥" (Ra., IV. 49), "अनेन पाणौ विधिवद्गृहीते महाकुलीनेन महीव गुर्वी। रत्नानुविद्धार्णवमेखलाया दिशः सपत्नी भव दक्षिणस्याः॥" (VI. 63). Whether this was deliberate or not is uncertain. If it was deliberate, we have an interesting bit of historical information. South Indian history is still wrapped in great obscurity and full informations about the mutual relations of the three Southern Powers during the few centuries before and after the Christian era are not available. *The historians of South India will kindly investigate the bearing of this fact on the date of Kālidāsa.* I have no choice but to leave the question undecided. But one thing may be mentioned here. We know from Strabo (Bk. XV. 4, 73) that a Pāṇḍya king sent an embassy to Augustus Cæsar in the last quarter of the first century B.C.[1] Similar information is not on record about the two other powers, particularly about Kerala which had a western foreign trade. This may indicate the pre-eminence of the Pāṇḍyas in the first century B.C. That king is represented by Strabo (XV. 73) as laying claim to a suzerainty over 600 princes ; they might mean the numerous Tamil chieftaincies of the three states. It is true that Strabo says the king was Poros and not Pandion according to some writers but the latter should be preferred on *a-priori* grounds,

[1] MacCrindle, Ancient India, as described by Classical Writers, pp. 9, 77, and C.H. I., Vol. I. p. 597.

for since Alexander's famous fight with a king Poros, 'Poros' would become the usual type for an Indian prince's name to an uninformed westerner. A Pandion may be mistakenly called a Poros but not the other way. Mr. Rawlinson's preference for 'Poros'[1] does not therefore commend itself to me. Could not a Pāṇḍyan sending an embassy to Rome get a letter written in Greek when trade with the west had been established long? Mr. Rawlinson's suggestion that the king was a Kuṣān monarch, cannot be accepted for no such reigned in India as early as 23 B.C.[2] The Periplus of the first century A.D. mentions (§54) the *Kingdoms* of Cerobothra (Kerala-putra) and Pandian but we find no mention of the Colas or their kingdom, though two Cola ports (Poduca and Sopatma) are named (§60). Is this not suggestive? One may also recollect here the special mention of the Pāṇḍyas in the extant fragments of Megasthenes.[3] To this may be added the fact that the inscription at Hāthigumphā mentions (l. 13) Khāravela attacking the Pāṇḍya king in the twelfth year of his reign; and the kings of Cola and Cera countries are not mentioned. Immediately after the reference to the despoiling of Aṅga and Magadha (l. 12) we have this reference to the Pāṇḍya-rāja and there seems to be a summing up of the conquests and the mention of its effect in the following line. We may therefore believe that no portion of the inscription has been lost that made any reference to conquest of, or diplomatic relations with, the Colas or the Ceras. This may justify the conclusion that the Pāṇḍya was the chief power in South India in the second century B.C. Karikāla Cola in the first or second century A.D. may have turned the balance against the Pāṇḍyas for the first time.

I cannot draw any conclusion from the mention of the king of Pāṇḍya as "उरगाख्यस्य पुरस्य नाथम्" (Ra., VI. 59). That

[1] India and the Western World, p. 108.
[2] Smith, E.H.I.[4], pp. 265 ff.; C.H.I., I., pp. 580 ff., 702-3.
[3] MacCrindle, Ancient India, as described by Megasthenes and Arrian, pp. 201, etc.

Uragākhya pura means Nāgapura, as explained by Hemādri or Mallinātha, or Nāgapattan in the Rājamahendry district, as suggested by Nandargikar,[1] is impossible. C. V. Vaidya, in a paper on "The Pāṇḍyas and the Date of Kālidāsa,"[2] identifies "उरगाख्य पुर" ('the city named *Uraga*') with Uraiyūr and infers that Uraiyūr was the Pāṇḍya capital before the Colas under Karikāla conquered the Pāṇḍyas and established their own seat there. But history or legend nowhere records that Uraiyūr ever was a Pāṇḍya capital; the indications are rather just the other way. Leaving out pre-historic times, when North Mañalūr may have been the Cola capital,[3] Uraiyūr was certainly the chief seat of Cola Government in the historical period. Karikāla Cola shifted the capital to Kāveripattinam[4] but before that Uraiyūr must have been the Cola headquarters. But it is not, of course, impossible that a Pāṇḍya was reigning in the first century B.C. at a conquered capital, as Vaidya believes and K. G. Sankara doubts,[5] but want of facts should deter us from making this assumption. The identification of *Uragākhya pura* with Uraiyūr I therefore consider as unsuccessful.[6] Madura, so far as is known, was the earliest Pāṇḍya capital. Mr. Sankara has laid North Indian students under great obligation by informing them[7] that the Tamil name of Madurā is Alavāy = 'Snake'; *uragākhya pura*

[1] Raghuvaṃsa, 3rd ed., Bombay, 1897, notes, p. 123.

[2] A.B.I., II, pp. 63—8.

[3] See V. V. Iyer's interesting paper "The Adventures of the God of Madura" in Indian Antiquary, 1913, pp. 65 72. [Had the legend recorded there any genetic connexion with the story of the Kumārasambhava?]

[4] S. K. Aiyangar, Ancient India, p. 93.

[5] A.B.I., II, pp. 189—191.

[6] But Mr. Sankara's objection that-*ākhya* shows that *uraga* or *uraya* could not be the first part of the name—as *gajasāhvaya* means Hastināpura and not Gajapura—is not convincing. We say *gajasāhvaya pura* and not *gajāhvaya pura* in the case of Hastināpura, and we have on the other hand cases like कपिलाह्वयं पुरं for Kapilāvastu, *e.g.*, in Buddhacarita (I. 94) and Lalitavistara (ed. Lefmann, Vol. I., pp. 101, 113).

[7] In the paper in A.B.I., cited above.

can therefore be none other than this famous city. Kālidāsa shows himself in Ra., IV. 49—50 and VI. 60—65 as well acquainted with the Pāṇḍyas and he must have travelled widely in that land; this bit of local touch may be due to the knowledge thus obtained. In spite of phonetic resemblance we should set aside Mr. Vaidya's equation and prefer Madurā as the Pāṇḍya capital meant by Kālidāsa, especially when Raghu enters the Pāṇḍya territory long after crossing the Kāveri (Ra., IV. 45) on whose bank Uraiyūr certainly was. Uraiyūr or Madurā, "उरगाख्यपुर," gives us no help for date. But does non-mention of Pāṇḍya patronage of letters in the sixth canto of the Raghuvaṃśa (as in the case of the king of Aṅga, Ra., VI. 29) indicate that Kālidāsa lived before the age of the famous Tamil Sangam?[1]

After conquering the Pāṇḍyas, Raghu proceeds towards the western coast. Whether Verse 54 (**भयोत्सृष्टविभूषाणां तेन केरलयोषिताम्। अलकेषु चमूरेणुश्चूर्णप्रतिनिधीकृतः॥**) indicates an actual fight with the Keralans or mere passage through their territory is not certain. Verse 58 tells us that the king of Aparānta yielded tribute to Raghu. We are familiar with this name in the inscriptions of Aśoka. Scholars who believe that Kālidāsa's description of Raghu's *dig-vijaya* is based on the conquests of the Gupta kings could seek for the parallel to this conquest of Aparānta in Samudra-Gupta's conquest of Devarāṣṭra= Mahārāṣṭra. But Jouveau-Dubreuil [2] calls into question the identification of Devarāṣṭra mentioned in the Allahabad Pillar Inscription with Mahārāṣṭra and himself places it in the Vizagapatam district.[3] There is therefore no parallelism between Kālidāsa's description and the description in the Allahabad Inscription. One should note here that Kālidāsa makes Raghu

[1] Second and third centuries after Christ (S. K. Aiyangar, Ancient India, Ch. XIV, Beginnings of South Indian History, Ch. IV). K. V. S. Iyer's theory of a much later date is not accepted by scholars. See K. G. Sesha Aiyar in I.H.Q., I., 473-82, 643-52.

[2] A.H.D., p. 60.

[3] Prof. D. R. Bhandarkar accepts this identification (I.H.Q., I., p. 254). [But G. Ramdas (*ibid.*, p. 687) pleads for Mahārāṣṭra.]

keep to the extreme west and avoid Central Deccan. We have a poetical significance here : Raghu should not be represented as conquering the country of his future son's would-be father-in-law, the king of Vidarbha (or his overlord, the Andhra king, if he had any). There may be also an historical reason : Kālidāsa may have wanted to avoid the conquest of the Andhra territory, because Ujjayinī was politically connected with it in his time which was certainly the case in the first century B.C. [1] Vikramāditya who, according to Jaina tradition, came from Pratiṣṭhāna and drove out the Śakas from Ujjayinī about 57 B.C. may have been also related to the Andhras.[2] Non-conquest of Avanti follows as a matter of course, for Raghu has been already made to take a more westerly direction. I do not therefore deduce any conclusion about date from the avoidance of Avanti, as Mr. Dhanapati Banerji has, for example, done,[3] particularly because this would be intelligible in any century—Kālidāsa would certainly avoid the indignity of his own province.

We have next the conquest of the Pārasīkas. As the passage is important, I shall quote all the verses : **पारसीकांस्ततो जेतुं प्रतस्थे स्थलवर्त्मना । इन्द्रियाख्यानिव रिपूंस्तत्त्वज्ञानेन संयमी ॥६०॥ यवनीमुखपद्मानां सेहे मधुमदं न सः । बालातपमिवाब्जानामकालजलदोदयः ॥६१॥ संग्रामस्तुमुलस्तस्य पाश्चात्यैरश्वसाधनैः । शार्ङ्गकूजितविज्ञेयप्रतियोधे रजस्यभूत् ॥६२॥ भल्लापवर्जितैस्तेषां शिरोभिः श्मश्रुलैर्महीम् । तस्तार सरघाव्याप्तैः स द्राक्षापटलैरिव ॥६३॥ अपनीतशिरस्त्राणाः शेषास्तं शरणं ययुः । प्रणिपातप्रतीकारः संरम्भो हि महात्मनाम् ॥६४॥ विनयन्ते स्म तद्योधा मधुभिर्विजयश्रमम् । आस्तीर्णाजिनरत्नासु द्राक्षावलयभूमिषु ॥६५॥.** Verse 60 tells us that Raghu went *by a land route*, which shows that there was an alternative sea route. The Persians were therefore conquered in Persia and not in Gujerat or Sind, as is often

[1] C.H.I., I, pp. 531—3.

[2] Mr. Harit Krishna Deb in the Zeitschrift für Indologie und Iranistik, Vol. I, pp. 250—302, identifies him with Gautamīputra Śātakarṇi and places the latter in the middle of the first century B.C.

[3] Q.J.M.S., Vol. X, pp. 79-80.

believed.[1] This verse rouses in our mind an *ākāṅkṣā* for learning the result of this expedition and the following verses therefore cannot tell us of a different conquest. Consequently यवनी in V. 61 means a Persian lady and Mr. Sankara is not justified in saying, "In the *Raghuvaṁśa* (IV. 61), Raghu is said to have defeated the Yavanas on his way from Trikūta to the land of the Pārasīkas, *i.e.*, in the Indus delta,"[2] nor also any other scholar who believes that Raghu separately defeated the Yavanas and the Pārasīkas. What our text warrants us is that Kālidāsa has confused the Persians with the Yavanas. This is remarkable for our poet who is so very accurate in his observations and expressions. The fact has a very important bearing on the date of Kālidāsa. Since the middle of the third century before Christ the Parthians were reigning in Persia and their rule continued till 225 A.D. Prior to them the Greeks were ruling there. When the Arsacidians came to power, the Greek population was not driven out but remained in Iran. Eastern Iran which probably Kālidāsa means as the land of the Pārasīkas conquered by Raghu had in the first century B.C. a strong Greek element in its population, the residuum of the previous Bactrian Greek ascendancy; some petty Yavana chiefs were also reigning in this region about this time.[3] To this should be added the fact that the Parthian kings called themselves *Philhellenes* and struck coins with Greek legends; they were more Hellenistic in culture than Persian. Under such circumstances Kālidāsa could well confuse between the Yavanas and the Pārasīkas *in Persia* (Eastern Persia?). Does not this place Kālidāsa in the Parthian period? Non-mention of the Yavanas in the Gupta inscriptions, particularly in the Allahabad Pillar Inscription of Samudra-Gupta, distinctly

[1] I am very glad to find Mr. Dhanapati Banerji (*ibid.*, p. 94) emphasise this point. For maritime commerce between Barygaza (Broach) and Persia in that early period see the Periplus of the Erythræan sea.

[2] I.H.Q., I, p. 313.

[3] C.H.I., Vol. I, Ch. XXIII.

shows, if any proof is necessary, that there was no Yavana power or population to the frontier of India in the Gupta period. Professor Dr. D. R. Bhandarkar, with whom I was discussing the question in March 1924, told me that "Kālidāsa has confused between the Greeks and the Persians and that is all." He did not want me to go further than that. But I cannot help doing this as I am fully convinced of the habitual accuracy of Kālidāsa's expressions. Kālidāsa mentions the Yavanas and the Yavanas alone (and not the Pārasīkas) as encountering the Śuṅga army in his Mālavikāgnimitra and other evidences indicate that Puṣyamitra had actually a tussle with Yavanas (and not Pārasīkas). I therefore explain this single confusion of Kālidāsa[1] by the large Yavana element in the Persian (especially East-Iranian) population of the first century B.C. Verses 61 and 65 tell us of the plenty of vine in the country of the Pārasīkas and this is still true of certain parts of modern Persia and Afghanistan.[2] Verse 62 informs us that the Persians fought on horseback. We know from Herodotus (Bk. I. §136) of the Persian fondness for horsemanship and Bactria which may have been the place where Kālidāsa makes Raghu fight the Persians[3] was noted both for horses and the vine.[4] The mention of beards of the Persians has, strangely enough, caused some trouble to a scholar of great note, because 'the Parsees are clean-shaven and so must have been their ancestors.' But not all modern Parsees are clean-shaven[5] and ancient Persians,

[1] My friend Professor Pramathanāth Sarkār, M.A., of the City College and the Calcutta University, a rare Kālidāsa scholar, says that Kālidāsa has not confused the two peoples at all but has simply referred to their admixture. If this interpretation is accepted, my argument about the poet's date applies with greater force.

[2] Keane's Asia, 1896, Vol. II, pp. 25, 486. I have used the term 'Persia' in a wide sense.

[3] *Cf.* Kṣīrasvāmin in his commentary on the Amarakośa (ed. Oka, p. 110), वह्लीकदेशजं वाह्लीक यद्रघोरुत्तरविजये "दुधुवुर्वाजिनः स्कन्धांस्लग्नश्मश्रूंश्च वल्गितान्," which shows that ere this Raghu was not far off from Bactria.

[4] Rawlinson, Bactria, pp. 2-3.

[5] I have one Parsee friend in Calcutta who has a nice beard and it is well known that the Parsee Dasturs (who necessarily conform to old ways) do grow most venerable beards.

as we know from their sculptures, did have a luxuriant growth of beard.

The three following verses (66—68) are again important and they are: "ततः प्रतस्थे कौवेरीं भास्वानिव रघुर्दिशम् शरैरुग्रैः किलोदीच्यानुद्वरिष्यन् रसानिव ॥६६॥ विनीताध्वश्रमास्तस्य वंक्षू- (v. l. सिन्धु-)-तीरविचेष्टनैः । दुधुवुर्वाजिनः स्कन्धान् लग्नकुङ्कुमकेसरान् ॥६७॥ तत्र हूणावरोधानां भर्तृषु व्यक्तविक्रमम् । कपोलपाटलादेशि बभूव रघुचेष्टितम् ॥६८॥." From Persia Raghu turns northwards (V. 66) and the Oxus (वंक्षू) falls on his way along whose banks his horses wander long (V. 67). वंक्षु is the reading, according to Nandargikar, of Vallabha, a commentator earlier than Hemādri, Cāritravardhana, Mallināṭha and Sumativijaya, who all refer to him[1] and वंकू of Cāritravardhana and वंचू of Sumativijaya; the other readings are मंचू and सिन्धु.[2] From this we may safely infer that वंक्षू- was the original reading and understand the Oxus to have been meant by Kālidāsa. Mallināṭha changed 'वंक्षू-' to 'सिन्धु' because the name was unknown for any Indian river—these commentators could not realize that Raghu was now outside India! Cāritravardhana throws out the wild guess that वंकू was a lake in Kashmir — "वङ्कू नाम काश्मीरो ह्रदः." Why? Because saffron mentioned in the last line of the verse grows in Kashmir ("काश्मीरदेशे कुंकुमक्षेत्रबाहुल्यात्तत्र विचेष्टनेन लोठनेन लग्नकुंकुमकेसरत्वं युक्तम्" — Cāritravardhana[3]). And Mallināṭha removes all difficulties by boldly reading 'सिन्धु-' for 'वंचू'-'वंक्षु'-'वंकू'- or 'मंचू'-; the Indus certainly flows through Kashmir. Apart from the extant readings of the earlier commentators, there is a very strong objection against the reading 'सिन्धु'- (=the Indus)— 'स्थलवर्त्मना' in Verse 60 has already indicated that Raghu is no more on Indian soil. As regards saffron, on which Raghu's horses rolled, the flower does grow in Persia,[4] though the fact is not generally known. Raghu was now in the north-eastern

[1] Nandargikar's Raghuvaṃśa, 3rd. ed., Introduction, p. 11.
[2] *Ibid.*, Text, p. 115, critical notes on V. 67.
[3] See selection from the commentaries in *ibid.*, Notes, pp. 81-2.
[4] See Encyclopædia Britannica, 11th ed., Vol. 23, p. 999.

frontier of Persia. Though Kālidāsa does not expressly tell us that Raghu crossed the Oxus, we may confidently believe that is what the poet meant. In Ra., V. 42, we are told that Aja reaches the banks of the Narmadā and its crossing is not anywhere referred to ; but the prince must have crossed the river before he could reach Vidarbha territory. Ra., IV. 68, describes in one short verse Raghu's conquest of the Hūṇas. The mention of the Huns is commonly believed[1] to preclude the possibility of a date earlier than the fifth or sixth century A.D. But Indian knowledge of the Huns in the first century B.C. is not impossible. The Huns are mentioned as Hunus in the Yashts (V. 53, 57, X. 113, XIII. 100 and XIX. 86, also XIX. 41?) of the Avesta[2] which can hardly date from a post-Christian era. The erection of the great Chinese Wall led to certain important race migrations in the second century B.C. The Hiung-nu (=Huns), against whom the wall was intended, fell upon the Yueh-chi, a people belonging to the same stock, in 165 B.C. and displaced them from Kan-suh in North-Western China. The Yueh-chi, in their turn, routed the Wu-sun in the country of the Ili river and continued their journey westwards. One section of these people, the Great Yueh-chi, settled on the north of the Jaxartes after driving the Śakas from there. But they could not long remain in peace in this country. The infant son of the Wu-sun chief whom the Yueh-chi had killed had now grown up to manhood under the protection of the Hiung-nus, the old rivals of the Yueh-chi and he now (c. 140 B.C.) with their help attacked the Great Yueh-chi and drove them to the south of the Oxus.[3] The Hiung-nus could have now lived (in

[1] Huth, Die Zeit des Kālidāsa, pp. 23-32 ; Hillebrandt, Kālidāsa, p. 13, and K. G. Sankara Iyer, summarising Indian and English opinions, in Q.J.M.S., Vol. IX, pp. 46, 49—51.

[2] J. J. Modi, in Bhandarkar Commemoration Volume, pp. 65—80.

[3] See among other summaries, M. A. Stein, I.A., Vol. 34, pp. 75-6, C. H. I., Vol. I, pp. 565-6, and Smith, E.H.I.², pp. 263-5 ; also see Stein in the Geographical Journal, May 1925, pp. 397 ff., for fuller particulars on some points.

small detachments?) to the north of the Oxus or may have frequently made incursions there. Since 115 B.C. the Kansu region had been freed of the Hiung-nus and they were now confined to the Tien-shan whence they could pounce on only the people to the south-west: the two Chinese walls made depradation on Chinese territory now impossible, and the Oxus region was in a direct line for the frequent attacks of those marauding horsemen. Tales of Hiung-nu depradations would be easily carried to Persia c. 100 B.C. or earlier and also to India about that time through traders.[1] Could not Kālidāsa know of the Hūṇas in the middle of the first century B.C. from the (Persian) Śakas of Ujjayinī or from traders? The poet does not precisely tell us if the Hūṇas lived to the immediate north of the Oxus or were some way off. We should also remember that the Yueh-chi who were living to the north of the Oxus about 140 B.C. seem to have been akin in race to the Hiung-nus.[2] It should be noted that Kālidāsa has left some interesting local touches for all the other principalities or peoples conquered by Raghu, but for the Hūṇas he could only say that Raghu caused their women to slap their own cheeks at the loss of their lords.[3]

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[1] A brisk trade between China and western countries, including Persia and India, began in the reign of the great Hun Emperor Wuti (140-87 B.C.) and silk was the chief thing exported from China. We find Kālidāsa refer to this new ware as *Cīnāṃśuka* (Chinese cloth) in Śakuntalā, Act I, last verse and Ku., VII. 4. We have here a delightful bit of anachronism like the reference to the importation of spices in Ra., VI. 57. For Chinese trade with India about this time see "Periplus of the Erythræan Sea" (Schoff), §64: "After this region under the very north, the sea outside ending in a land called This, there is a very great inland city called Thinæ, from which raw silk and silk yarn and silk cloth are brought on foot through Bactria to Barygaza, and are also exported to Damirica by way of the river Ganges." Of course, silk had begun to be imported into India much earlier (Schoff, p. 264).

[2] See Smith, E.H.I.[2], p. 262, and n. 1, and M. Aurel Stein's paper "White Huns and Kindred Tribes in the History of the Indian North-West Frontier," in I.A., Vol. 34, pp. 73—87, referred to above.

[3] Professor Bhandarkar in the course of the conversation referred to above said there might be a local touch in the slapping of the cheeks; it is generally the head or the breast that an Indian

This shows conclusively that Kālidāsa knew not much of the Hūṇas or their country and what little he knew was from mere hearsay. I cannot therefore believe that mention of the Hūṇas in Ra., IV. 68, necessarily makes Kālidāsa live after 420 A.D. or later still and I am very glad to find Professor Keith remark, "The exact identity of the Hūṇas of the epic is immaterial; as the name had penetrated to the western world by the second century A.D. if not earlier, there is no conceivable reason for assuming that it could not have reached India long before the fifth or sixth centuries A.D." [1] That a well-travelled and well-informed man like Kālidāsa could not secure any precise information about the Hūṇas certainly suggests that they were not living in the neighbourhood of India in his time. The discovery of the earlier reading 'वंक्षू' or 'वंक्षण' or 'वंक्षु' for Mallinātha's 'सिन्धु' has dispelled the old illusion that Kālidāsa places the Huns in Kashmir and the information about the growth of saffron in Persia supplied by the Encyclopædia Britannica removes all doubts.

The other peoples conquered by Raghu are unimportant for our purpose. But before taking leave of Canto IV, I must make some remarks about the alleged Gupta basis of Kālidāsa's *digvijaya* story. Mark Collins believes in this origin and he has drawn up a comparative table of the countries conquered by Raghu and those conquered by Samudra-Gupta (including some with which S. had but diplomatic relations).[2] But no great pains are required to

woman strikes in grief. My brother-in-law Mr. Santosh Kumar Banerji, a Persian scholar, tells me that slapping the cheek is a Persian custom, and my friend Mr. M. Naimur Rehman of our Persian and Arabic Department corroborates Mr. Banerji's statement from personal observation. The custom also seems to have been known in some part of Arabia. But no such information is available about the Huns. [Does K. ascribe to the Huns a Persian custom ?]

[1] Sanskrit Drama, p. 145. I may here refer to the mention of Hūṇa-lipi in the Lalitavistara (ed. Lefmann, p. 126), which even in its present form can hardly be as late as the fifth century A.D.

[2] Geographical Data of the Raghuvaṃśa and Daśakumāracarita, Leipzig, 1907, pp. 57—9.

realise the want of real parallelism. Collins has noticed one difficulty, that the geographical terms used by Kālidāsa are different from and earlier than those used in the inscriptions of the fifth and sixth centuries A.D. He has sought to explain this discrepancy by assuming that Kālidāsa used conventional geography! This is but natural because he started with the given premise that Kālidāsa lived sometime "between 400 and 600 A.D." We have now sufficient reason for placing our poet much anterior to 400 A.D., and we need not therefore brand his geographical terms as conventional. That he has been purposely[1] a little archaic here and there I do not want to deny, but he has been mostly true to the conditions of the first century B.C. Mr. Radhagovinda Basak attempted a more thorough parallelism between Raghu's *digvijaya* and Gupta conquests[2] and it seems at first sight that he has completely succeeded. But careful scrutiny will reveal that he has exaggerated the resemblances and has sometimes interpreted the inscriptional evidence in the light of Kālidāsa.[3] It should be noted that there is nothing in the fourth canto of the Raghuvaṃśa corresponding to Samudra-Gupta's receipt of tribute from some Punjab tribes, or his violent uprooting of the neighbouring chiefs in Āryāvarta. A. Gawronski's explanation of the latter discrepancy[4] must be considered a poor

[1] We should remember that the supposed date of his story is earlier than his times by at least several centuries.

[2] In a paper communicated to the Second Oriental Conference at Calcutta. See Proceedings, pp. 325—334.

[3] Compare, for example, his supposition that Candra-Gupta I re-established the family of the reigning princes of Bengal after having conquered them, because Kālidāsa makes Raghu re-establish the King of Vaṅga after defeating him, though the Meherauli Inscription tells no such tale. The inscription mentions only the defeating of the Vaṅgas by Candra and it is not certain that this Candra is Candra-Gupta I. He was probably the same person as Candra-Varman of Puṣkaraṇa (in Rajputana) who was a contemporary of Candra-Gupta I. See I.A., 1913, pp. 217—9, Smith. E.H.I.[2], p. 307 n., and R. D. Banerji's বাঙ্গালার ইতিহাস, ১ম ভাগ, পৃঃ ৪০, ৪১, ৪৪.

[4] "The Digvijaya of Raghu and some connected Problems" in Rocznik Oryentalistyczny, Vol. I, Krakow, 1914-5, p. 46.

attempt. Nor does Samudra-Gupta *march against* the king of Kāmarūpa as Raghu does. I cannot therefore help believing that Kālidāsa has followed no actual historical model but his own imagination, and such epic model as may have existed before his time in describing the conquests of Raghu.[1] I may even say that Hariṣeṇa, the chronicler of Samudra-Gupta's conquests, derived some hints from Kālidāsa's poem and made much of his patron's petty conquests and described his defeats or indecisive engagements as *grahaṇa-mokṣānugraha-janita-pratāponmiśra-mahābhāgya.*[2] What induced Kālidāsa to make Raghu release the kings of Vaṅga and Kaliṅga after conquering them was probably the presence of these kingdoms in his time. And there was the additional driving factor in our poet's *ahimsā* predilections;[3] see Ku., III. 20, Ra., V. 50, Ra., V. 57 (with VII. 61-62) and VII. 47—also IX. 14, XVI. 2, XVII. 42, which speak of similar restitutions of territories. *Before we utilise a poem for historical purposes we should determine fully the poet's view of life.* It is usual to believe that Samudra-Gupta was a mighty

[1] Compare Keith in J.R.A.S., 1909, p. 437: "But, in truth, as Bühler pointed out, the poem shows in every line that Raghu's march is a poetical one, not a real one. Just as Somadeva copies Kālidāsa in an account presumably meant to be at least as historical as that of Raghu's conquests, so Kālidāsa followed the Epics, the Purāṇas, and other Kāvya writers. He makes Raghu conquer Pārasīkas, Hūṇas, Kāmbojas, Yavanas, *et hoc genus omne*; he simply defeats for him all warlike nations,....." I am in complete agreement with Professor Keith, except in so far as the Pārasīkas are concerned, for which see below.

[2] We read at school a certain text-book on Indian History, describing the battle of Chillianwalla as a drawn engagement and another as a victory for British arms! A. Gawronski has himself (*loc. cit.*, pp. 48—55) shown the influence of Kālidāsa on Somadeva (in his description of Udayana's conquests). Another possible influence of Kālidāsa may be traced in the Mahāprajñāpāramitā Sāstra, ascribed to Nāgārjuna and translated into Chinese before 405 A.D., in which a Bodhisattva is described as having "proceeded for a short time to Northern India to the country of the Yuetche to subjugate the Dragon King Apalala, and finally" as having gone "to the west of the Yuetche to conquer the Rakshasi"! (Nariman, Sanskrit Buddhism, 1st ed., p. 194).

[3] Probably under Jaina influence.

conqueror. But M. Jouveau-Dubreuil has shown that the belief is a little exaggerated, at least so far as the South is concerned.[1] I have a lurking suspicion in my mind that Samudra-Gupta's imagination was fired by the poet Kālidāsa's description of Raghu's *digvijaya* and he may have tried to imitate it, as far as it was then possible.[2] Raghu conquered the eastern and south-eastern powers and then turned southwards. Samudra-Gupta himself belonged to the eastern province of Magadha and he therefore first[3] turned southwards. But meeting with a repulse there, after some success, he could not complete the circuit of South India,[4] but retraced his steps conquering some more petty principalities. The easier conquests in North India have been made much of by his panegyrist and the diplomatic relations with some foreign powers, though true, may have been entered into by Samudra-Gupta or described by Hariṣeṇa in imitation of Raghu's conquest of the Persians, the Huns and the Kambojas. Kālidāsa could not flatter the Gupta

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[1] A.H.D., pp. 58—61.

[2] Samudra-Gupta seems to have had a predecessor in Candra-Varman of Puṣkaraṇa, who claims to have conquered even Vāhlīka (Bahlk) where Kālidāsa made Raghu go.

[3] The Allahabad Pillar Inscription describes the southern conquests first and M. Jouveau-Dubreuil seems justified (A.H.D., p. 59) in rejecting Vincent A. Smith's theory (E.H.I.[4], p. 299) that Samudra-Gupta first "subjugated the Rājās of the Gangetic plain."

[4] G. Jouveau-Dubreuil (A.H.D., pp. 59, 60) shows that Devarāṣṭra is not Mahārāṣṭra, nor is Eraṇḍapalla in Khandesh. Professor Bhandarkar (I.H.Q. I., p. 253, 254) seems to accept Monsieur Jouveau-Dubreuil's identifications. It would be proper for me to mention here Professor Dr. Radhakumud Mukherji's objection against the French scholar's rejection of Mahārāṣṭra and Eraṇḍol. He told me that it would be difficult for Samudra-Gupta to return by the way he had first marched for his conquered enemies would try to harm him and he would therefore take a more westerly direction. But the argument does not convince me and it is possible to infer from the text of the inscription that Samudra-Gupta did slightly alter his path, but still confining himself to the east coast. In support of an eastern locality for Devarāṣṭra, I may quote a verse occurring in the Vāyu and Brahmāṇḍa Purāṇas, giving the territorial limits of the Devarakṣitas (of the fourth century A.D. ?): कोशलांश्चाभ्रपीण्ड्रांश्च तान्त्रलिप्तान् ससागरान्। चम्पां चैव पुरीं रम्यां भोक्ष्यन्ते देवरक्षिताः॥" (Pargiter, D.K.A., p. 54.)

monarchs by making Raghu conquer lands which even Samudra-Gupta could not reach. Why do Gupta period theorists forget this? The first portion of the Allahabad Inscription of Samudra-Gupta, describing Candra-Gupta's acceptance of this prince as heir-apparent and ensuing events, has a strong resemblance with the concluding portion of Raghuvaṃśa, Canto III, and the first few verses of Canto IV, where we have a similar description of Dilīpa's passing on of the crown to Raghu and the immediate effect of Raghu's accession. One would naturally think that Kālidāsa was influenced by the actual facts of Samudra-Gupta's accession, but is it certain that Hariṣeṇa did not use the court poet's usual hyperbole? I shall show the resemblances elsewhere but I may mention one parallel here: "दिलीपानन्तरं राज्ये तं निशम्य प्रतिष्ठितम्। पूर्वं प्रभूमितो राज्ञां हृदयेऽग्निरिवोद्गताः॥" (Ra., IV. 2) possibly suggested "वीर्योत्सिक्तास्त्र केचिच्छरण्यमुपगता यस्य वृत्ते प्रणामे॥"[1] of the inscription (l. 10.); compare also v. 4 (ll. 7-8) of the inscription with Ra., III. 68. And "साध्वसाधूदयप्रलयहेतुपुरुषस्याचिन्त्यस्य" of the inscription (l. 25.) may preserve a distant reminiscence of "अमुं युगान्तोचितयोगनिद्रः संहृत्य लोकान् पुरुषोऽधिशेते" (Ra., XIII. 6) and of the verse preceding it ("तां तामवस्थां प्रतिपद्यमानं स्थितं दश व्याप्य दिशो महिम्ना। विष्णोरिवास्यानवधारणीयमीदृक्तया रूपमियत्तया वा॥").

But some historical facts may be after all behind Kālidāsa's story. I have already drawn attention to the fact that the king of Kaliṅga has been likened to adverse fortune in Ra., VI. 58, where Indumatī rejects him. This may have been due, as I have suggested, to the historical depredations of king Khāravela of Kaliṅga of the preceding century over the territory, among others, of the Bhojakas of Vidarbha. Kālidāsa has dilated over only three conquests, those of Kaliṅga, Persia and Kāmarūpa. The king of Kāmarūpa did not fight at all but the Kaliṅgans and the Persians did put up a tough fight. Kālidāsa has described these two fightings with some *animus*. The reason for his pique against the Kaliṅgans has been already

[1] Does 'यस्य वृत्ते प्रणामे' mean 'whose coronation salute being done'?

indicated and that for the Persians I shall suggest now. The Jaina legend in connexion with Kālakācārya's history represents him as going out of India and bringing the Śakas from the other side of the Indus to dethrone and kill Gardabhilla of Ujjayinī. The chiefs of these foreigners are termed Śāhis and their overlord Śāhānu Śāhi. [1] The titles are Persian and we know that the Śakas in and to the north-west of India in the first centuny B.C. were under the Parthians or were related to them.[2] Kālidāsa's fair Ujjayinī remained under foreign rule till (Gardabhilla's son) Vikramāditya, so the tradition continues, came from Pratiṣṭhāna (Paiṭhān) and drove out these Śaka-Pārthava usurpers. Our poet could not therefore cherish kindly feelings towards these Śakas or their suzerains, the Pārthians, and he made Raghu beard the Persian lion in his den. The foreign conquerors of Ujjayinī were Śakas and not Persains proper but they were vassals of the Persians and bore Persian titles and certainly followed Persian ways. We may therefore believe that Kālidāsa made Raghu conquer the overlords of these Śakas, the Persians, in their own home to wipe off, if he could, this national disgrace. The Kumārasambhava may have been written when the "demoniacal" foreigners were reigning in the heart of the sacred land of Avanti[3] and the prince Vikramāditya[4] may have been living in the court

[1] See Z. D. M. G., Vol. 34. pp. 262-3. Professor Sten Konow makes out the Indo-Scythian conquerors of India to be Iranian in stock and speech. See Modern Review, April, 1921 pp. 463—470.

[2] See Smith, E.H.I [4], pp. 242 ff., Rapson, C.H.I.,I, Ch. 23.

[3] *Cf.* "तस्मिन् विमर्दकृताः काले तारकेण दिवौकसः। तुरासाहं पुरोधाय धाम स्वायंभुवं ययुः॥" (II. I), etc., of the Kumārasambhava. Students of Bengali Literature will here recall the case of the वृत्रसंहार (Vṛtra-Saṃhāra) of Babu Hemchandra Bandyopadhyaya.

[4] I am not certain whether विक्रमादित्य was the name of the individual or the title assumed on accession, but the latter assumption would probably be more natural. Candra-Gupta II, who reconquered Malwa from the Śakas about the end of the fourth century A.D., was probably the second man to assume the title of Vikramāditya, in imitation, as it seems, of the avenger of Gardabhilla. Similar attempts at imitataion by King Bhoja of Dhārā of early eleventh century are known to scholars. Modern traditions about Vikramāditya

of Pratiṣṭhāna, planning the rescue of his ancestral kingdom from the yoke of the foreigners.[1] The Raghuvaṃśa was certainly a later work, possibly the last of Kālidāsa's writings. There was peace and prosperity now, and the poet takes an imaginary vengeance on the late disturbers of the peace.[2] I shall show below that Kālidāsa makes a veiled reference to Vikramāditya, king of Ujjayinī in the Raghuvaṃśa.

We may now turn to the sixth canto of the Raghuvaṃśa, where the qualities of some of the important kings of India are recounted before Indumatī and our poet incidentally gives us some idea of the political condition of India in his time (or shortly before). We are justified in making some inferences about contemporary conditions by the factt hat there is little correspondence between Kālidāsa's political divisions and those in the Rāmāyaṇa and the earlier Purāṇas; Kālidāsa was therefore influenced more by the actuals of his day than

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seem to contain elements from incidents in the reigns of these three kings. The Vikramāditya referred to by Hāla (V. 64) must necessarily be Gardabhilla's son. The greater part of Kālidāsa's literary career probably belonged to a period prior to Vikramāditya's patronage.

[1] I have given one possible explanation for the non-completion of the work; another may be that fear of the reigning Śaka chief made Kālidāsa leave his poem unfinished. I must mention here a view long held by my friend Professor Pramathanath Sarkar that the Kumārasambhava is not an incomplete poem but that its story has a natural and artistic end with the eighth canto. But I do not accept my friend's view as the Kumāra is not even conceived at the end of that canto.

[2] The Śaka invaders may have been known, when they first came, as Persians, and their true nationality may have been realised only later. We have a somewhat similar case in the term 'ফিরিঙ্গী' (Phiriṅgī = Frank) used long in my province promiscuously for all Europeans. *The writer of the Periplus of the Erythrean Sea* (§38), *knew the Śakas of Sind as Parthians.* Kālidāsa's information about Persia may have been obtained not from travel in that land but only from the testimony of the Śaka intruders in Ujjayinī. *The information about the Hūṇas may well have been received from this source,*

by the earlier writers. But it is possible that in some cases there is no correspondence between Sunandā's description and the real condition of the state in Kālidāsa's time.

The king of Magadha heads the list. He is described in Verses 21—24 and Verse 25 refers to his rejection by Indumatī. The verses may be quoted here:

"असौ शरण्यः शरणोन्मुखानामगाधसत्त्वो मगधप्रतिष्ठः ।
राजा प्रजारञ्जनलब्धवर्णः परन्तपो नाम यथार्थनामा ॥२१॥
कामं नृपाः सन्तु सहस्रशोऽन्ये राजन्वतीमाहुरनेन भूमिम् ।
नक्षत्रताराग्रहसङ्कुलापि ज्योतिष्मती चन्द्रमसैव रात्रिः ॥२२॥
क्रियाप्रबन्धादयमध्वराणामजस्रमाहूतसहस्रनेत्रः ।
शच्याश्चिरं पाण्डुकपोललम्बान् मन्दारशून्यानलकांश्चकार ॥२३॥
अनेन चेदिच्छसि गृह्यमाणं पाणिं वरेण्येन कुरु प्रवेशे ।
प्रासादवातायनसंश्रितानां नेत्रोत्सवं पुष्पपुराङ्गनानाम् ॥२४॥
एवं तयोक्ते तमवेक्ष्य किञ्चिद्विस्रंसिदूर्वाङ्कुरमधूकमाला ।
ऋजुप्रणामक्रिययैव तन्वी प्रत्यादिदेशैनमभाषमाणा ॥२५॥".

Verse 22 distinctly shows that Magadha was the chief power in India in Kālidāsa's time. The Gupta period theorists read here a reference to the Imperial Guptas of Magadha. But, was an inglorious dynasty ruling in Magadha in the first century B. C.? The Mauryas were the paramount rulers of North India and though the Magadhan Empire had considerably diminished during the reign of the successors of Aśoka, Puṣyamitra, the founder of the Śuṅga dynasty, did make some extension of territory; and though by the time of the Kāṇvas, who were reigning in the second and third quarters of the first century B.C., disintegration had again set in, the imperial glory had not altogether left the throne of Puṣpapura (Pāṭalīputra). The Kāṇvas may well be compared to the later Mughal Bādshāhs of India, who though Emperors in little more than name, did receive the honour of paramount rulers. The glory of the Magadhan throne extended in the past through the Śuṅgas, the Mauryas, the Nandas and the Śiśunāgas to the Purāṇic Bṛhadrathas. There is therefore nothing in verse 22 making for a late date.

The following verse refers to the performance of many sacrifices by the King of Magadha. Here too the Gupta period theorists see a reference to the performance of the Aśvamedha sacrifice by Samudra-Gupta after it was long in disuse ("चिरोत्सन्नाश्वमेधाहर्त्तुः"). But did not Puṣyamitra too revive the Aśvamedha ceremony of which we have an allusion in Patañjali's Mahābhāṣya, a circumstantial account in Kālidāsa's own Mālavikāgnimitra and a reference in the newly discovered Śuṅga Inscription?[1] That Kālidāsa had a great regard for the Śuṅgas is conclusively proved by his selecting the theme of his virgin drama from their history. And these Śuṅgas were not far removed in time from a writer writing in ± 50 B.C. Indumatī bows to the King of Magadha before she passes on to another king; no other king received the same treatment. This is, so says Mr. Bijay Chandra Majumdar, because the Guptas were the Emperors of North India in the fifth century A.D. But imperial title (with a nominal empire, if you like) is intelligible in the King of Magadha of pre-Christian centuries as well. The real reason for Indumatī's *praṇāma*, however, seems to me to lie in the fact that a Brahmin dynasty was just then sitting on the throne of Magadha. The Kāṇvas (72 B.C.—28 B.C.) were certainly Brahmins and such may have been their predecessors, the Śuṅgas, too;[2] a Kṣatriya princess would naturally bow down before a Brahmin prince.[3] This interpretation is probably supported by the

[1] Mr. K. P. Jayaswal in Modern Review for October, 1924 (pp. 430-2). The inscription (found in Ayodhyā) gives the interesting information that Puṣyamitra performed the Aśvamedha sacrifice twice—" द्विरश्वमेधयाजिनः सेनापतेः पुष्यमित्रस्य " (*ibid.*, p. 431).

[2] See K. P. Jayaswal, J.B.O.R.S., Vol. IV, pp. 257-260. MM. Pt. H. P. Shastri first offered this suggestion. The arguments of Pt. Shastri and Mr. Jayaswal convince me.

[3] I do not blind myself to the artistic effect of making Indumatī pause a while before the first king she is introduced to and courteously bowing to him before rejection; she soon gets over her delicacy and rejects suitor after suitor till she comes to Aja. I do not want to forget that Kālidāsa was writing poetry and not history and I regret the lot of us twentieth century readers

expression—*labdhavarṇa* in v. 21, where a secondary meaning of "लब्धो वर्णः उत्तमवर्णः (a Brahmin's caste or, say, a twice-born's caste) येन" may have been also intended. The Kāṇvas were Brahmins and if the Śuṅgas too were not so, they were at least of a higher caste than the doubly fallen (casteless and heretical) Mauryas. Kālidāsa may have been thinking of Puṣyamitra when he wrote "प्रजारक्षनलब्धवर्णः" and "परन्तपो नाम यथार्थनामा" for the founder of the Śuṅga dynasty inaugurated a Brahmanical revival and gained popularity with the Hindu subjects who had so long been cast into the shade, and he certainly crossed swords with the Yavana invader Menander and defeated him.[1] It is also possible that our poet was thinking of Vāsudeva, the founder of the Kāṇva dynasty, who could well earn popularity with the subjects through the removal of the licentious Śuṅga king Devabhūti (—bhūmi.) No special significance can, however, be shown for *parantapaḥ* in this case.[2] Before taking leave of the king of Magadha, I must, in all honesty, mention one point which might go against my theory. Verse 21 makes this king "the refuge of persons seeking shelter" and we should probably read here an allusion to some well-known incident in the life of the contemporary king of Magadha or of any previous king

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who have to read history in the finest poem. Still, an indirect hint at the caste of the contemporary king of Magadha does not seem to me incompatible with the artistic reason for this preferential treatment. [I may mention here a highly humorous explanation of this *praṇāma* proposed by Mr. Nrityalal Mookerji, late Principal of the Carmichael College, Rangpur. When I gave him one day my explanation of the obeisance, he said with a smile, "এটা বুঝ্‌তে পারলেন না? ইন্দুমতীর মনে হ'ল 'ঠাকুরদা, তুমিও'?" ("Don't you understand the reason? Indumatī thought 'Grandpa, thou too (art come)!'")].

[1] Even if the whole fighting was done by his grandson, Prince Vasumitra, the credit goes to him.

[2] Vāsudeva=Kṛṣṇa was, however, famous as a killer of many foes, human and non-human.

(historical or Purāṇic).[1] From my present knowledge I cannot make out what incident in the first or any previous century before Christ our poet could have referred to. But there is a line in Hariṣeṇa's panegyric of Samudra-Gupta which does speak of that monarch's vouchsafing of help to other kings—"अनेकभ्रष्टराज्योत्सन्नराजवंशप्रतिष्ठापनोद्भूतनिखिलभुवनविचरण-शान्तयशसः (l. 23)."[2] This ought to make Kālidāsa posterior to Samudra-Gupta, but, as I have sufficient ground for believing that Aśvaghoṣa has borrowed from Kālidāsa and not Kālidāsa from him, I prefer to take Hariṣeṇa's statement as a hyperbole in the usual courtier's style and possibly under the influence of Kālidāsa. Later research may some day reveal to us some story of Puṣyamitra's helping of other (Brahmanical) states in throwing off foreign (or Buddhist) yoke.[3] Can we read here any reference to Udayana's regaining of his ancestral land (encroached upon by the Kāśis)

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[1] Possibly not Purāṇic, because 'नृपा श्वोपप्लविनः परेभ्यो धर्मोत्तरं मध्यममाश्रयन्ते' of Ra., XIII. 6, seems to indicate that such an incident was in the living memory of people. If Puṣyamitra is meant by Kālidāsa in Ra., VI, 21, he could certainly be described as 'धर्मोत्तरं मध्यमम्' in XIII. 6. [But was K. thinking of the refuge and help Vikramāditya received from the Andhra court? If performance of sacrifices could entitle Puṣyamitra to the epithet *dharmottara*, some Andhra chiefs (notably, the third, Śrī-Śātakarṇi) could lay claim to it (see Rapson, C. H. I., I. pp. 530-1). The son of Gardabhilla overthrown and killed by the foreign Śakas could certainly be alluded to as *upaplavin nṛpa*.]

[2] *Cf.* also "कृपणदीनानाथातुरजनोद्धरणसमन्तदीक्षाद्युपगतमनसः" in l. 26.

[3] After I had written the above I referred the question to my friend Professor Pramathanath Sarkar. He said Kālidāsa was probably alluding to Puṣyamitra who must have helped many princes suffering from the attacks of Menander by defeating him or to Candragupta Maurya who certainly formed a league with many chiefs and helped them to throw off the Greek yoke. My friend was emphatic in his view that most of the kings thought of by Kālidāsa belonged to the immediate past and were not his contemporaries.

through the help of Darśaka, king of Magadha, with whose sister Padmāvatī he contracted a political marriage?[1]

After the king of Magadha is courteously rejected by Indumatī, Sunandā carries her to the king of Aṅga. A king of Aṅga is certainly unintelligible as a power distinct from the Gupta king of Magadha in the fourth or fifth century A.D., and neither Aṅga nor Campā come in for mention in any of the Gupta Inscriptions. Aṅga must have been included within the home province of the Gupta emperor. We must therefore assume that Kālidāsa's Aṅga-nātha belongs to the realm of legends. But if there was no distinct state of Aṅga in Kālidāsa's time, why did he introduce a king of Aṅga in the sixth canto of the Raghuvaṃśa? I have already drawn attention to the purposive character of Kālidāsa's selection. There are some indications about the presence of a state of Aṅga, distinct from that of Magadha, in the second century B.C., and the same condition may be safely inferred for the following century. Khāravela lays claim to having carried away the wealth of Magadha *and* Aṅga;[2] *Magadha and Aṅga were therefore distinct kingdoms in his time.* The king of Rājagṛha (l. 8) also may have been distinguished from Bṛhaspatimitra (=Puṣyamitra, according to Mr. Jayaswal) of Magadha (l. 12), though Mr. Jayaswal has identified the two.[3] The mention of

[1] The story is given in the Svapnavāsavadatta and in the Kathāsaritsāgara (possibly on the basis of the Bṛhatkathā of Guṇāḍhya for the brief Bṛhatkathāślokasaṅgraha of Buddhasvāmin makes a reference to Padmāvatī). See Harit Krishna Deb's paper "Udayana Vatsa-Rāja," Calcutta, 1919.

[2] "*Aṅga-Magadha-vasuṃ ca neyāti*"—Hāthigumphā Inscription, l. 12, J.B.O.R.S., vol. IV, p. 384.

[3] See C.H.I., I, pp. 527, 537. Mr. Jayaswal has certainly made out a strong case for the identity of the king of Rājagṛha with Bahasatimitra, the king of Magadha. Mathurā and the adjoining regions were certainly within the sphere of influence of the house of Vatsa (the Śuṅgas) at this time as numismatic evidence seems to indicate (*Ibid.*, pp. 525-6). But the language of the Hāthigumphā Inscription

a distinct king of Aṅga in Raghu., Canto VI, should therefore place Kālidāsa close to Khāravela's time. One verse of the Aṅga group (v. 79) gives us an interesting bit of information: "निसर्गभिन्नास्पदमेकसंस्थमस्मिन् द्वयं श्रीश्च सरस्वती च । कान्त्या गिरा सूनृतया च योग्या त्वमेव कल्याणि तयोस्तृतीया ॥." We may infer from this that the king of Aṅga was a great patron of learning in Kālidāsa's day—the poet may, for all that we know, have himself received his patronage. Will scholars search for a king of Aṅga answering this description in the first or second century B.C., or in the legendary period—or say in the fifth or sixth century A.D.? Scholars who make Kālidāsa recipient of Gupta patronage should notice that *the poet has made the king of Aṅga a scholar and patron of learning and not the king of*

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seems to cast some doubt over the point. Bahasatimitra's identification with Puṣyamitra is possible but not certain. But Bahasatimitra of the Pabhosā Inscription (Lüder's 904) and of coins cannot certainly be Puṣyamitra. For how could Āṣāḍhasena, maternal uncle of Bahasatimitra, have lived till the tenth year of the reign of Odraka, the fifth Śuṅga king, if Bahasatimitra were Puṣyamitra, the first Śuṅga monarch? However, as this Bahasatimitra had relations in Mathurā, he could be identified with Bahasatimitra=king of Magadha (and Rājagṛha) of the Hāthigumphā Inscription, if we could bring down Khāravela to the time of Odraka and give up all thoughts of his contemporaneity with Puṣyamitra. Mr. Jayaswal has himself recently spoken of the uncertainty of palæographic evidence (Modern Review, October, 1924, p. 432). The Śātakarṇi referred to by Khāravela (l. 4) may well be Śātakarṇi II, the sixth Andhra king, and not Śrī-Śātakarṇi, the third monarch (as Mr. Jayaswal supposes, J.B.O.R.S., III., pp. 441-2). This supposition will probably remove all difficulties. The king of Magadha and the king of Rājagṛha of the Hāthigumphā Inscription will then easily mean the same person. The inscription may really have been incised in the 165th year since *Aśoka's accession*; for Aśoka was the "Muriya King" who conquered Kaliṅga and Candragupta had nothing to do with it. Of course I do not get any support for my theory from the interpretation of the inscription I myself propose but separate mention of Aṅga and Magadha in l. 12 is sufficient for my purpose.

Magadha. Kālidāsa's partiality for the king of Aṅga is also borne out by the next verse, "अथाङ्गराजादवतार्य चक्षुर्याहीति जन्यामवदत् कुमारी। नासौ न काम्यो न च वेद सम्यग् द्रष्टुं न सा, भिन्नरुचिर्हि लोकः ॥."[1]

Next comes the king of Avanti. The verses being very important from my point of view I quote them in full:—

"ततः परं दुःप्रसहं द्विषद्भिर् (v. l. परेषां) नृपं नियुक्ता प्रतिहारभूमौ।
निदर्शयामास विशेषदृश्यम् (v. l. विशेषकान्तम्) इन्दुं नवोत्थानमिवेन्दुमत्यै ॥३१॥

अवन्तिनाथोऽयमुदग्रबाहुर्विशालवक्षास्तनुवृत्तमध्यः।
आरोप्य चक्रभ्रममुष्णतेजास्त्वष्ट्रेव यत्नोल्लिखितो विभाति ॥३२॥
अस्य प्रयाणेषु समग्रशक्तेरग्रेसरैर्वाजिभिरुत्थितानि।
कुर्वन्ति सामन्तशिखामणीनां प्रभाप्ररोहास्तमयं रजांसि ॥३३॥
असौ महाकालनिकेतनस्य वसन्नदूरे किल चन्द्रमौलेः।
तमिस्रपक्षेऽपि सहप्रियाभिर्ज्योत्स्नावतो निर्विशति प्रदोषान् ॥३४॥
अनेन यूना सह पार्थिवेन रम्भोरु कच्चिन्मनसो रुचिस्ते।
सिप्रातरङ्गानिलकम्पितासु विहर्तुमुद्यानपरम्परासु ॥३५॥
तस्मिन्नभिद्योतितबन्धुपद्मे प्रतापसंशोषितशत्रुपङ्के।
बबन्ध सा नेत्तमसौकुमार्या कुमुद्वती भानुमतीव भावम् ॥३६॥.

These verses plainly show that there was then sitting on the throne of Avanti a king (and no provincial governor) independent of Magadhan or any other control. Prior to the conquest of Malwa by Candra-Gupta II this region was under the rule of the Śakas (Western Satraps)[2] and it is highly doubtful if the sympathy of Kālidāsa would go out for these foreign usurpers. And after the Gupta conquest, Malwa was

[1] Will a Pandit Manmathanath Bhattacharya appear in Bihar and claim that Kālidāsa was a native of Bhagalpur District? My late lamented teacher Pandit Sarat Chandra Śāstrī used to say that "of all the provinces of India Bihar has the best claim to call itself the home of the immortal poet of India." His view, so far as is known to me, was based only on the nature of the local traditison and not on Ra., VI. 29. Kālidāsa was in all probability both a native and a resident of Avanti. He may have received only some help from Aṅga and even that is by no means certain.

[2] Smith, E.H.I.[3], p. 307.

included in the Gupta empire and a ruler meriting Kālidāsa's description could hardly be a provincial governor or even a *yuva-rāja* holding the province for the crown. Several scholars like to make Candra-Gupta II the Vikramāditya who patronised Kālidāsa. But Candra-Gupta II was a king of Magadha and not of Ujjayinī, whereas Kālidāsa's patron is traditionally ascribed to Ujjayinī. I have no quarrel with persons who reject traditions altogether but I cannot understand the *ardhajaratīya* attitude of those scholars who accept one part of a tradition and conveniently ignore the other. If Kālidāsa's patron was a king named or titled Vikramāditya, he was also king of Ujjayinī; such Candra-Gupta II was certainly not, nor so any other later Gupta king. The poet has likened the king of Avanti to the Moon, newly risen, in verse 31, but he immediately corrects himself by comparing him to the Sun in the following verse. This probably suggests that Kālidāsa was thinking of the name or title of his patron, Vikrama-*āditya*. But verse 36 gives us a clear allusion to this name: "As the water lily cannot love the *Sun*, so could not that exquisitely delicate princess place her heart on him who causes his friend-lotuses to bloom forth and his enemy-mud to dry up at his *valour*." We have here both a comparison with the Sun (*Āditya*) and a mention of the king's valour (*pratāpa*, a synonym for *vikrama*). I cannot therefore doubt that we have here an exquisitely fine allusion to the name or epithet (Vikramāditya) of the king of Ujjayinī. It should be noted that the simile "as the lily does not like the Sun" has not been used in the case of any other suitor, though the opposite one, "as the lotus does not like the Moon," has been used twice—*cf.* "तस्याः प्रकामं प्रियदर्शनोऽपि न स क्षितीशो रुचये बभूव। शरत्प्रमृष्टाम्बुधरोपरोधः शशीव पर्याप्तकलो नलिन्याः ॥४६॥" and "स्वसुर्विदर्भाधिपतेस्तदीयो लेभेऽन्तरं चेतसि नोपदेशः। दिवाकरादर्शनबद्धकोशे नक्षत्रनाथांशुरिवारविन्दे ॥६६॥." There was therefore something deliberate in this expression and I conclude that *Kālidāsa has referred to*

Vikramāditya, king of Ujjayinī, in the Raghuvaṁśa.[1] I would identify this Vikramāditya with the Vikramāditya of Jaina tradition, who in the first century B.C. drove out the Śakas from Ujjayinī and established himself on the throne of his (father) Gardabhilla. " इन्दुं नवोत्थानमिव " in v. 31 probably refers to the new accession of this monarch and reference to the youth of the king in v. 35 points that way. It should be noted that Kālidāsa has not invested this suitor of Indumatī with a Purāṇic pedigree, as he has, for example, done in the case of the next king. The dynasty to which Kālidāsa thus makes reference had probably on that account but newly come to power. If we are justified in identifying this dynasty with "the seven Gardabhillas" of the Matsya, Vāyu and Brahmāṇḍa Purāṇas (Pargiter, D.K.A., p. 46), just before the Śakas, the family was certainly a new one, provided Gardabhilla was the first king. Jaina tradition makes Gardabhilla reign for 13 years and places an interval of 135 years between his son Vikramāditya's accession and the coming back of the Śakas to power, with a Śaka

[1] I told Professor Dr. D. R. Bhandarkar of my interpretation of Ra., VI. 36, and I was glad to find that I convinced him. Of course the Professor does not share my view about the date of Kālidāsa—he places him in the sixth century A.D. Professor Dr. Radhakumud Mukerji recently drew my attention to a somewhat similar interpretation by Mr. Dhanapati Banerji in Q.J.M.S., Vol. X., pp. 77-8. Mr. Banerji deduces reference to Vikramāditya from the Avanti-nātha's being compared to the Sun (in v. 32 *c*, *d*, and v. 36 *d*), and from the mention of his fine physique (in v. 32 *a*, *b*). Mr. Sankara (*ibid.*, p. 188) rightly objects that *vikrama* (valour) is not synonymous with a manly form. Mr. Banerji's reply (p. 364) is ineffective for " अतिशक्तिता " (the synonym for " विक्रम " given by the Śabdakalpadruma on the authority of Amara and Bharata and quoted with approval by Mr. Banerji) is not an exact equivalent for *vikrama* and is not even itself synonymous with a fine physique—a tall and largely built man is not necessarily " विक्रमी " and we should remember that among the Pāṇḍavas " विक्रम " has been ascribed to Arjuna and not to the giant Bhīma. I pin my faith on *pratāpa* in v. 36 *c*, which is certainly an exact equivalent for *vikrama* and the *āditya* I search for in the same verse. I have therefore not been wholly anticipated but am in any case glad to find another worker read a reference to Vikramāditya, king of Ujjayinī, in Ra., VI.

interregnum of 4 years between Gardabhilla and Vikramāditya.[1] A period of 148 years is not much too long for 7 reigns. But the Vāyu and the Brahmāṇḍa Purāṇas make the Gardabhilla dynasty reign for only 72 years ("द्विसप्ततिः" or = 140 ?). We may therefore assume that the Gardabhilla dynasty ended with Sarasvatī's transgressor and not begun with him. Vikramāditya, coming after the Śaka usurpation, will in any case have founded a fresh line; "इन्दुं नवोत्थानमिव" will apply in either case with the same force. "द्विषद्भिः दुःप्रसहम्" in VI. 31, may refer to the conquest of the Śakas by Vikramāditya. A similar allusion may also be contained in Ra., XI, 26-27. "स हत्वा लवणं वीरस्तदा मेने महौजसः। भ्रातुः सोदर्य्यमात्मानमिन्द्रजिद्वधशोभिनः॥ तस्य संस्तूयमानस्य चरितार्थैस्तपस्विभिः। शुशुभे विक्रमोदग्रं वीडयावनतं शिरः॥." Compare also the title of the Vikramorvaśīya and "दिष्ट्या महेन्द्रोपकारपर्याप्तेन विक्रममहिम्ना वर्धते भवान्" (B.S.S., 3rd ed., p. 16), "अनुत्सेकः खलु विक्रमालङ्कारः" (p. 18), etc., of its text.[2]

[1] Z.D.M.G., Vol. XXXIV, pp. 254, 267. The *Periplus* seems to supply an interesting confirmation of one of these particulars by calling the city of Ujjayinī "*formerly* a royal capital." Ujjayinī probably passed about 78 A.D. into the hands of the Śaka prince Caṣṭana who may not have removed his capital there. Prior to this event the city must have formed for a long time the capital of a Hindu principality (connected, as numismatic evidence indicates, with the Andhra Empire). The *Periplus* does not record its date and there is great diversity of opinion on the point. Mr. Schoff in the Introduction to his translation (pp. 7-15) declared in favour of 60 A. D. but the view of the scholars of his 'Second Group' (80-89 A. D.—p. 292) commend itself to me. Mr. Schoff has, however, subsequently accepted 80 A.D. (See Smith, E.H.I.,[2] p. 245, *n.* 2); Ujjayinī must have then recently lost its independence. Caṣṭana's successors seem, however, to have shifted their capital to that holy city.

[2] I have given above complete reference to the sources of the legend of Kālakācārya, Gardabhilla and the Śakas. But as the texts are not well-known and as the Cambridge History of India, which has published a summary, has not yet attained the popularity it fully deserves, I give below two extracts from it, at the suggestion of my friend Mr. Nirendranath Ray Chaudhuri of the Bangabasi College, Calcutta:—

The next king is Pratīpa of Anūpadeśa. The fact that the description opens with an account (vv., 38—40) of his legendary ancestor Kārtavīrya and that Pratīpa is himself declared in verse 42 as superior to the legendary Paraśurāma probably shows that there was no real Indian dynasty ruling the land in Kālidāsa's time. But the mention of the province

"Only one legend, the *Kālakāchārya-Kathānaka*, 'the Story of the Teacher Kālaka,' tells us about some events which are supposed to have taken place in Ujjain and other parts of Western India during the first part of the first century B.C., or immediately before the foundation of the Vikrama Era in 58 B.C. This legend is perhaps not totally devoid of all historical interest. For it records how the Jain saint Kālaka, having been insulted by King Gardabhilla of Ujjain, who, according to various traditions, was the father of the famous Vikramāditya, went in his desire for revenge to the land of the Śakas, whose king was styled 'King of Kings' (Śāhāṇusāhi). This title, in its Greek and Indian forms, was certainly borne by the Śaka kings of the Punjab, Maues and his successors, who belong to this period; and as it actually appears in the form *Shaonano Shao* on the coins of their successors, the Kushāṇa monarchs, we are perhaps justified in concluding that the legend is to some extent historical in character. However this may be, the story goes on to tell us that Kālaka persuaded a number of Śaka satraps to invade Ujjain and overthrow the dynasty of Gardabhilla; but that, some years afterwards, his son, the glorious Vikramāditya, repelled the invaders and re-established the throne of his ancestors. What the historical foundation of this legend may be, is wholly uncertain—perhaps it contains faint recollections of the Scythian dominion in Western India during the first century B.C. In any case, it seems undoubtedly to give further proof of the connexion of the Jains with Ujjain, a fact indicated also by their use of the Vikrama Era, which was established in the country of Mālwā, of which Ujjain was the capital." (Charpentier, pp. 167-8).

"But a few years later, c. 75 B.C., there arose another formidable power on the west. The Scythians (Śakas) of Seistān had occupied the delta of the Indus, which was known thereafter to Indian writers as Śakadvipa, 'the doāb of the Śakas,' and to the Greek geographers as Indo-Scythia. The memory of an episode in the history of Ujjayinī as it was affected by this new element in Indian

shows that there was a separate kingdom there. I therefore infer that foreigners were probably reigning there. If Māhiṣmatī, the capital, was to the south of Ujjayinī in Avanti, and the same as the modern Mandhāta on the Narbadā in the Nimār district of C. P., [1] the province was probably under Śaka rule in the middle of the first century B.C., possibly even after Vikramāditya's driving away of the Śakas from the Ujjayinī region. But Śaka rule also prevailed there in the fourth century A.D., in whose last decade Candra-Gupta II

politics may possibly be preserved in the Jain story of Kālaka, which is told in chapter VI, pp. 167-8. The story can neither be proved nor disproved; but it may be said in its favour that its historical setting is not inconsistent with what we know of the political circumstances of Ujjayinī at this period. A persecuted party in the state may well have invoked the aid of the warlike Śakas of Śaka-dvīpa in order to crush a cruel despot; and, as history has so often shown, such allies are not unlikely to have seized the kingdom for themselves. Both the tyrant Gardabhilla, whose misdeeds were responsible for the introduction of these avengers, and his son Vikramāditya, who afterwards drove the Śakas out of the realm, according to the story, may perhaps be historical characters; and, from the account which represents Vikramāditya as having come to Ujjayinī from Pratishṭhāna, we may infer that they were connected with the Andhras.* It is possible that we may recognise in this story the beginnings of that long struggle between the Andhras and the Śakas for the possession of Ujjayinī, the varying fortunes of which may be clearly traced when the evidence of inscriptions becomes available in the second century A.D.† With the imperfect documents at our disposal, we can do little more than suggest such possibilities. It is hopeless to attempt to discriminate between the elements which may be historical and others which are undoubtedly pure romance in the great cycle of legend which has gathered around the name, or rather the title, Vikramā-

[1] See, C.H.I., I, pp. 173, 531 and map 5, also map in Pargiter's Ancient Indian Historical Traditions.

*These kings belonged probably to the family of Gardabhillas, who appear in the Purāṇas among the successors of the Andhras; see *Kali Age*, pp. 44—6, 72.

†B. M. Cat., *Andhras, etc.*, pp. xxxv, xxxvi.

conquered these parts from the Western Satraps. The passage is therefore indecisive for our purpose and we may pass on to the next king, Suṣea of Śūrasena. This prince is described in v. 46 as belonging to the legendary Nīpa family[1] and the same logic ought to indicate that there was a foreign power reigning in Mathurā regions in Kālidāsa's time. The Śakas were certainly there in the first century B. C.[2] But can any such thing be said in the Gupta period? The Arjunāyanas, an old Kṣatriya tribe,[3] were reigning to the west of the Mathurā region in Samudra-Gupta's time as his feudatories (Allahabad Inscription, l. 22) and Mathurā was certainly included within Gupta territory, as the votive (?)

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ditya, 'the Sun of Might.' Many kings at different periods and in different countries of India have been so styled; and it seems that the exploits of more than one of them have been confused even in those legends which may be regarded as having some historical basis. While it is possible, nay even probable, that there may have been a Vikramāditya who expelled the Śakas from Ujjayinī in the first century B.C., it is certain that the monarch who finally crushed the Śaka power in this region was the Gupta emperor, Candra-Gupta II Vikramāditya (380—414 A.D). Indian tradition does not distinguish between these two. It regards the supposed founder of the era, which began in 58 B.C., (p. 571), and the royal patron of Kālidāsa, who lived more than four hundred years later, as one and the same person." (Rapson, pp. 532-3).

I am trying to show that our poet lived in the court of Gardabhilla's son (Vikramāditya) and not Candra-Gupta II (Vikramāditya). But I am not concerned with the personality of the founder of the Sambat Era. Sarasvatī, referred to above in my text, was Kālakācārya's sister and a nun. Gardabhilla violated her and brought on himself the vengeance of Kālaka Sūri.

[1] Nīpa, the founder of the line belongs to the South Pañcāla dynasty and is No. 66 in Pargiter's list (Ancient Indian Historical Tradition, p. 148). See *ibid.*, pp. 117, 166, 281.

[2] See Kālakasūriprabandha (in Prabhāvakacarita), v. 67 "पञ्चालललाटदेशेशभूपान् जित्वाथ सर्वतः। शका मालवसन्धिं ते प्रापुराक्रान्तविद्विषः॥," V. A. Smith, E.H.I.[4], p. 241; Rapson, C.H.I., I, p. 526.

[3] Gaṇapāṭha on Pāṇini, IV, 2. 80; C.H.I., I, p. 526.

stone inscription at Mathurā of Candra-Gupta II (Fleet's No. 4) clearly indicates. Kālidāsa's mention of a king at Mathurā and the manner of his description can therefore be understood only in the first century B. C. As Kālidāsa's contemporary ruler (or Satrap) of Mathurā did not belong to a native dynasty, he had to select Indumatī's contemporary from the pre-historic period. But does "नृपं तमावर्तमनोज्ञनाभिः सा व्यत्यगादन्यवधूर्मनस्विनी। महीधरं मार्गवशादुपेतं स्रोतोवहा सागरगामिनीव॥" (v. 52) indicate that Kālidāsa was now thinking of the contemporary ruler, an undesirable foreign Satrap, fit to be likened to an obstruction?

The next king is Mahendra of Kaliṅga about whom I have already said much. The reference to the Spice Islands and their produce in verse 57 ("द्वीपान्तरानीतलवङ्गपुष्पैरपाकृतस्वेदलवा मरुद्भिः") is, as pointed out by Mr. Sankara,[1] intelligible after 75 B. C., the date of Kaliṅga colonisation of Sumatra and is a humorous bit of anachronism in Kālidāsa's usual style. I shall once again draw attention of my readers to Ra. VI, 58 *c. d.* "तस्मादपावर्तत दूरकृष्टा नीत्येव लक्ष्मीः प्रतिकूलदैवात्" and my explanation of it in the light of Khāravela's mischiefs in the territory of the Bhojakas.[2] After Mahendra comes the king of Pāṇḍya to whom Kālidāsa has forgotten to give a name[3]. I need not say here anything more about this king. "सञ्चारिणी दीपशिखेव रात्रौ यं यं व्यतीयाय पतिंवरा सा। नरेन्द्रमार्गाट्ट इव प्रपेदे विवर्णभावं स स भूमिपालः॥" probably sums up without specific mention Indumatī's passage before some other kings. We have next the description of Aja and Indumatī's bashful acceptance of this prince. As Aja belongs to the original story we should

[1] I.H.Q., I, p. 315.

[2] That Rāṣṭrikas and Bhojakas do not mean particular peoples, outside the Kaliṅga territory, but Khāravela's own provincial and local (!) governors (Lüder, E. I., X, suppl. p. 161, R. D. Banerji, J. B. O. R. S., III, p. 500) seems impossible to me. I have Mr. Jayaswal (J.B.O.R.S., III, p. 455) and Mr. Rapson (C. H. I., I, p. 535) on my side. Mr. Jayaswal rightly says, "But nobody would think it important enough to mention in an inscription the respect one receives from one's servants or officers."

[3] Or was it because the poet could not coin a name from the Purāṇas for the "इन्दीवरश्यामतनुः" Dravidian chief?

not suppose that Kālidāsa has alluded to a contemporary king of Ayodhyā. No historical conclusion should therefore be drawn from this separate mention of the state of Uttara-Kośala[1] and I must now take leave of the sixth canto of the Raghuvaṃśa.

But leave of the Raghuvaṃśa we may not take yet. The Gupta period theorists will say here that allusions to the Gupta kings and to their family are too many and too obvious in the Raghuvaṃśa to admit of any explanation other than the Gupta patronage of Kālidāsa. But we should remember that the Guptas are not really kings of Avanti with which tradition associates Kālidāsa's Vikramāditya and where the poet certainly lived. The large number of derivatives of the root *gup*[2] are noticed in Kālidāsa only

[1] The Gupta period theorists need not therefore be troubled by the fact that Ayodhyā was included within and was a capital of the Gupta empire (V. A. Smith, E. H. I.*, p. 310). My own attitude is just this : I do not want to read history, where it is not called for. The texts should be studied from their own points of view and if any historical conclusions can be deduced they should not contradict the internal data of the texts. This is unfortunately not usually done ; in the question of Kālidāsa's date, we have often theory first and interpretation of the text afterwards, instead of text before theory. Similarly historical facts should not be interpreted in the light of Kālidāsa and then compared with his own statements ! Mr. Radha Govinda Basak's paper on the "Historical basis for Raghu's conquests" though very learned and full of acute suggestions is vitiated by this mixing up of evidence. "तत्र स्कन्दं नियतवसतिं... ...रक्षाहेतोः..... .वामवीनां चमूनाम..." in Me. 47 (or 44) is taken to suggest "that at the time of the composition of that great lyric Skanda-Gupta had his residence fixed in Avanti, probably in Ujjain and that he was placed in charge of the king's (cf. the title *Mahendrāditya* as used by king Kumāra-Gupta I) army." (Proceedings of the Calcutta Oriental Conference, p. 326). But unfortunately for Mr. Basak, Kālidāsa places Skanda not in Ujjayinī but on Mount Devagiri (mentioned in the previous verse) which is at some real distance from that city. How is it also known that Skanda-Gupta as a prince was a general of his father's troops stationed in Ujjayinī ? The chronological order of the different works of Kālidāsa should also be fixed on purely internal evidence and not on supposed historical allusions. The Kumārasambhava which is certainly earlier than the Raghuvaṃśa is placed by some scholars after that work just to suit the theories about the historical allusions !

[2] To which Professor Dr. Meghnad Saha of our Physics Department draws my attention.

on account of the theory. *A similar list can be made out from Aśvaghoṣa's works but no one will dare suggest that the Buddhist philosopher lived in the Gupta period. Samudra* and *Candra* are too familiar terms in poetic vocabulary to call for any especial notice or historical explanation in the case of Kālidāsa's use. I would not urge any grammatical objection against the late Mr. Harinath Dey's interpretation of "आसमुद्रक्षितीशानाम्" (Ra. I., 5), for a secondary meaning of 'lords of the earth since Samudra-Gupta' is *a-priori* not impossible.[1] But when I compare the other alleged references to Samudra-Gupta or Candra-Gupta I lose all faith in this method. If the Guptas were lords of the earth since Samudra-Gupta, the poet could not possibly speak of his son Candra-Gupta II as *purer* than him; for that would be the meaning of Ra. I, 12, "तदन्वये शुद्धिमति प्रसूतः शुद्धिमत्तरः। दिलीप इति राजेन्दुरिन्दुः क्षीरनिधाविव ॥." Above all, Ra. XVII, 71 "प्रवृद्धौ हीयते चन्द्रः समुद्रोऽपि तथाविधः। स तु तत्समवृद्धिश्च न चाभूत्ताविव क्षयी" clearly shows that Kālidāsa never wanted to flatter the Gupta kings Samudra-Gupta and Candra-Gupta II. If Dilīpa is incidentally likened to Candra-Gupta II, born of Samudra-Gupta, in Ra. I, 12, how do you explain Ra. III, 17 "निवातपद्मस्तिमितेन चक्षुषा नृपस्य कान्तं पिबतः सुताननम्। महोदधेः पूर इवेन्दुदर्शनाद् गुरुः प्रहर्षः प्रबभूव नात्मनि ॥," where the self-same Dilīpa is compared to *Samudra* (or its swelling) and his son Raghu to *Candra*? Why do you notice only such passages as suit your theory and overlook the rest? An unprejudiced study of these references should convince one that Kālidāsa has used only the language of poetry and he has in his usual way[2] constantly varied his similes. As regards the alleged frequent references to Kumāra or Skanda, they may be also paralleled from the Buddhacarita; and we should not blind ourselves to

[1] Nor would I say with a well-known Professor of English at Calcutta that Kālidāsa has even referred to Candra-Gupta's *Śālā* (Bengali for *Śyāla*='brother-in-law') in Ra., XIII, 40 "वियद्गतः पुष्पकचन्द्रशालाः" etc.

[2] Kālidāsa's rich fund of similes is proverbial.

the fact that Kālidāsa was a devout Śaiva[1] and frequent references to Śiva's son would be but natural here. I have already suggested one possible historical ground for the writing of the Kumārasambhava. Kālidāsa may also have been making frequent visits to the temple of Kārtikeya in Mount Devagiri, alluded to in the Meghadūta. Speaking of historical allusions, I may refer to Ra., VIII, 2 "दुरितैरपि कर्तुमात्मसात् प्रयतन्ते नृपसूनवो हि यत् । तदुपस्थितमग्रहीदजः पितुराज्ञेति न भोगतृष्णया ॥," where the poet has probably the well-known parricide Ajātaśatru in mind. The allusion, if meant, could hardly be understood in the fourth or fifth century A.D. Bāṇa, writing in the seventh century, has preserved for us many anecdotes of the Śuṅga period but he has throughout given us the names. Kālidāsa, if writing in the first century B.C., did not need to take the name of Ajātaśatru and his indirect reference[2] could be easily understood by his contemporaries.

The possible transference of the Gupta capital to Ayodhyā is supposed by some to have been alluded to in Kuśa's return to Ayodhyā, described in Raghuvaṃśa, Canto XVI. But Kuśa *returned* to Ayodhyā and did not go there for the first time, as the Guptas did, and Kuśa's return is most probably *given* in the legends from which Kālidāsa draws his story and not invented by the poet. The establishing of a second capital at Ayodhyā may, on the other hand, have been as much due to a wish to rival or at least imitate the glories of the famous Ikṣvākus (so beautifully sung by two of India's greatest poets) as to administrative necessities. Pure administrative necessity would probably have led to the choice of a more westerly city like Mathurā or a more central place like Allahabad. We should remember that the Guptas were Hindu revivalists and they would

[1] Compare, among others, the *nāndī-ślokas* of the Mālavikāgnimitra, the Vikramorvaśīya and the Abhijñānaśakuntala, the *bharata-vākya* of the last, the first verse of the Raghuvaṃśa and the theme of the Kumārasambhava.

[2] Of course, if meant.

naturally choose a royal city famous in Hindu tradition. Some direct influence of Kālidāsa's Raghuvaṃśa is possible here. I have already spoken of a possible influence of this epic on the conduct of Samudra-Gupta. I have a suspicion that the early Gupta kings were great admirers of Kālidāsa's works. One work of our poet was probably carried to Magadha (and Bengal) by some Gupta king. The Bengali recension of the Śakuntalā spells the name of the hero as *Duṣmanta*,[1] whereas all other texts spell it as *Duṣyanta*, even the Kashmir recension[2] which is in many respects similar to the Bengali text. The inference is natural that in the first codex of the drama brought to Bengal the subscript *y* was misread as *m*. The two letters, therefore, or their forms in subscript were so very similar that one could be mistaken for the other ; but as *y* seldom changes form in a ligature the ordinary letters *y* and *m* must have had the same look. We find this similarity in the Bilsaḍ Stone Pillar Inscription of the time of Kumāra-Gupta (Fleet's No. 10, Plate V).[3] I therefore infer that the arch codex of the Bengali Śakuntalā was brought some time in the reign of Kumāra-Gupta or in that of his father Candra-Gupta II, the conqueror of Mālwā. A drama would ordinarily circulate within narrow limits, unless specially favoured by the position of the writer. But a good poem would reach distant regions earlier than the dramas of the same author. Aśvaghoṣa's Śāriputraprakaraṇa, for example, had a more limited circulation[4] than his poems. Similarly Kālidāsa's dramas too may have been for long confined more or less to the Malwan stage and been carried to distant Magadha and Bengal by

[1] See, e.g., Pt. Prem Chand Tarkavāgīśa's text, Calcutta, 1860, p. 3.

[2] See Burkhard's Die Kashmirer Sakuntalā-Handschrift, Vienna, 1884, p. 21.

[3] See Table IV, column IV, rows 31 and 32 in Bühler's Indische Palaeographie (Tafeln) and the form of the *m* in *Brahmaṇya-devasya* of the Bilsaḍ Inscription, l 7, in Fleet's plate.

[4] As is clearly indicated by its total disappearance from India.

only Candra-Gupta II, conqueror of Malwa, or his son. In mediæval Bengali versions of the Śakuntalā story and in some Bengal manuscripts of the Mahābhārata too we find the spelling *Duṣmanta*, obviously under the influence of the popular drama of Kālidāsa as current in Bengal. But there are manuscripts in Bengali character, e.g., some of the Mss. of the Padmapurāṇa used by my friend Professor Haradatta Śarmā for his text of selections from the Padma-Purāṇa,[1] which spell the name as *Duṣyanta*.

That the nineteenth canto of the Raghuvaṃśa was not the last, as Mr. S. P. Pandit supposed,[2] cannot be seriously believed. The fact that the poet has rushed a number of unimportant kings through the eighteenth canto shows that the poet is coming towards the end. But an artistic winding up required that there should be a little more leisurely movement and we have that in the nineteenth canto. The amours of Agnivarṇa in the last canto of the Raghuvaṃśa correspond to the eighth canto of the (unfinished) Kumārasambhava, the last that left his pen. But this nineteenth canto of the Raghuvaṃśa does not show that the writer was a voluptuary; Kālidāsa's moral tone is fully manifest in vv. 48—53. Agnivarṇa's tragical culmination conveys a moral and is suggestive to historians. Kālidāsa probably saw the inglorious end of a glorious line of kings through the debaucheries of the last king. And that line was most probably the family of the Śuṅgas with whom Kālidāsa was in deep sympathy and the Agnivarṇa among the Śuṅgas was probably Devabhūmi who was slaughtered by his indignant Brahmin minister Vasudeva.[3] It should be noticed that Kālidāsa makes the ministers of Agnivarṇa hide the news of the king's death and secretly

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[1] Padmapurāṇa and Kālidāsa, Calcutta, 1925.

[2] Preface to his edition of Ra., Vol. III, preface, pp. 14-18.

[3] "अमात्यो वसुदेवस्तु बाल्याद् व्यसनिनं नृपम्। देवभूमिं तथोत्पाट्य शुङ्गेषु भविता नृपः" (Pargiter, D.K.A., pp. 33-4), "अतिस्त्रीसङ्गरतमनङ्गपरवशं शुङ्गकुलजमात्यो वसुदेवो देवभूतिदासीदुहिता देवीव्यऽजमदा वीतजीवितमकरोत्।" (Harṣacarita Uc. VI, Vidyāsāgar's ed., p. 173, Nirnaysagar ed., p. 199).

consume his body in fire under the pretext of performing some propitiatory rites for the king's recovery. Some connexion with what Vasudeva Kāṇva did is quite evident. I may also point out that the names of many of the Śuṅga kings ended in—*mitra*=the Sun and the Śuṅgas could therefore be thought of in connexion of the Raghus of the solar race. Another sensual king could have been also thought of by our poet when he wrote of Agnivarṇa, *viz.*, Gardabhilla of Avanti, who brought on great misfortune to his whole kingdom by his debaucheries culminating in the forcible abduction of Sarasvatī, the sister of Kālakācārya. It is possible, as I have said already, that this Gardabhilla came at the end of the Gardabhilla dynasty and was not Gardabhilla I.[1] Nurture of his son (Vikramāditya) under Śātavāhana protection and the regaining of the family glory through that prince may have something in common with the careful nourishing of the posthumous son, the hope of Agnivarṇa's line, referred to at the end of the Raghuvaṃśa. *Āditya* of the Malwan prince's name or epithet easily lends itself to a veiled comparison with the kings of the solar dynasty. The Raghuvaṃśa was, therefore, not purely tragical in its culmination; it ends with a hope for a glorious king.

That Kālidāsa could be contemporary with Agnimitra, as is inferred by Mr. S. Ray[2] from only the *bharata-vākya* of the Mālavikāgnimitra, "**आशास्यमभ्यधिगमात् प्रभृति प्रजानां सम्पद्यते न खलु गोप्तरि नाग्निमित्रे**", seems to me to be altogether impossible. Agnimitra's foibles as well as his excellences and also those of Irāvatī (and Dhāriṇī) are described in the drama with a certain amount of humorous freedom and it is absurd that a contemporary poet could thus flatter Agnimitra. That there is something strange in the *bharata-vākya* I admit; but acknowledging a problem is better than offering a cheap

[1] The Śaka interregnum would create a gap and continuity of the line through this gap would not be spoken of. A culmination of the line in Sarasvatī's transgressor seems therefore more natural.

[2] Śakuntalā, 5th ed., 1920, Introduction, pp. 28, 29.

explanation. Kālidāsa could simply have begun his literary career when the Śuṅgas were still reigning and the Mālavikāgnimitra certainly belongs to this early period.[1] It is also possible that the regular type of the Bharatavākya had not yet been fixed by usage. I have already drawn attention to the fact that Bāṇabhaṭṭa has preserved some Śuṅga traditions. It is therefore *a-priori* not impossible for a fifth century writer, living in Malwa, not far from Vidiśā, the home of the Śuṅgas, to know much of these princes. Still so many are the minute historical details preserved in the Mālavikāgnimitra—details such as tally with known facts and are such that critical scholars of the present day feel disposed to utilise for the construction of history[2]—that it is difficult to believe that they could be all remembered after six or seven centuries. I therefore think that Kālidāsa wrote his drama within a century of the reigns of Puṣyamitra and Agnimitra, when their memory was still fresh in popular memory. The Mālavikāgnimitra was Kālidāsa's first drama[3] and he was then a novice in his art. He would therefore hardly dare to be very original in his story and would rather follow facts closely. It is probably in the love incidents alone that Kālidāsa has been original—even Mālavikā's misfortunes and subsequent admission into Agnimitra's household and marriage with him may have been given by history. However, I do not wish to press the evidence of the Mālavikāgnimitra for fixing Kālidāsa's date, for I cannot prove that Kālidāsa had not some *kāvya* or historical work about the Śuṅgas before him. A later drama, the Mudrārākṣasa,[4] reproducing

[1] Either Devabhūmi (82-72 B.C. ?) or his predecessor Bhāgavata (114-82 B.C. ?) may have been then reigning.

[2] *Cf.* Rapson, C.H.I., Vol. I, Ch. XXI.

[3] Compare the apologetic tone in the prologue.

[4] The date of this drama is wholly uncertain but that it belongs to a post-Christian epoch (perhaps later than the century to which Kālidāsa is usually assigned) may be taken for granted. See Keith, Sanskrit Drama, p. 204.

Opposite to p. 157.



Terracotta Plaque from Bhitā. (Reproduced from photograph kindly supplied by the Director-General of Archæology, India.)



The same. (Reproduced from the Cambridge History of India, Vol. I, by kind permission of the Cambridge University Press, London.)

traditions of a still earlier epoch was based, according to Dhanika, on the Bṛhatkathā.[1]

The evidence of the Bhiṭā medallion, on which Mr. S. Ray[2] has pinned his faith so much, fails to convince me, and I shall not cite it in favour of a first century B.C. theory. How can we be altogether certain that it is a work of the Śuṅga period? Then, does it really picture the opening scene of the Śakuntalā? We have a fine reproduction now of the medallion in an easily accessible volume[3] and its close scrutiny reveals important differences. There is no deer running before the horses. It cannot be urged that want of space to the right hand side induced the engraver to put the deer at the bottom, for we have two animals there and not one as in Kālidāsa's story. Then Kālidāsa makes two hermits (three in the Devanāgarī recension) come and stop the king from his cruel quest, whereas we have here only one individual standing before the horses, with hands outstretched (to bid the party welcome?). Again, the person driving the horses with a whip in his right hand looks youthful and has got something like a crown on his head and can hardly answer to Duṣyanta's elderly charioteer. The other person seated on the chariot has neither a crown on his head nor a bow in his hand. Then again, who are the individuals at the top of the medallion? With all these fundamental differences, how can the picture represent the opening scene of Kālidāsa's immortal drama? I therefore set aside the allegation that its testimony places Kālidāsa in the first century B.C. or earlier,[4] and I place

[1] Avaloka of Dhanika, com. on the Daśarūpaka, Nirnaysāgar edition, Bombay, 1917, p. 34. No such tradition is on record about Kālidāsa's obligations. May we, not therefore conclude that he had only living memory of the Śuṅgas to go by?

[2] Śakuntalā, Introduction, pp. 9-10. Mr. Sankara too has used its testimony with approbation (I.H.Q., Vol I, p. 313).

[3] Cambridge History of India, Vol. I, Plate XXIX. See two impressions of the plaque in the annexed plate.

[4] With much diffidence I propose to take the plaque as depicting the scene of the aged man sent by the gods (pictured at the top?) to create the first impression of *vairāgya* in the prince Siddhārtha's

my hopes on the nature of the resemblances between Aśvaghoṣa and Kālidāsa, as hinted in my *pratijñā* verses. My case fails if those resemblances (by the decisive character of some and the cumulative effect of the rest) do not establish my point. But my present conviction is that they do[1] and in such a way that if Kālidāsa is not removed from the fourth or the fifth century after Christ, Aśvaghoṣa will have to be brought down from the Kuṣān period or all the passages in his works resembling Kālidāsa will have to be pronounced as post-Kālidāsean interpolations. If such an *abhyupagama* is made by anybody for the sake of argument, I am certainly silenced. But

" उत्पत्स्यतेऽस्ति मम कोऽपि समानधर्मा, कालो ह्ययं निरवधिर्विपुला च पृथ्वी."

I have not answered one very strong set of arguments, against an early date for Kālidāsa, viz., those based on Kālidāsa's knowledge of (Grecian) astronomy and astrology. This I leave to more competent hands. I may, however, ' द्विजातिभावादुपपन्नचापल : ' make a few remarks here. Kālidāsa certainly knew the *rāśis* and the planets and probably also the *lagna* (and perhaps the week days too). But when the Sarnath inscription of Rājā Aśvaghosa of c. 150 A.D.[2] clearly indicates the knowledge of solar days and consequently of *rāśis* on which they are based and when Āryadeva in the same century mentions *vāra* and *rāśi*,[3] when the Divyāvadāna (XXXIII, p. 642) and the Baudhāyana Dharma Sūtra (II. 5.23) show a knowledge

mind, when he was out on a drive. The man in front whom I take to be stretching out his hands in welcome may really be the old man with no control over his limbs. [I am informed by Rai Bahadur Daya Ram Sahni that some Buddhist remains have been discovered in that region.]

[1] Of course such scholars as do not already possess an intimate acquaintance with Kālidāsa and Aśvaghoṣa will not be convinced by what I have said above but such an acquaintance is essential for the correct evaluation of all internal evidence. As limitations of space obliged me to be very brief in comparing the two writers, I fear much of what I have said will remain obscure to my readers, unless they should have the texts discussed open before them when going through this paper.

[2] Lüder's No. 922, E.I., Vol. VIII, pp. 171-2.

[3] J.A.S.B., 1898, p. 181.

of the planets, why must Kālidāsa's knowledge be made possible after 200 A.D.? Archæologists often unconsciously suggest by their writings that inscriptions give currency to a usage,[1] but others may be excused if they believe that it is prevalent customs and knowledge that they reflect. Kauṭilya, as admitted in Mr. Sankara's earlier paper,[2] shows some knowledge of planets and their conjunctions. Though the genuineness of the Arthaśāstra is now doubted in several quarters, I am personally certain that it is a work of the fourth century before Christ.[3] Cannot a further increase of

[1] See, *e.g.*, Prof. Dr. Bhandarkar in the Bhandarkar Commemoration Volume, p. 189, ll. 10-13.

[2] Q.J.M.S., IX, p. 21.

[3] The work has the stamp of antiquity on it. Even the vocabulary and syntax bespeak an early date. The *vidyāsamuddeśa* section should be particularly noticed. Its four-fold division of the *vidyās* attained such popularity that the author of the metrical Manu-Smṛti, based on a Mānava Dharma Sūtra, adopted it, though the Mānavas in olden times accepted only three *vidyās*, an information known both from the Arthaśāstra and the Nītisāra of Kāmandaka. The Manu-Smṛti is usually assigned to about 200 A.D. But my study has led me to the conclusion that the work is nearer the upper limit assigned by Bühler than the lower one. Mr. Jayaswal has placed its composition in Puṣyamitra's time and M.S.,I. 99-101, II. 87, etc., support him. The Arthaśāstra should therefore be earlier than the second century B.C. That Kauṭilya defines Ānvikṣakī as Sāṅkhya, Yoga and Lokāyata should also prove his antiquity. Vātsyayana, the author of the Nyāya Bhāṣya, who certainly lived before 400 A.D. (Keith, Indian Logic and Atomism, pp. 27-8) obviously refers to "प्रदीपः सर्वविद्यानामुपायः सर्वकर्मणाम् । आश्रयः सर्वधर्माणां शश्वदान्वीक्षकी मता ॥" of the Arthaśāstra, *vidyāsamuddeśa* section (2nd ed., p. 7), in his own "सेयमान्वीक्षकी,...प्रदीपः सर्वविद्यानामुपायः सर्वकर्मणाम् । आश्रयः सर्वधर्माणां विद्योद्देशे प्रकीर्तिता ॥" (Nyāyabhāṣya, Viz. ed., p. 7). It should be noticed that with the author of the Arthaśāstra, Ānvikṣakī means Sāṅkhya, Yoga (=Vaiśeṣika ?) and Lokāyata, whereas Vātsyāyana understands it in the sense of Nyāya alone. Why is it that comparisons are made between Megasthenes and Kauṭilya to decide on the latter's date ? Tradition says that Cāṇakya retired to forest after leaving Candragupta's government under the charge of Rākṣasa. If he wrote a manual of politics for the guidance of the Maurya, its dictates would not be necessarily binding on the conduct of Rākṣasa or his royal master. The mistake is commonly made that actual practice can be gauged from the law books. But unfortunately there has always been a great difference between theory and practice. Non-mention of Kauṭilya in Megasthenes' work cannot cast any doubt on his existence for tradition makes the Brahmin

knowledge, resulting in the use of *rāśis* and of week days, be understood in two or three centuries more? Most of the astronomical or astrological concepts found in Kālidāsa were evolved in Greece [1] earlier than the middle of the first century B.C.,

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return to his forest almost immediately after Candragupta's accession and the foreign ambassador would neither meet him nor hear of him. Besides, we cannot be sure that Megasthenes did not refer to him for his work has not come down to us in its entirety but only in a few quotations in other works. It is notorious that writers of summaries often omit important facts. Can we therefore expect that the Greek and Roman historians or naturalists, who have quoted, paraphrased or summarised such passages in his work as had a bearing on their respective topics, have, between them, preserved for us all that was important in the *Indika*? I have therefore little faith in the conclusions of Dr. Otto Stein, though Professor Dr. Winternitz and some other scholars have accepted them. There are fairly old traditions extant for Kauṭilya=Cāṇakya's authorship of a text on Statecraft and we may safely believe that the text published by Dr. Shama Śāstri is in its essentials the same as left the pen of Candragupta's first minister in the fourth century B.C. The figure given by the seventh century writer Daṇḍin for the extent of the work—"इयमिदानीमाचार्यविष्णुगुप्तेन नीत्यर्थं षड्भिः श्लोकसहस्रैः संक्षिप्ता" (Daśakumāracarita, 8th Ucchvāsa, N.S.P. ed. 1917, p. 256)—agrees with the Mysore text. The "*idānīm*" ('now') in Daṇḍin's statement may perhaps be with reference to the characters of the story who are placed in an early age. Dr. N. Law has given us a lengthy reply (Cal. Rev., Sept.-Dec. 1924) to Professor Winternitz's objections. Some more discussion of the question is expected shortly from Dr. Law and other scholars especially over Dr. Stein's recent evidence of *suruṅgā*= συριγξ. [See H. C. Ray on the Arthaśāstra in recent numbers of the I. A.] Whatever date scholars may finally agree upon for the Arthaśāstra, my position about Kālidāsa remains unaffected.

[1] I may not speak of the ultimate Babylonian source of Greek astronomy (and astrology), not even in view of the recent findings at Harappa and Mahenjo Daro, for I am contented to accept immediate Grecian origin of a good deal of Kālidāsa's astral lore. *Jāmitra*, if that is the true reading of Ku., VII. 1, is certainly a (happy) Sanskritisation of the Greek διαμετρον—to be paralleled by the "হৃষিদ্" of a nineteenth century orthodox Pandit of Bengal for the English word 'stupid.' But the system of seven-day weeks need not have been borrowed from Greece or Rome. The system was in currency in Western Asia since earliest times (En. Br. [11] IV, p. 988), whence India could have obtained it directly. As regards the supposed Sumerian findings of the Indus region, it is too early to use their implications. The Aryans may have entered India after the Sumerians (or Elamites or whoever they may have been) left the land (or migrated southwards?) or may have failed to learn anything substantial from these more civilised natives at the first blush of their acquaintance; we have a parallel

at least about 125 B.C., when Hipparchus made his calculations.[1] This astronomer knew, as Mr. A. C. Banerji of our Mathematics Department assures me, of all these things (and even of the precession of the Equinox). Could not these ideas have entered at least some part of India in the first quarter of the first century B.C. ? In historical arguments, India is often looked upon as a small country where the same knowledge and the same customs are supposed to prevail equally everywhere. But, unfortunately, India has always been (and even now is) a vast continent, where knowledge and customs have differed (and do still differ) from province to province. Avanti in Western India was in the first century B.C. in almost as active communication with Greece and Rome, through the port of "Barygaza" (=Bhṛgukaccha), as the extreme south ;[2] much astronomical lore could thus pour into Ujjayinī from the West through sea-faring merchants. That city early became a strong centre of astronomical studies and scientific astronomy would evolve

case in Greek history. Direct contact between western India and western Asia is, however, testified to by the Bāveru Jātaka (the Suppāraka Jātaka) and the Periplus of the Erythræan Sea. There could thus be a substratum of Babylonian astronomy in the astral science of Ujjayinī, which could quickly acquire a scientific character under the influence of Hipparchus and others.

[1] See Encyclopædia Britannica, 11th. ed., vol. II, p. 797, for the date and origin of Greek astrology.

[2] See, among others, H. G. Rawlinson's India and the Western World, Ch. V and VI. To quote Professor Keith, "We know that Alexandria under the Lagidai became a great centre of Greek learning, and that between Alexandria and Ujjayinī through the port of Barygaza there was a brisk exchange of trade which may have aided in intellectual contact." (Sanskrit Drama, p. 60). The Lagidea are the Ptolemies who reigned in Egypt from the fourth century B.C. to the first. Hipparchus though a native of Bithynia (in Asia Minor) resided for some time in Alexandria (see Smith, Dictionary of Greek and Roman Antiquities). It was from Barygaza that the embassy of king Pandion or Poros sailed about 27 B.C. (Strabo XV. 73). See Periplus of the Erythræan Sea (§ 48) about the trade connexions of Ujjayinī with Europe in the first century A.D. (and earlier ?). Ujjayinī was "the great emporium of the period." (C.H.I., I. 517). See also Sten Konow in Modern Review, April, 1921, p. 467, c. 2.

there earlier than in many other parts of India. If Kālidāsa, a man of this region, shows a knowledge of scientific astronomy in a rather early epoch, one should have no matter for surprise. The manner in which Kālidāsa has paraded his astronomical learning indicates the popularity of the study in that region, and probably also its recent introduction there. The Mṛcchakaṭika, which I believe to be of about the same age, also makes astrological references (IX. 33, etc.). The Śātavāhana prince Hāla writing in the first century A.D. in the Andhra country shows a knowledge of week days (Sapta-Śatī III. 61), and that implies much knowledge of scientific astronomy and cognate astrology.[1] The close relation that the Andhras had with Ujjayinī in this period is well-known.[2] Can we not suppose that Kālidāsa living in Ujjayinī in the previous century possessed the knowledge of week days, *rāśis*, planets and all that gear? Ujjayinī may have been an emporium not only of merchandise but also of scientific ideas. That Kālidāsa does not seem to possess a scientific knowledge of the cause of an eclipse[3] should speak for his antiquity. I could not therefore find anything in the astronomical objections to necessitate the abandoning of Aśvaghoṣa's testimony. I cannot help believing that *the current theories about the date and nature of borrowings from Greek Astronomy stand badly in need of revision.*[4]

[1] See in this connection K. P. Jayaswal in I. A., 1918, p. 112.

[2] C.H.I., I. pp. 531-4.

[3] The interpretation of Ra., XIV. 40 proposed by S. P. Pandit has long been abandoned by scholars. The *mala* of the Moon is not the occasional obscurity but the constant dark spot. Kālidāsa is therefore earlier than, at least, Āryabhaṭṭa (500 A.D.).

[4] I could not understand the significance of Mr. Sankara's remarks: "Now the Balance (*tulā*), which always figures as a distinct sign in Hindu astrology, was unknown even to Hipparchus (c. 125 B.C.) and appears first in Geminus and Varro (c. 100 B.C.). Kālidāsa must therefore have lived after 100 B.C." (I. H. Q., I, p. 315). What has Kālidāsa to do with the *tulā*? He does not name it. The *tulā* would form the *jāmitra* "house" only if the *lagna* was in *meṣa*. It is not true that this *rāśi* was not in the Zodiac before Geminus and Varro. The Zodiac was divided into 12 "houses"

When discussing the date of Kālidāsa I have kept in mind only the scholars who decide in favour of the fourth or fifth century A.D., because I can never seriously think of the sixth century as a possible time for our poet's life. Vatsabhaṭṭi, the writer of the Mandasor Inscription of the time of Kumāra-Gupta II and Bandhuvarman (Fleet's No. 18—of c. 474 A.D.), was most certainly under the influence of Kālidāsa's writings.[1] And our poet can never be placed after him. I have read the inscription carefully and I could find nothing to doubt the obligation of the writer to Kālidāsa, already surmised by several scholars.[2] I have also noticed the influence of Kālidāsa in the Bhiṭāri Stone Pillar and the Junnagarh Rock inscriptions of Skanda-Gupta; but I reserve all this for a separate treatment. Bhāravi too can never be placed before Kālidāsa (see I. A., 1918, pp. 249-250). One scholar who believes in the sixth century theory gave me as his reason the fact of India being divided into a number of petty principalities in that century, a condition reflected in the Raghuvaṃśa. But similar conditions also prevailed in the first century B.C. when after the disintegration of the Maurya Empire and the subsequent collapse of the Śuṅgas,

since very early times. Only the "house" corresponding to the present "Balance" had no *special name*: the "Scorpion" was extended across the seventh and eighth divisions. "Libra" ('Balance') was not of Greek invention. Ptolemy, who himself chiefly used the 'Claws' (χηλαί—part of the 'Scorpion'), speaks of it as a distinctly Chaldæan sign; and it occurs as an extra-zodiacal asterism in the Chinese sphere" (Encyclopædia Britannica, 11th ed., vol. xxviii, p. 994—see the whole article on "Zodiac"). There were 12 divisions but only 11 symbols; Geminus and Varro only introduced a *name* for the seventh *rāśi*. I beg to take exception to another statement of Mr. Saṅkara. He ascribes Amarasiṃha, the famous lexicographer, to the 6th century A.D. "as he follows Varāha and not Āryabhaṭṭa in equating the *manvantara* with 71 instead of 72 *mahāyugas*" (I. H. Q., I. p. 310). But Amara seems to have really followed the Manu Smṛti (I. 79), which was certainly written several centuries before the times of Āryabhaṭṭa and Varāhamihira.

[1] See Keith in J.R.A.S., 1909, pp. 433-4.

[2] Bühler, Kielhorn, Macdonell, Keith, Mr. Dhanapati Banerji, and others.

North India was divided into a number of small kingdoms, a condition further accelerated by the Śaka settlements in three regions, the Punjab,[1] Mathurā and Western India. In South India too, we have the Andhras (with their feudatories), the Kaliṅgas and the other Dravidian powers unapproached even by Aśoka.

It will probably be improper for me to make no mention of the historical reference read by Mallinātha in Me., I. 14, "अद्रेः शृङ्गं हरति पवनः किंस्विदित्युन्मुखीभिर्दृष्टोत्साहश्चकितचकितं मुग्धसिद्धाङ्गनाभिः। स्थानादस्मात् सरसनिचुलादुत्पतोदङ्मुखः खं दिङ्नागानां पथि परिहरन् स्थूलहस्तावलेपान् ॥."[2] Mallinātha reads here an allusion to the rivalry between a poet Nicula and the Buddhist logician Diṅnāga, both contemporaries of Kālidāsa, and he proposes a second meaning of the verse in consonance with this allusion. The best view about Vasubandhu's date seems now to be that he lived in the first half of the fourth century A.D.[3] and if Diṅnāga was his pupil, as Buddhist

[1] It is because foreigners were reigning in the Punjab for a very long time (longer than in Mathurā or Kaṭhiāwāḍ) that Kālidāsa makes no suitor come from there for Indumatī's hand.

[2] Particularly when my friend Pandit Amarnāth Jhā, M.A., of our English Department asks me to answer the chronological difficulty created by it.

[3] See V. A. Smith, E. H. I.[4], pp. 346-7, on the basis of M. Peri's work in B. E. F. E. O. It is however no longer possible to connect Vasubandhu with the son (Samudra-Gupta) of Candra-Gupta I on the supposed authority of Vāmana for the true reading of the passage (Kāvyālaṅkāra Sūtra, III. 2,2) seems to be "तात्पर्यं यथा—'सोऽयं संप्रति चन्द्रगुप्ततनयश्चन्द्रप्रकाशो युवा। जातो भूपतिराश्रयः कृतधियां दिष्ट्या कृतार्थश्रमः ॥' आश्रयः कृतधियामित्यस्य च सुबन्धुबाणश्लेषोपहतत्वात्तात्पर्यम् ॥" (N. S. P. ed., 1895, p. 32). This Subandhu, we now know, is not the author of the highly artificial prose romance Vāsavadattā, nor is the Candragupta the Gupta king of that name. The Avantisundarīkathā informs us that this Subandhu was a contemporary of the Maurya Emperor Candragupta and his son Bindusāra (p. 1); and this text and the Abhinava Bhāratī tell us that the poet captivated Bindusāra's heart by writing a drama named *Vāsavadattā-Nāṭṭa (ṭya ?)—dhārā*. *See* M. Ram Krishna Kavi's paper, "Avantisundarī-kathā of Daṇḍin" in the Proceedings of the

traditition asserts, [1] he lived about the second half of the fourth century.[2] If Mallinātha's interpretation is accepted, Kālidāsa must be placed in the fourth century and he becomes a contemporary of Samudra-Gupta or his son Candra-Gupta II. This would of course fit in with the theory of most scholars. But is the testimony so sure that we must accept it? Dakṣiṇāvarta-nātha (12th century) and after him Mallinātha (14th century) are the only commentators who speak of this allusion. The earlier commentator Vallabhadeva (10th century) has no inkling of it. There is no other evidence about the rivalry of a poet Nicula with the logician Diṅnāga (or even of the existence of that poet) and such a rivalry is extremely improbable. Then, *the plural in* "दिङ्नागानाम्" *cannot be explained if Diṅnāga is referred to by Kālidāsa as a rival.*[3] The name of Diṅnāga was a terror in later Hindu philosophical circles and Dakṣiṇāvartanātha and Mallinātha, nurtured under the influence of these schools, naturally think of the writer of the *Pramāṇa-samuccaya* at the sight of the word Diṅnāga. The story about Nicula probably comes from pure imagination, helped by the adjective सरस-, for is not *kāvya* defined as

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Calcutta Oriental Conference, p. 196, and Rangaswami Saraswati's paper on "Vasubandhu or Subandhu" in *ibid.*, pp. 203—213 (also an article in the I. H. Q., Vol. I, pp. 261-4). I have no opinion to hazard about the identity of Vikramāditya of Ayodhyā father of Bālāditya and patron of Vasubandhu mentioned by Buddhist writers (*e.g.*, Paramārtha in his Life of Vasubandhu).

[1] Kern, Manual of Indian Buddhism, p. 129

[2] See Keith's Buddhist Philosophy, p. 305.

[3] Mr. Dhanapati Banerji has proposed a very queer meaning of "दिङ्नागानाम्" *viz.*, "Buddhist savants out on mission to various places." (Q.J.M.S., X., p. 78), for which he has not given any authority and, I believe, has none. Mr. Saṅkara (*Ibid.*, p. 188) has justly criticised him and Mr. Banerji's reply (pp. 365-6) has not improved matters a bit. No historical conclusion can be arrived at by coining meanings of words at will.

rasātmaka vākya?[1] Without labouring the point further, I shall make a quotation from Professor Keith, a writer who is himself not in disfavour of Kālidāsa's contemporaneity with Candra-Gupta II: "But the difficulties of this argument are insurmountable. In the first place, it is extremely difficult to accept the alleged reference to Nicula, who is otherwise a mere name, and to Diṅnāga; why a Buddhist logician should have attacked a poet does not appear, especially as every other record of the conflict is lost. Nor is the *double entendre* at all in Kālidāsa's manner;[2] such efforts are little in harmony with Kālidāsa's age, while later they are precisely what is admitted, and are naturally seen by the commentators where not really intended."[3] Dakṣiṇāvarta-nātha and Mallināṭha, therefore, I cannot help believing, have coined a legend and not preserved a tradition. Occurrence of the story in two writers proves

[1] The rich imagination of our ancestors from the time of the writers of the Brāhmaṇas, the Anukramaṇīs and the Purāṇas down to our present day Pandits, an imagination that never owns defeat before big gaps but must boldly bridge it over, was brought home to me when I was studying the traditions about the Ṛgvedic *ṛṣis*. I may mention as a typical illustration the Purāṇic analysis of the name of Bharadvāja as '*bhara dvāja*' and the worthless story about the sage's birth it gave rise to. Howmuchsoever one may lament it from the point of view of history, one has the consolation that this special gift of our race gave to the world a rich fund of story literature (Vedic, Purāṇic, classical, Jaina, Buddhist and vernacular). That our commentators were sometimes unscrupulous with texts is illustrated by Mallināṭha's alteration of 'बंधू—' in Ra., IV, 67 into 'सिन्धु—,' referred to above, and of "विद्गुधलीलोचितदन्तपत्रिका—" the only reading of Māgha I, 60, into "विलासिनीविभमदन्तपत्रिका— "(in the light of Ra., IV. 17)!

[2] "The allusion to Vikramāditya that I have read in Ra., VI, 31, is altogether on a different level. There is no *śleṣa* there. Kālidāsa has not descended to the vulgarity of taking the king's name directly but has used synonyms which suggest it through *vyañjanā*. Similarly *Mahendra* in v. 54 of the same canto does not refer to a Mahendra but to a Mahāmeghavāhana prince." K. C.

[3] Sanskrit Drama, p. 145; see also Keith, J.R.A.S., 1909, pp. 435-6.

nothing; Mallinātha has simply copied it from his predecessor.[1] Space forbids the answering of other objections.[2]

I have not tried to prove the existence of a Vikramāditya, king of Ujjayinī, in the first century B.C. for sufficient facts for such a supposition are already present before scholars, some of whom have accepted their implication.[3] The

[1] Mr. H. N. Randle of our Philosophy Department draws my atention to an attempt by Dr. F. W. Thomas, in J. R. A. S., 1918, pp. 118-22, to revive the Diṅnāga theory. Dr. Thomas believes that Me., I. 14 alludes to a work named *Hasta* by Diṅnāga and he thinks that it is the same as the Muṣṭi-prakaraṇa-śāstra or Hastavāla-prakaraṇa, a short text preserved in Tibetan and Chinese, and ascribed by some authorities to Jina=Diṅnāga and by others to Āryadeva. It contains six *kārikās* (seven in Tibetan), followed by a commentary. Dr. Thomas has sought to reconcile the difference in tradition about the authorship of the work by assuming that Āryadeva wrote the *kārikās* and *Diṅnāga* the *vṛtti*. The Tibetan and Chinese versions have been published by Dr. Thomas and Professor Ui, proceeded by a reconstructed Sanskrit text, in *ibid.*, pp. 267-310. But the introductory sentence of the commentary (p. 278) makes it clear that it is a *svopajña-vṛtti* and diversity of authorship for the *kārikās* and the *vṛtti* is therefore an unjustifiable assumption. Then Diṅnāga's claim to have any connexion with the work is not very strong. The Tibetan authorities are unanimous in naming Āryadeva and Chinese tradition is not really agreed, as Dr. Thomas himself admits (p. 271), in making Diṅnāga the author. That Kālidasa refers to a work named *Hasta* is not asserted by Mallinātha and is difficult to understand. Nor do I see how Dr. Thomas finds support for Kālidāsa's alleged reference to Diṅnāga's *sthūla-hastā=vilepa* in verse 5 of the Hastavāla (p. 119), for there is no mention of *sthūlatva* there; we have instead *sūkṣma-buddhi*. He himself reconstructs the verse as "सर्वेषामश्रितं येन विद्यते मूढमबुद्धिना। त्यजेत्स बुद्धिमान् सुष्ठु रज्झिभयं यथा॥" (p. 285).

[2] Some reference to the nature of the relation between Kālidāsa and the Padma Purāṇa may be demanded of me. My friend Professor Haradatta Śarmā has tried to show in his recent "Padmapurāṇa and Kālidāsa, Calcutta, 1925" that Kālidāsa is indebted to the Purāṇa for his variations in the Raghuvaṃśa and Śakuntalā stories and for many verbal suggestions. Professor Dr. Winternitz writes in the Foreword that he accepts his pupil's conclusions. But careful study of the text published by my friend and of his discussions on it failed to convince me. The view that Kālidāsa has drawn on the Padma Purāṇa is generally prevalent among orthodox scholars and naturally so. But anyone who takes the trouble of reading the text of the Purāṇa published by my friend with an open mind will be convinced that Professor Macdonell and other modern scholars are justified in placing the Padma Purāṇa after Kālidāsa.

[3] See the two extracts from the C.H.I., quoted above.

genuineness of the *Saptaśatī* as a work of Hāla Śātavāhana and its reference to (this?) Vikramāditya's liberality (V. 64), though doubted in certain quarters, also seems in no need of fresh proof. I am not concerned with the personality of the founder of the Sambat era. Let historians decide whether Azes I or Gautamīputra Śātakarṇi[1] or any other individual founded it. What I have sought to prove is the existence of our poet Kālidāsa in the time of Vikramāditya of Ujjayinī, avenger of Gardabhilla's overthrow. I have shown that Aśvaghoṣa knew and used two of the poems of Kālidāsa. Had Kālidāsa been the borrower, his debts would have been found most in his first poem, the Ṛtusaṃhāra but I have not discovered any single resemblance between that poem and any passage or passages in the Saundarananda or the Buddhacarita. The reason for Aśvaghoṣa's non-use of this lyric is not far to seek; the work is not of great merit and would then hardly pass beyond the limits of

[1] Mr. Harit Krishna Deb in the Zeitschrift für Indologie und Iranistik, 1922, pp. 250—302; but I am not convinced by his arguments. He has made this Śātavāhana prince live in the first century B.C. and he has identified him with the Vikrama of tradition. Nor am I sure about by Sir John Marshall's theory. [Is there any connexion between Azes and Kālidāsa's Aja, justifying the assumption of a matrimonial alliance between the houses of southern Ujjayini (or say of Pratiṣṭhāna) and of northern Takṣaśilā ? Or, if there is any reference to Vikramāditya in the title of the Vikramorvaśiya, could the contemporary counterpart of the *apsaras* Urvaśi possibly be a Śaka princess ? Vikramāditya could thus have come to the throne through the help of, among others, another Śaka chief—कण्टकेन कण्टकोद्धरणम् ? The era could thus have been jointly founded by Azes and Vikramāditya. The previous Śaka satraps of Taxilā probably belonged to a rival house (so asserts Smith in E. H. I.*, p. 243 but doubts Rapson in C. H. I., I, p. 568). However, these suggestions are not very seriously meant and I disown competence to decide the question.] There is of course no inherent improbability in the assumption that the era was founded by Azes and made current in Avanti by the Śaka overthrowers of Gardabhilla (sometime after 58 B. C.?) and that when the Śakas were driven out by Vikramāditya, the national feeling of the people caused the alteration of the name with which the era was originally associated into that of the liberator of Ujjayinī. Vikramāditya would then have come to the throne about 50 B.C. or later. I do not suppose that the Jaina legend about Kālika and Gardabhilla is to be accepted in block.

Kālidāsa's native province. It has come down to us only on account of its association with the great name of Kālidāsa.[1] The Meghadūta too has not been used much by Aśvaghoṣa; this poem, though a work of great merit, is also less known generally than the epics Kumārasambhava and the Raghuvaṃśa. The Buddhist writer therefore chose such works of the poet as were most popular (or as I might say, "people were mad after") and tried to improve on them in his own way.[2] A somewhat similar story is told by the Śiśupālavadha of Māgha, a conscious effort at excelling the Kirātārjunīya of Bhāravi. Māgha has only written a more artificial poem and his lack of originality and inartistic hyperboles make one doubt if we have an improvement here.[3] Aśvaghoṣa with a better gift but no poet's training has escaped the same sorry fate; but that his poems are no improvements on Kālidāsa's requires no proving. I have already spoken

[1] I have thrown out the suggestion that Kālidāsa left the Kumārasambhava incomplete and he did not publish it himself, though he wrote and published other works after it; its preservation must be due to Kālidāsa's popularity. [Besides Ku., VII, 56—69 reproduced *mutatis mutandis* in Ra., VII, 5—16, we have another long passage in the second canto of Kumāra, the *stuti* of Brahmā by the gods and his reply, repeated with many verbal agreements in Ra., X. *Ajavilāpa* is also a parallel to *Rativilāpa* and the nineteenth canto of Ra., to the last in Ku. that left Kālidāsa's pen. All this shows that (1) Kālidāsa was giving publicity to some of the nice passages in an unpublished (or suppressed ?) work and (2) that he was repeating his own words and not those of another writer.] As fire cannot lie hidden under the cover of linen, the Kumārasambhava could not long remain in obscurity and reached even distant Sāketa in less than two centuries, a fate that was denied to the Ṛtusaṃhāra, whose chief recommendation in our eyes is the dawn of Kālidāsa's poetical powers that it reveals.

[2] But probably in trying to improve on Kālidāsa, he imbibed so much of this poet's devotion to beauty that he himself represented Upagupta as longing for a beautiful vision of Budha. See the story of Upagugta and Māra of the Sūtrālaṅkāra (pp. 263-73), preserved in the Divyāvadāna (particularly pp. 361-2). The professed philosopher turned to poetry to get popular hearing but ended by building up a synthesis of philosophy and poetry, of reason and sentiment, in that charming form of Buddhism, the Mahāyāna, whose precursor Aśvaghoṣa certainly was.

[3] My strictures on Māgha's poem must not be taken to imply a refusal to admit any good points in that work.

of the influence of Darwin's theory on contemporary scientific thought. But we should not make a fetish of it ; fetishism is least in accord with science. Evolution is a truth but decay is not an illusion. And then human thought and its products cannot be brought under mechanically regular laws of nature. If Aśvaghoṣa is to be believed as Kālidāsa's predecessor, the latter's borrowing should be *proved* and *not assumed.* It is possible that I have misunderstood the indications of the resemblances recorded above but the importance of the question demands that scholars should try to set me right. This kindness I crave of my readers for my own aim has throughout been to know the truth. I want to be convinced that scholars are not deciding in favour of the Gupta period or a later date under the hypnotic influence of repeated assertions to this effect by a host of writers, Indian and European, an influence which has often claimed me its votary like the repeated statements (may I hope ?) that induced a simple Brahmin to look upon a sacrificial goat as a vile dog.

I therefore conclude with the prayer :

"तमसो मा ज्योतिर्गमय"

Besides the gentlemen named above who have laid me under obligation by listening to my arguments or reading this paper in proof or in any other way, I must mention here my revered teachers, MM. Dr. Jhā and Pt. G. Kavirāj, and my friends Prof. Dr. S. K. Chatterji, Dr. H. Ray Chaudhuri, Dr. Pashupatināth Shāstri, Pt. Batuknāth Sharmā, Prof. G. Gupta, Prof. J. De, Pt. Ishwari Prasad and Mr. R. M. Shāstri ; I offer my thanks to all of them. Nor must I omit to thank the Manager of the Indian Press and his staff who have conformed to my wishes at great sacrifice.

P. S.—It will be seen above that I have not used the simplicity of Kālidāsa's style as an argument ; for it is possible for a late writer to write in a simple style. But the fewer rhetorical ornamentations used by the poet might be used as a corroborative evidence. Kālidāsa's vocabulary and metre will give us much help but they require separate treatment.

The new Ayodhyā inscription of Dhana (-deva), the sixth (brother ?) of Puṣyamitra and ruler of North Kośala, shows Śuṅga rule there and may be used as a match for the argument (pp. 152-3) based on Gupta connexions in Ayodhyā. अयोध्यापतये नमः ॥

MARRIAGE IN GRIHYA TIMES AND NOW

BY

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Marriage, one of the oldest social institutions, or perhaps the oldest institution,[1] that the history of mankind has known, always possessed an essentially peculiar feature in India from the very earliest times. Whereas among most other peoples of the world it is considered a civil rite with a perfectly utilitarian social purpose for its end,[2] in India its social character has been very indissolubly intermixed with its religious aspect; and the peculiarity lies in the fact that the latter has always held paramount. In fact the very society of our ancient people was more or less religious and so were all their conventions and superstitions as well.

For a Hindu marriage is a religious duty and a sacrament, and an unmarried man, who, of course, is not very common, is generally looked upon with a sort of contemptuous surprise even up to this day.[3] The son being, much more than now,

[1] "In all probability there has been no stage in the social history of mankind where marriage has not existed, human marriage apparently being an inheritance from some ape-like progenitor."—Westermarck, Origin and Development of Moral Ideas, p. 364.

[2] Westermarck classifies marriage among those modes of conduct which man's sexual nature has given rise to. It is 'a more or less durable connexion between male and female lasting beyond the mere act of propagation till after the birth of the offspring.....As a social institution.....it is a union regulated by custom or law."—Origin and Development of Moral Ideas, p. 364.

[3] The fact is proved by a number of proverbs prevalent in various parts of Upper India. Two of them will suffice here, *viz.*, *jai kē joṛū tai ko ghar ; be gharanī ghar bhūta kā derā.*

one of the most prized objects in ancient times,[1] when needs of onward advance and consequent strifes with other people added a cause to the pious desire for a son, was always prayed for of the gods, and marriage was made binding upon all who would not shut themselves from the blessings of progeny in this life and an untortured peace in the life after death. A much greater strictness has been observed with regard to marriage of the females and a girl who remains unmarried up to a certain age brings criticism both of the society and the religious law upon herself as well as upon her family. To quote,—

"A Hindu male must marry and beget children—sons, if you please—to perform his funeral rites, lest his spirit wander uneasily in the waste places of the earth. The very name of son, 'Putra,' means one who saves his father's soul from the hell called 'Puta.' A Hindu maiden unmarried at puberty is a source of social obloquy to her family and damnation to her ancestors."[2]

In fact, marriage is part of a man's religion, his solemn duty, and must in no case be neglected. "According to the Laws of Manu," says Monier Williams in his Indian Wisdom, "Marriage is the twelfth Samskāra and as such a religious duty incumbent upon all." The entire ritual of marriage, and most of the changing customs too, as now-a-days evidenced, have that essentially religious atmosphere about them, which excluded, marriage would not remain marriage at all.

Our ancient forefathers, the *Ṛishis* of the hoary Vedic times, passing from the stage of mere devotional prayer

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[1] See Vedic Index of Names and Subjects, p. 486 :—"But the main object of a woman's marriage was the production of children, this being repeatedly asserted in the Rigveda and later. The desire for offspring.....took the form of a wish for a son to perform the necessary funeral rites for the father and to continue his line." *Cf.* also p. 536 :—"Reference is frequently made to the desire for a son." The authors support their remarks by referring to a number of passages in the Vedic literature.

[2] P. K. Wattal, The Population Problem in India, p. 3.

and worship of gods, when gods and their fear and love were their sole absorption, began gradually to constitute a system, a ritual, of worship, and later on a ritual of everything. And a time came afterwards when this ritual began to play the chief part but, nevertheless, pervaded with the spirit of worship, in fact the spirit of religion, through and through. During the *gṛihya* period—the period of the composition of the Gṛihya Sūtras—there existed a ritual about everything that was held important; and this was in order of the degree of importance of the particular rite. Marriage being one of the most important functions in life, its ritual too was very complex. But besides the ritual, there was a number of other limitations too which governed marriage as strictly as the ritual itself; and all these limitations and ritual have come down to us in a little or more strict form. "Marriage is, therefore," in the words of Mr. R. W. Frazer, "the most ancient, sacred and inviolable of all Hindu institutions and its due performance the most complicated of all religious acts....To remodel the institution of marriage is to reorganise the whole constitution of Indian society and to create, so to speak, an entirely new social atmosphere."[1] But before entering direct into the treatment of our subject we may have a brief notion of what the Gṛihya Sūtras are and understand the point of view with which we have to discuss marriage in the *gṛihya* times

Gṛihya Sūtras[2] describe the various rites and ceremonies that a householder has to undergo and undertake from his

[1] Indian Thought Past and Present, pp. 271-72.

[2] There are different Gṛihya Sūtras attaching themselves to the different schools of the various Vedic Saṃhitās. Of those that have yet come to light belong to—

the Rigveda—the Śankhāyana and the Āśvalāyana Gṛihya Sūtras;

the Sāmaveda—the Gobhila, Khādira and Jaimini Gṛihya Sūtras;

White Yajurveda—the Pāraskara Gṛihya Sūtra; Black Yajurveda,—the Bodhāyana, Hiraṇyakeśī and Āpastamba Gṛihya Sūtras;

the Atharvaveda—the Kauśika Sūtra.

birth down to the time of his death. Probably before the composition of Gṛihya Sūtras the *gṛihya* life and duties were not so complicated and accompanied with all that paraphernalia of charms and chants and ritual and various other complexities which became their guiding elements later on. Probably also, as Oldenberg thinks, there are no direct traces of *gṛihya* ceremonies in the early Vedic literature and some of them are, beyond doubt, "contemporaneous with, or even earlier than, the most ancient hymns of the Ṛigveda."[1] The time of the Gṛihya Sūtras, coupled with that of the preceding Śrauta Sūtras, extends over a sufficiently long period[2] to allow a thorough development of anything.[3] The ceremony of marriage itself was divided into no less than five half-dozens of important items, the various details resultant from or preceding to it excluded. In a case like this the object of a critical study will, as is necessary, be to find out by comparison of the different Gṛihya Sūtras what items were common to all and thus likely to be older and what those of which we find mention only in some and which therefore were either the fruits of later developments of the *gṛihya* times or had then become obsolete. Again a comparison of some of the customs prevalent now-a-days will show us which of the older practices have descended to us in their original forms and which have left only meagre traces of themselves or have now disappeared.

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[1] Introduction to the Gṛihya Sūtras, S.B.E., Vol. XXX, p. ix.

[2] See Hopkins, Religions of India, p. 7—"The Brahmanic age in turn ends, as we opine, about 500 B.C., overlapping the Sūtra period as well as that of the first Upanishads. The former class of writings (after 500 B.C. one may talk of writings) is represented by dates that reach from Circa 600—500 B.C. nearly to our era."

[3] See Hopkins, Religions of India, p. 245—"It is sufficient to understand that according to the house-ritual (Gṛihya Sūtra) and the law-ritual (Dharma Sūtra and Dharma Çāstra), for every change in life there was an appropriate ceremony or a religious observance.

Of the kinds of marriage which were being recognised then, we find distinct mention only in the Āśvalāyana Gṛihya Sūtra of the Ṛigveda. They are eight in number, *viz.*, *Brāhma*, *Daiva*, *Prājāpatya*, *Ārsha*, *Gāndharva*, *Āsura*, *Paiśācha* and *Rākshasa*.[1] But undoubtedly the most acceptable and honoured forms of marriage were the first two,[2] and from the definition given of the *Brāhma Vivāha*,[3] it is evident that all the Gṛihya Sūtras agree in prescribing rules for this one only, which with slight variations could have been adopted for the following three also. There are no grounds to believe that the Āśvalāyana Gṛihya Sūtra is the latest[4]; but, even if there were, the silence of the earlier ones in this respect would not lead us to the conclusion that these various forms were developments of the later *gṛihya* age. The numerous references to all these kinds of marriage in the early Vedic literature[5] show that they were prevalent even in the most early times. Some of the later Dharmaśāstras also describe these various forms and as late as the time of most Purāṇas, some of the lower kinds also, *e.g.*, the *Gāndharva*, were often resorted to. But the tendency seems to have been ever on the decline for these lower kinds. Kauśika Sūtra, a late book of the Sūtra Age,[6] after describing marriage rites, however, mentions three names, but omits others.[7]

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[1] Ās., I, 6.

[2] According to the commentator Gargya Nārāyaṇa, the first four of these are respectable in order, the latter four sinful. Of these also the first two only are meant for Brāhmaṇas, *cf.* तत्र पूर्वो ब्राह्मणस्य। इतरयोः प्रतिग्रहाभावात्। आर्षिदेयाभावाच्च। गार्ग्यः क्षत्रियस्य पुराणे दृष्टत्वात्। राक्षसश्च तस्यैव युद्धसंयोगात्। आसुरस्तु वैश्यस्य धनसंयोगात्। इतरे त्वयोनियताः।

[3] अलंकृत्य कन्यामुदकपूर्वं ददादेष ब्राह्मः।—Ās., I, 6, 1.

[4] According to Monier Williams, Āśvalāyana's "collection of rules (sūtras) was probably composed more than 2500 years ago" —Brahmanism and Hinduism, p. 385.

[5] See Hopkins, J.A.O.S., XIII, pp. 361-62.

[6] See Bloomfield's Introduction to Kauśika Sūtra, p. xxxi: "...I shall be content if these remarks have made it clear that the sūtra ascribed to Kauśika is a work dating from the later sūtra period."

[7] The description of marriage here given is almost the same as of the other Gṛihya Sūtras. In the end we find—एष नीयो

The one form of marriage that has come down to us, with its local differences of course, is the *Brāhma*. This fact also supports to some extent the inference that the lower kinds of marriage, at one time in vogue, became more and more unpopular as people grew in their refined sense and more sensitive morality. Mr. Gait's remark about marriage being as a rule by purchase now-a-days[1] does not seem to be universally true. Leaving the *Kānyakubja* Brāhmaṇas and certain Kāyastha families, marriage by purchase is little seen in Northern India. In Bengal, however, it is most in practice and the price is almost universally paid for the bridegroom. The form of purchase is usually the settlement of a big dowry or a sum of money to be paid by the bride's father on the occasion of marriage; in other words, the bridegroom has to be purchased, or rather, bribed, for the bride. In olden times purchase was generally of the bride. The suitor had to present rich gifts to his future father-in-law, whereupon the marriage was celebrated in traditional form in the presence of both families and their friends in the house of the bride's parents.[2]

The *Āsura* form of marriage was always looked down upon as unworthy,[3] but the ceremony attendant upon it should have been of the usual kind. It is to be doubted if

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विवाहः । ब्रह्मापरनितिब्राह्मणः । आर्षः प्राजापत्याः प्राजापत्याः । (X,79,31—33). Bloomfield quotes from another Ms. wherein the last sūtra is read as आर्षः प्रजापत्यः प्राजापत्यः । Probably *saurya* was an unfrequent name of the *Brāhma Vivāha* while *Brāhmyā* was a name for the same kind of marriage slightly different from the *Brāhma* of other Grihya Sūtra in the ritual or worship part of it (? *cf.* ब्रह्मापरम्). On *Prājāpatya*, Keśava, the commentator, has to say—आर्षः प्राजापत्य इति शूद्रस्य विवाहे तूष्णीं सर्वं कार्यम् ।

[1] Census of India, 1911. Vol. I, p. 257.

[2] See Adolf Kaegi, The Ṛigveda, p. 15.

[3] Vedic Index by Macdonell and Keith, p. 482, refers to the use of *vi-jāmātṛi* in the Ṛigveda, which meant a son-in-law who not being in other respects altogether suitable had, as indicated by Pischel, to buy his bride at a heavy cost. The *vi-jāmātṛi* was in fact the *aśīro jāmātā*, the ignoble son-in-law of Ṛigveda, VIII, 2, 20. Bodhāyana, quoting the opinion of others says in his Smṛti that a woman purchased for money is not a wife and she cannot assist at sacrifices; according to Kāśyapa she is a slave (I, II, 21, 2).

Gāndharva, *Paiśācha* and *Rākshasa* marriages had any real ceremony at all,—in any case there could not have been any ceremony at the bride's father's. Now-a-days, among some uneducated and hilly tribes, where traces of marriage by capture (*i.e.*, *Rākshasa* marriage) may be found, some sort of ceremony does seem to take place. In a few cases, a mimic fight takes place and ordinarily it is the bride whose capture is simulated, although among the matriarchal Garos it is of the man too. In Baroda and Kashmir a Rajput often sends his sword to represent him in marriage. In Tinnevelly the Marava zamindars may send their stick.[1] Here the mimicry itself appears to have become a part of the ceremony.

If by marriage we also understand that behaviour and attitude of action which tend to bring about relations akin to those of husband and wife, it is occasion here to consider what are generally called widow-marriage, *niyoga*, polygamy, etc.,—practices which presuppose marital relations, but are not regarded as such and are looked upon with discouragement by the society. In the earlier Vedic literature, references to such practices are usually found,[2] but Gṛihya Sūtras, being works purely on *Samskāras* are silent about them. Yet inference can be drawn from such passages as कुमार्याः पाणिङ्गृह्णीयात् (Pār., I, 4, 5), नग्निका[3] तु श्रेष्ठा (G., III, 4, 6), पिण्डानभिमन्त्र्य कुमारीं ब्रूयात् (Ā., I, 5, 5), and a long list of various kinds of girls to be excepted from selection, as given by Āpastamba, that illicit relations often existed in the society. People had become very cautious in their selection of the bride and took every precaution against marrying an unchaste or wedded girl. This also does away with the question of widow-marriage, and Mr. Gait is very correct when he says that "the

[1] See Census of India, 1911, Vol. I, pp. 257, 261.

[2] See Vedic Index of Names and Subjects, pp. 477-78.

[3] "According to the Gṛihya-samgraha (II, 17,18), a 'naked' girl is one who has not yet the monthly period, or whose breast is not yet developed."—Oldenberg, S.B.E., Vol. XXX, p. 82, footnote 6,

logical outcome of the theory that marriage is a religious sacrament is that a Hindu widow cannot take a second husband."[1] Āpastamba discards even a *dattā* girl, one who has already been given in promise to some other person, as unfit for marriage.[2] Leaving some of those who have become more modernised through contact with the Western ideas and the Āryasamājist class of people, we find that, even now-a-days, widow-marriage is associated with a not very favourable sentiment of the people. Among some low classes scattered here and there widow-marriage exists in one form or other which seems to have developed from the *niyoga* practice of olden times. Mr. Gait gives an account of some of the classes which allow widow-marriage. He remarks :—

"...In Bengal only the lowest castes allow widows to remarry, but in many parts the prohibition is far less general. In the Punjab it applies only to the castes of twice-born status. Widow-marriage is exceedingly common in Orissa; and in Baroda it is said that there are even certain low classes of Brāhmaṇas who recognise the practice, while in the Punjab hills and Marwar certain Rajputs do so. Where widow-marriage is allowed, the general rule in most parts of India is that the deceased husband's younger brother may, if he so wishes, take the widow as his wife, and she may marry no one else without his consent; sometimes, indeed, she must first obtain from him a formal deed of separation. Marriage with the deceased husband's elder brother is generally forbidden, but it is allowed by the Kanets in the Punjab, by the Banjāras of the Central Provinces and by the Gandas and Koppila Velamas of Madras. The Muduvars and Udayas of the same Presidency forbid marriage with either brother, and regard the son of the

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[1] Census of India, 1911, Vol. I, p. 246.

[2] सुप्तां रुदन्तीं निष्क्रान्तां वरके परिवर्जयेत् । दत्तां, गुप्तां, क्षोताम्बुषभां, शरभां, विमतां, विकटां, मुण्डां, मण्डूपिकां, साङ्कारिकां, रातां, पालीं, मित्रान्, स्वनुजां, वर्षकारीं च वर्जयेत् ।—Āp., I, 3, 11, 12.

deceased husband's maternal aunt as having the best claim to her....."[1]

Nobody now advocates the practice of *niyoga* and in those days too when it was exercised it was not held in high esteem—at least not regarded as a matrimonial duty of man or woman, except so far as the continuation of the line was concerned. The Gṛihya Sūtras make no reference, whatsoever, to it[2] while describing *garbhādhāna*. The Āśvalāyana Sūtra, however, in its treatment of the funeral ceremony, prescribes the lying down of the wife to the north of the deceased husband, and her younger brother-in-law, now to be a substitute of her husband (*patisthānīyo devaraḥ*), makes her get up.[3]

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[1] Census of India, 1911, Vol. I, p. 246.

[2] The Dharma Çastras mention it. From them, too, it appears that women were given no license for the niyoga practice. According to Bodhāyana, a widow had to avoid for one year the use of honey, meat, salt, etc., and was required to sleep on the ground. After that she might, with the permission of her elders, bear a son to her brother-in-law, in case she had already no son.—II, 2,4,7-9.

[3] उत्तरतः पत्नी । धनुश्च क्षत्रियाय । तामुत्थापयेद्देवरः पतिस्थानीयोऽन्तेवासी जरद्दासोऽथैनामेतं जीवलोकम्—Ā., IV, 2, 16-18. The expression *patisthānīya*, substitute of the husband, here, is really significant and raises a difficulty. If the consideration was of supporting the widow, the word enjoys only a side-application of the meaning and can qualify all the three persons named. The other consideration could be in which the word would have its full application and the substitute would in cases of need fulfil all the responsibilities of a husband. In the former explanation, reason will have to be sought why the son, or the father-in-law, or the elder brother-in-law have been omitted—persons upon whose support the widow could count upon with better reason and hope. On the other hand the *devaraḥ* might possibly only have been a child, the *antevāsī* himself a dependent boy and similarly also, the old servant. In case of the alternative explanation of the word, whereby we may understand a reference to the *niyoga* practice, the word can be taken to qualify *devaraḥ* only and not also the other too. The *antevāsī's* relations were too sacred to allow *niyoga* with him and the *jaraddāsa* was too old, and perhaps indignified also, for it. But these two could probably touch the woman—although it is not clear whether touching was necessary to raise her or they merely addressed her to get up—and were to officiate either in the absence of a younger brother-in-law or when the deceased left children. But this again remains a question why in this case also, the son or the father-in-law has not been mentioned instead of, or besides, the younger brother-in-law or the old servant. In any case, the devaraḥ was to be *patisthāniya*

Coming to polygamy one finds that it was allowed by the Gṛihya Sūtra writers with certain limitations. Pāraskara allows three wives for a Brāhmaṇa, one from each caste, two for a Kshatriya and one for a Vaiśya. These all could have an additional wife also from the Śūdra class; but recitation of mantras was prohibited in marriage with a Śūdrā wife.[1] Other Gṛihya Sūtras are not frank on this point,[2] but numerous illustrations from the literature that went before and came after the Gṛihya Sūtras show that polygamy was in vogue. Usually, it should have been the well-to-dos and the reigning class that kept more wives than one."……The king regularly has four wives attributed to him, the Mahiṣī, the Parivṛktī, the Vavātā, and the Pālāgali."[3] Yet it seems that this system was not held in very high esteem and gradually died out in course of time—in the Ṛigveda period itself, Zimmer thinks, it was dying out—and that the wife first wedded was alone a wife in the true sense. "This view is supported by the fact emphasized by Delbrück, that in the sacrifice the Patni is usually mentioned in the singular."[3]

Another case in which polygamy could have existed was the one in which the first wife did not bear any sons. The

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only, as is to be inferred, when the widow was left childless and this inference is supported from numerous references to the fact in the previous and later literature. To quote Macdonell and Keith from their Vedic Index, p. 477, the custom of *niyoga* "was probably not followed except in cases where no son was already born. This custom was hardly remarriage in the strict sense, since the brother might—so far as appears—be already married himself."

[1] Pār., I, 4, 8-11.

[2] Bodhāyana defining the various kinds of sons writes—ब्राह्मणेन ब्राह्मण्यामुत्पन्नः प्रागुपनयनाज्जात इत्यभिधीयते (I, 7, 1). This may either imply that a Brāhmaṇa had wives from other castes as well or it may be taken to leave out illegal sons born of a Brāhmaṇa. But the latter inference is less likely ; for, a Brāhmana could have illegal connections with a Brāhmaṇī too and from the description which follows the above quotation (I, 7, 2—21) and the connection in which the whole thing is treated of, we cannot derive the conclusion that an illicit son of a Brāhmaṇa could also be called jāta. The Hiraṇyakeśi Gṛihya Sūtra prescribes that the wife should be from the same caste (I, 17, 2).

[3] Vedic Index of Names and Subjects, pp. 478-79.

existence of such a case is not inferable from the Gṛihya Sūtras, but having a son being necessary, there can be little doubt about its existence. Even now some husbands have more wives than one—have them on a mere excuse of the slightest fault on the part of the first wife. Gṛihya Sūtras do not also throw any light on the question whether, in such a case, the second wife must have been from the husband's caste only or she could be from any other also.

In the modern day, polygamy among the civilised and educated people is almost a nullity. Sometimes here and there, we still have polygamous customs, *e.g.*, amongst the Kunniwans and Kaikolans of Madras. On the other hand, among certain castes "there is a certain amount of compulsory polygamy owing to the practice whereby certain castes expect a man to marry his elder brother's widow. The Garos expect him in certain cases to marry his widowed mother-in-law. The Namputri Brahmans are polygamous, as the eldest son alone is allowed to marry, and unless he took several wives, many of the girls would perforce remain unwed." [1]

Courtship in the Rigvedic age was sometimes sought and parents were often anxious to see that the acquaintance between their daughters and the youths in view came out successful. Such acquaintances were generally formed on some festive occasions, and in case the friendship developed, permission for marriage was to be sought from the father or some other guardian of the girl.[2] But this custom too was probably dying out in later age. The Gṛihya Sūtras are entirely silent about it. Only in the Āpastamba we find, after a description of girls that are to be left out, the passage **यस्यां मनश्चक्षुषो निबंधस्तस्यामृद्धिनतरदाद्रियेतेत्येके.**[3]

[1] See Census of India, 1911, Vol. I, p. 246.

[2] See Adolf Kaegi, The Rigveda, p. 15.

[3] Āp., I, 3, 21. Commenting on this Sudarśanārya says—
अत्र मनश्चक्षुषो निबंधस्य आदरणे कारणं, न तु उद्योतिषादिना ज्ञाता गुणाः। तथा तद्भाव एव परिवर्जने कारणं, न तु स्वापादयो दोषा इति। उभयोरपि मतयोर्दत्तादीनां निषेधनाद्रियेतैव; 'सुवर्णांपूर्वेशास्त्रविहितायाम्' (आप. ध. २-११-१) 'अमनाभार्यगोत्रजां, षऽचनास्मनादूषवंन्' इत्यादिवचनजातात्। It means

But *manonibandha* cannot be taken very conclusively to point to the existence of a previous intimacy between a girl and a boy. Or, generally, the common injunctions should have been followed while in exceptional cases, when a previous *manonibandha* existed, the latter should have worked decision.

The peculiar moral and semi-religious prejudices of the Hindu society never made it possible for the system of courtship to grow. The innumerable limitations that governed marriage and the constantly narrowing of circles from which a bride or bridegroom could be selected could not breed an atmosphere healthy for the growth of pre-marital communism and friendship. In fact, the real matrimonial friendship was supposed to be brought about after such solemn parts of the ceremony as the *Saptapadī*, when the bridegroom had to recite—**सखायस्सप्तपदा अभूम सख्यं ते गमेयं सख्यात्ते मा योषं सख्यान्मे मा योष्ठाः ।**[1]

The modern Hindu society does not approve of the ways in which bachelors in the Western countries select their own wives and pledge their matrimony to maids. However, with many aboriginal tribes in India it is the custom to make children sleep away from their parents. Separate dormitories are kept for boys and girls; and girls usually creep away to those of the boys. In case pregnancy occurs, they expect that the putative father should take the girl as his wife. A Gujar girl who goes astray with a man of another caste is excommunicated, but, in case the lover is a Gujar, she is forgiven on her parents giving a feast.[2]

In the Gṛihya Sūtra times it was the custom to send, first, 'wooers' to the house of the bride. The work of wooers was

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that in the face of such prohibitions as explained by **दत्ता**, etc. (see footnote 2, p. 178), the attachment of mind and eye had no standing and **इतरत्** should be taken to refer to such rulings of secondary importance as **सर्वांश्चरेफलंकारोपान्ता वरणे परिवर्जयेत्** । (Āp.,I, 3, 14).

[1] Bodh., I, 1, 28; Hir., I, 21, 2.

[2] See Census of India, 1911, Vol. I, p. 243.

to confirm the contract of marriage.[1] But the custom of sending 'wooers' may not have been perhaps universal. Some Gṛihya Sūtras omit the mention of them and their work altogether. Besides, sometimes, the bridegroom himself may have first seen the bride and after an estimation of hers decided about marriage. This may have been the case sometimes when, in order to know the particular characteristics possessed by a girl, she was made to choose one of the several clods of earth presented to her.[2] The girl chose one of them and this gave the final word of decision. But this in itself is not conclusive as to the exact personality who presented the clods. The presentation could as well have been made by some one else—possibly the bridegroom's friends, the 'wooers'—on behalf of the bridegroom.

Greatest care was observed in selecting a bride. The numerous details expected to be present in a suitable bride were sometimes so confusing and difficult to be detected that recourse was often had to means hardly convincing. All the characteristics were judged by one single device, a self-makebelieve, *viz.*, the presenting to the bride of a certain number—usually eight—of clods of earth or seeds of grain from different places, out

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[1] *Cf.*...युष्मान् ब्राह्मणान् वरान् प्रहिणोति । But यदि दक्षिणाभिः सह दत्तान्येतत्तत वरान् प्रहिणुयात् —Bodh., I, 1, 13-16.

युवं भगमिति संभरं सानुचारं प्रहिणोति । ब्रह्मणस्पत इति ब्रह्मणम् । तद्वृतान्धङ्कनानो निशि कुमारीकुलाद्वयलीकान्यादीप्य ।—Kauśika, X, 75, 8-10. Upon this the *Daśakarmāṇi Brahmavedoktani* says—अर्द्धर्चेन संपुटमभिमन्त्र्य सानुचरं वरं प्रतिप्रेषयति.....अर्द्धर्चेन ब्रह्माणं प्रेषयति कुमारीसमीपे वरस्य गुणान् कथयति ।

सुहृदः सनवेताग्नंत्रयतो वरान् प्रहिणुयात् ।—Āp., II, 4, 1. But curiously the commentator writes in this connection एतच्च वरप्रेषणादासुरार्षयोरेव, नान्येषु अर्थलोपात् । None of the Gṛihya Sūtra texts, however, make any distinction of this kind. If there was any recognition of the sending of the 'wooers,' it could have been for all the recognised forms as well. There is nothing in the Sūtras to show that *arthālopa* was a necessary condition for sending 'wooers.' By *arthālopa* we understand the paying of a price for the bride. In the *ārsha* marriage the bridegroom had to give a bull and a cow to the girl's father.

[2] Ā., I, 5, 5-6 ; G., II, 1, 4-9 ; Āp., I, 3, 14-17.

of which she was asked to select one. The clod made of earth from a particular spot indicated a particular characteristic of the girl and settled if she would make an acceptable bride. Sometimes, the limitations were so great as even to discard girls having a particular kind of name.[1] In general, she should have been of proportionate limbs, smooth hair, with two curls to the right at her neck—such a one being expected to give birth to six sons[2]—of a good and respectable family, possessing intelligence, beauty and moral conduct and free from disease.[3] Then she should not have been already given to another, or guarded or concealed by her relations, or of crooked eyes, or hunch-backed, or one whose lustre was lost, and so on.[4] Similarly the bridegroom was also sometimes expected to fulfil certain requisite conditions, but probably the people were not very strict about his qualities. Only Āśvalāyana speaks in this connection and he too in a very suppressed manner.[5]

Besides, there were other limitations pertaining to the family of the girl. First of all an examination of the girl's family, from the father's side as well as from that of her mother, was necessary.[6] According to Gargya Nārāyaṇa,

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[1] *Cf.* नक्षत्रनाम्नां नदीनाम्नां वृक्षनाम्नाञ्च गर्हिता: । सर्वाश्च रेफलकारोपान्ता वरणे परिवर्जयेत् ।—Āp., I, 3, 12-13. This suggests also that parents should have taken care not to name their daughters after rivers or in words ending in or beginning with ra or la. This restriction does not seem to be much observed now-a-days, when such names as Saraswatī, Kanwal or Lalitā are not uncommon.

[2] Ś., I, 5, 6-10.

[3] Ā., I, 5, 3.

[4] See footnote 2, p. 178. Oldenberg admits the difficulty of translating this passage and thinks that "Most expressions in this Sūtra are quite doubtful." *Cf.* the commentary—.....दत्ता अन्यस्मै वाचा प्रतिश्रुता, उदकपूर्वं वा प्रतिपादिता । गुप्ता अदर्शनार्थं कञ्चुकादिभिरावृता, प्रयत्नसंरक्ष्यमाणा वा दौशील्यादिशंकया । क्लीबा पिङ्गाक्षी बभ्रुकेशीवा विषमनष्टिर्वा । ऋषभा प्रधाना, ऋषभस्येव शरीरं गतिशीलं वा यस्यास्सा ककुद्वान्ति यस्यास्सा । शरभी शीर्णदीप्तिः, सदृनीललोमी वा, ऋक्षपावा, etc.

[5] बुद्धिमते कन्यां प्रयच्छेत् ।—Āś., I, 5, 2.

[6] Āś., I, 5, 1.

the commentator of Āśvalāyana, her parents should have been free from the 'great sins' and such diseases as epilepsy, etc. Gargya Nārāyaṇa quotes that that family is considered flawless in which ten descents on the father's side and ten on the mother's side have been distinguishing themselves by learning, penance and good deeds. According to Gobhila the girl should not be from the same exogamous group (*gotra*),[1] she should not be a *sapiṇḍa*-relation[2] of his mother and should be a *nagnikā*. Khādira supports Gobhila. Hiraṇyakeśī narrows these limits further by adding that she should belong to the same country and should be of the same caste.[3]

More than any other practices and considerations relating to marriage, the ordinances about *gotra* and *sapiṇḍa* relationship have come down to us in an almost unchanged form. Nearly the whole of Northern India believes that a man should not marry in his own exogamous group. Sometimes, as with the Marathas, he may not marry even in the group to which either parent belongs. "In Orissa, intermarriage between members of the same *gotra* is strictly forbidden only in the case of Brahmans. In Bombay, the Anāvalā Brahmans may marry within the *gotra* provided the couple are outside seven degrees of relationship, Audich Brahmans if they have different surnames, and Modh Brahmans if the *pravara* is different. The Sakadvipi Brahmans of Bihar do not regard the *gotra* as constituting any bar on marriage. In Assam, Garhwal and Marwar also, the Brahmans do not all observe

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[1] G., III, 4, 4-6. Bodhāyana in his Dharma Sūtra (II, 1, 1, 37) ordains for one who unintentionally marries a woman of the *same gotra* to support her and treat her like his mother.

[2] According to Gautama, XIV, 13, '*Sapiṇḍa*-relationship ceases with the fifth or the seventh ancestor. See also Manu, V, 60. Āpastamba Dharma Sūtra (II, 6,15,2) prescribes the bathing of an adult in the case of death of a relation within six degrees from his father's or mother's side.

[3] I, 6, 17, 2.

the restrictions implied by the *gotra*." In South India *gotra* restrictions are more rare ; while, in some cases, the marriage of a certain class of first cousins, or, sometimes even closer alliances, are usually tolerated.[1]

The age at which one could marry in the *gṛihya* times was evidently much advanced and child marriages must have been unknown in the case of males. All the Gṛihya Sūtras permit marriage only for a *snātaka*, *i.e.*, for one who after initiation, having passed a certain period in the study of Veda, was going to enter upon the duties of a householder.[2] We do not know if the strict limitations about age were backed by as strict a practice also ; but clearly, a departure, in practice at least, must have taken place in the early classical period itself and as late as the time of our literary poets and dramatists it must have secured general recognition.[3] The gulf between the old law and the practice of later days is all the wider now when children are married even while they are within the limits of their infancy. In some of the lower communities of Baroda and the C. P., sometimes even unborn children are given in wedlock, because of a very curious custom of celebrating all their marriages on a single day once every 9, 10 or 11 years. If, however, when born, they happen to be of the same sex, the ceremony is considered as void.[4]

There have been greater discrepancies in the quota of marriageable age for females as deducible from statements of different periods. Numerous references found in the Vedic

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[1] Census of India, 1911, Vol. I, pp. 250– 51.

[2] The time when one became a *snātaka* was different according to the differences of caste and to the number of Vedas studied. After the initiation, which took place generally in the eighth year after birth in the case of a Brāhmaṇa, in the eleventh year in that of a Kshatriya and in the twelfth year in the case of a Vaiśya, the initiated had to undergo a period of studentship of 12, 24 or 36 years, according as one, two or all the three Vedas were studied. Then took place *Samāvartana*, after which one could enter home life.

[3] The Rāma of Rāmāyaṇa and the Mādhava of Bhavabhūti were married at the age of sixteen and fifteen respectively.

[4] See Census of India, 1911, Vol. I, p. 258.

literature, to unmarried girls who grew old in the house of their parents, show that in the early Vedic time unions usually took place between a fully developed couple.[1] In the *gṛihya* times the limit of marriageable age for girls had become much more defined; and if there are no direct traces in the Gṛihya Sūtras to show that girls were much developed at the time of marriage, the inference can at least be drawn that they were generally married when on the verge of youth or when they had just stepped into it. A *nagnikā* girl was generally preferred and on the fourth day after the bride was taken to the bridegroom's house, cohabitation took place. There was a strict injunction that during the first three nights after marriage they should observe perfect *brahmacharya*, should sleep on the ground and should not eat pungent or saline food.[2] Some Gṛihya Sūtras explicitly prescribe the fourth-day intercourse.[3] While the rest, from the very fact of their being strict with regard to the first three days' *brahmacharya*, seem to have a tolerant attitude about it. Only the Pāraskara Sūtra stands alone in advising cohabitation after the monthly period separately; but, at the same time, he gives freedom about the other days too and also speaks of the usual *brahmacharya* for the three nights, giving also the optional periods to the extent of one year. Then again, we find the self-same authors who give these injunctions, laying down, in another place, such restrictions as that one should not desire intercourse with an *ajātalomnī*.[4] All this seems so confusing and

[1] See Vedic Index of Names and Subjects, p. 476. The authors allude to various passages in the Ṛigveda and the Atharvaveda and to instances of other kinds in which grown-up maidens or youths sought the love of the other.

[2] Ś., I.17, 5; Ā., I, 8, 10-11; G., II, 3,15; Kh, I, 4, 9; J., 20,6; Bodh., I, 7,9, etc.; Āp., III, 8,8; Hir., I, 7,10; Par., I, 8, 21; K., X, 79.

[3] Hir., I, 7, 23, 11—24,6; G., quoting others, II,5,7; Āp., III, 8, 10.

[4] *Cf.* अजातलोम्न्यैपहारानभिचेष्टेत् ।—G., III, 5, 3; Kh., III, 1, 34. अजातलोम्नीं विपुंसीं षंढाञ्च नोपचरेत्—Pār., II, 7, 9. Gobhila, who, in his Gṛihya Sūtra, considers a *nagnikā* girl as best and enjoins strict observance of *brahmacharya* for three days after marriage, says in his *Smṛti*—

अजातश्मश्रुलोम्नी न तया सह संविशेत् ।
अयुग्वः काकबंध्या या जाता तां न विवाहयेत् ॥—III, 136.

self-conflicting that unless we presume that the girl was *nagnikā* at the time of selection and that some time intervened, as it does now for making preparations, between the selection and the marriage, thus allowing the girl to become *anagnikā* by the latter occasion, we cannot help accusing the *gṛihya* authors of a gross self-contradiction.

But whatever the compromise be that *gṛihya* writers and commentators may offer, the fact that girls should have been mature at the time of marriage is further evident by the statement of Jaimini who, in defiance of all other writers, even prescribes an *anagnikā* girl as the one to be selected.[1] Hiraṇyakeśī, on the other hand, says—'Let him marry a girl..... who is a *nagnikā* and who has not had sexual intercourse.'[2] Again, we find that, according to this author, the fourth day's cohabitation is necessary.[3] Here, unless we take for granted that *nagnikā* also meant what we know as '*anagnikā*'—a queer paradox, of course—we cannot make the two conditions agree with each other. It would be questioned if a totally opposite meaning came to be attached to the same word in not a very distant period of time. Even to-day we understand by *nagnikā* what we used to understand in the time of Gobhila and his son.[4] But then, we have also the support of the commentator Matṛidatta in favour of the paradox. He defines *nagnikā* as a girl just on the eve, or within the precincts, of puberty, one, 'worthy of being without clothes; therefore, fit for cohabitation.'[5] In addition, again, we have such an authority as the author of Samskāraratnamālā standing side by side with Matṛidatta.[6] And so, in order to see that our *gṛihyakāra*

[1] ताभ्यामनुज्ञातो जायां विन्देतानग्निकां रुनामजातीयामनगोत्रां नातुरसपिण्डाम् ।—20, 3.

[2] ताभ्यामनुज्ञात. भार्यामुपयच्छेत्सजातां नग्निकां ब्रह्मचारिणीमनगोत्राम् ॥—I, 6, 19, 2.

[3] See footnote 3, p. 187

[4] "नग्निका तु वदेत्कन्या यावन्नर्तुमती भवेत्" ।—*vide* V. S. Sastri, Marriage after Puberty, p. 31.

[5] नग्निकामासन्नार्त्तवाम् । नग्नपतिरपि परिपठितो वस्त्रविक्षेपणार्थः । ततो ऽर्हेऽण् । कर्त्तरि च । ग्रहात्कृतो बहुलं कृति । तस्मात्तद्विक्षेपार्हां नग्निका । मैथुनार्हेत्यर्थः ।

[6] *Cf.* p. 403—नग्निकां मैथुनार्हाम । ब्रह्मचारिणीमकृतमैथुनाम् ।

is not totally devoid of self-consistence we may have to accept the explanation given by the commentator.

But then, how is the paradox to be explained? Looking to the commentator and at the same time having regard of the generally accepted meaning, we perforce have to ask ourselves if our *gṛihya* authors were not, sometimes, a bit unscrupulous with regard to their language. Was it not that the basis of difference between the meanings of the two words should have been a very little duration of time—a short-lived transition—which separates the two conditions of girlhood and yet joins them? And then, could not, by a little stretch of interpretation, our *gṛihya* authors have made both the words serve the same purpose? We have already seen that the attitude of the *gṛihya* law-givers was to allow cohabitation on the fourth night after marriage and that this could not have been done with an *ajātalomnī*. So, even those authors who mean by *nagnikā* a '*nagnikā*' had not probably in mind a *nagnikā* of a very small age, but one who swang in the mild waves of those unsteady moments which are the harbingers of youth. Only by the later *Smṛti*-writers was the codification considered necessary that girls should be given in marriage in their eighth or tenth year, references to early marriage being not common in any previous literature.

There was a part of the ritual—in Pāraskara, the *Samīkshaṇa*—where the bridegroom had to address the bride with the words—'Soma has acquired thee first; after him the Gandharva has acquired thee. Thy third husband is Agni; the fourth am I thy human husband.'[1] The Dharma Çāstras understand this fourfold division of wifehood in the light of different stages which lead a girl to youth. The third husband Agni owned her at the beginning of her monthly course, when

[1] सोमः प्रथमो विविदे गंधर्वो विविद उत्तरः। तृतीयोऽग्निष्टेपतिस्तुरीयस्ते मनुष्यजाः।
सोऽददद्गन्धर्वाय गंधर्वोऽददद्रये रयिञ्च पुत्रांश्चादादग्निर्मह्यमथो इमान्।—Pār., I, 4, 16.

she was transferred to her human husband.[1] It was this time when the *nagnikā* of the time of selection (?) became a wife and proved fit for the fourth-day intercourse after marriage.

Some of the Gṛihya Sūtras do not specify the intercourse on the fourth night and some make it optional on that day—the other alternatives being the sixth or the twelfth night, or, in some cases, the intercourse may take place even after a year. This leaves one allowance that while usually girls were married when they were beginning to be youthful, sometimes, some child-girls, such as may have required a year or so to attain puberty, were also married; and in that case it was for the bridegroom to judge how long the *brahmacharya* was to be observed.[2] In certain cases the optional periods were also meant to provide suitable occasions to husbands desirous of having a particular kind of son.[3] This leads us also to the inference that probably the first cohabitation with the wife was identical with the rite of *garbhādhāna*;[4] and this may go to support a step farther the existence of the marriage of mature girls

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[1] *Cf.* पूर्वं स्त्रियः सुरैर्भुक्ताः सोमगंधर्ववह्निभिः।
मनुष्यन्ते मानुषैः पश्चान्नैता दुष्यन्ति कर्हिचित्॥
व्यञ्जनेषु च जातेषु सोमो भुङ्क्ते च कन्यकाम्।
पयोधरेषु गंधर्वो रजस्यग्निः प्रतिष्ठितः॥

—Atrismṛiti, chapter V, slokas 5 and 9.

[2] *Cf.* ततो यथार्थम् स्यात्—Kh., 4,14. The opinion of Harihar, a commentator of Pāraskara, that the optional periods are given to suit individual capabilities to observe *brahmacharya* seems untenable. There is little logic in wishing and expecting a newly married young couple to abstain for one whole year—especially when the fourth-night intercourse should also have been considered a *saṃskāra* for the woman and was therefore indispensable. *Cf.* इदमुपपन्नमनावश्यकं स्त्रीसंस्कारत्वात्—Bhaṭṭa Gopināṭha Dīkshita in his Saṃskāraratnamālā, p. 585.

[3] *Cf.* Ā., I, 8, 10-11; Par., I, 8,21; Bodh., I, 7, 9-21.

[4] *Cf.* Ś., I, 18-19.

in the Gṛihya times,[1] no *garbādhāna* being possible in an immature girl.

The choice of the bride over, some day was to be selected for marriage. The Gṛihya Sūtras prescribe the auspicious occasions when a marriage should take place. During the northern course of the sun, in the fortnight of the increasing moon, under some auspicious constellation—or, as some say, on any convenient occasion[2]—the marriage rite should have been performed in the morning, the forenoon, at midday, in the afternoon, or in the evening.[3] Some Gṛihya Sūtras specify the auspicious constellations and the auspicious months also, *e.g.*, the stars denoted by *Uttaraphālgunī*, etc.,[4] and all months with the exception of *Māgha*, *Phālguna* and *Āshāḍha*[5] mark the time suitable for marriage. According to the Kauśika Sūtra (X, 75, 2—4) all months onwards from *Kārttika* to *Vaiśākha*, or as it pleased one, with the exception, of course, of *Chaitra* and *Āśvina*, made good occasions for marriage.[6]

Modern Brāhmaṇas generally celebrate their marriages during the two or three months of winter and two or three months of summer—usually April, May and June. Among

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[1] One may feel surprised to see Mr. Frazer write in his Indian Thought Past and Present, p. 282, that 'To perpetuate the sacrificial system sons were married before they were even boys. Girls were hastened in their infancy to the houses of their husbands, there to deem as a dread calamity, inflicted on them for misdeeds in this or in previous births, the not having a son!' From what we have discussed above, it would appear that it was rather just the reverse of this position which then existed. Hopkins writes in his Religions of India, p. 270,—"The rite of marriage presupposes a grown girl, but child-marriages also were known to the early law!"

[2] Āś., I, 4, 2.

[3] Hir., I, 6, 19, 3.

[4] Pār., I, 4, 6, 7.

[5] Bodh., I, 1, 19.

[6] Among the Parsees too, the marriage seasons are much the same as among the Hindus. The Parsees also consider the new and full-moon days as auspicious. Tuesdays they regard as inauspicious. Even now-a-days many Parsee families restore to Hindu astrologers for fixing an auspicious day for marriage.—See J. J. Modi, The Religious Ceremonies and Customs of the Parsees, p. 17.

certain people there is the custom of celebrating all their marriages once every 9, 10 or 11 years. "The Bharvāds of Baroda celebrate their marriages only once in every twelve, fifteen or twenty-four years, and the Motala Brahmans once every four years. The Chettis of Madras have a marriage season at intervals of ten or fifteen years...During the conjunction of Jupiter with Leo which takes place every twelfth year and lasts for about eighteen months all marriages (and various other religious and secular acts) are forbidden in the tract between the Ganges and the Godāvari, but as the castes who observe this rule are, for the most part, addicted to infant marriage, it has very little effect on the time when real married life commences."[1]

THE CEREMONY OF MARRIAGE.

It is as a matter of fact the ceremony or the ritual only, with which the Gṛihya Sūtras have to deal. The details of the ceremony of marriage vary in number and in arrangement in the various Gṛihya Sūtras. By far the greatest number of details is given in the Sānkhāyana Gṛihya Sūtra. The other Gṛihya Sūtras do not make any particular additions. The difference lies only in the fact that they either omit some of the details or describe them in a different order. The following is a description of the entire ceremony of marriage as given in the Śānkhāyana:

First of all, 'wooers' were sent to obtain consent of the bride's father for marriage. This sending of the 'wooers' and their asking the girl's father for her was itself attended upon by a miniature-ritual, a certain recitation of mantras over them when they started and their offering to the would-be bride a vessel full of fried grain, fruits, barley, etc., after her father had consented to give her in marriage. The *āchārya* of the girl's family put that vessel on the girl's head with certain auspicious *mantras*. The solemn contract was then complete.

[1] Census of India, 1911, Vol. I, p. 258.

Now, preliminary to starting with the party for the bride's house, the bridegroom was required to perform a sacrifice. This was of the general model of *gṛihya* sacrifices with the *āvāpa, i.e.*, 'the special characteristical offerings' peculiar to marriage, inserted in it.[1] Thereupon certain auspicious ceremonies[2] were performed for the bridegroom, and then escorted by happy young women[3] he proceeded to the bride's house.

The day on which the bridegroom's party was to reach the bride's house (?) a little ceremony was performed for the bride also at her own place. On that night, (or on the second, or on the third ?), after the nocturnal darkness had disappeared, the girl bathed with sweet-scented water and put on a newly-dyed garment, whereafter, the *āchārya*, making her sit down behind the fire, sacrificed with the *mahāvyāhṛitis*[4] and made *ājya* oblations to Agni and other deities. Then four or eight

[1] Śānkhāyana devotes four khaṇḍas to the description of the sacrifice. *Cf.* also Pār., 1, 5, 6.

[2] These auspicious ceremonies are not described by any Gṛihya Sūtra. But certain such ceremonies are performed even up to this day and occupy several days before the marriage party proceeds to the bride's house. In Northern India, the most important of these are *halda* and *ghuṛa-chaṛhī*. On the *halda* day, the entire body of the boy is besmeared with yellow turmeric and the marital cord stuck round his right-hand wrist. The *ghuṛa-chaṛhī* takes place on the procession day a little while before the march of the procession, when, with certain minor accompaniments, the boy is made to ride a horse and drive him a few steps. If the party has to go to another city or village, this ceremony is usually performed on the previous night. Similar ceremonies are performed for the bride also at her own house, with the exception of *ghuṛa-chaṛhī*.

[3] This custom is not described by other Gṛihya authors. But it seems to have survived in various parts of India even now. Among the Sārasvat Brāhmaṇas of the Punjab, and most Khatrī sub-communities, females, especially those belonging to the family, form part of the marriage party. Among some Brahmans of the U. P. the ladies and the lady-guests of the bridegroom's family go to the house of the bride on the second day of marriage, usually known as the *Barhar* day. Among the Parsees, the ladies of the bridegroom's family go to the house of the bride on the betrothal day and make her a money present in silver coins. In ancient Irān this ceremony was called *Nām-pādvān*. See J. J. Modi, 'The Religious Ceremonies and Customs of the Parsees,' pp. 17, 18.

[4] *Viz.*, *bhūḥ*, *bhuvaḥ*, *suvaḥ*.

women, who had been regaled with vegetables, *surā* and food, performed a dance four times, and this was followed by distribution of food to Brāhmaṇas.

The bridegroom with his escort reached the bride's house and, at the proper hour, was, as was the bride, brought to the place where marriage was to take place. The Gṛihya Sūtra does not say anything in this connection. It starts with the bridegroom's offering the bride the garment and the salve-box. This leads to the anointing of the two, which, as Oldenberg thinks,[1] was done by some third person. Next, he gave a mirror into her left hand and her relations tied to her body (?) a red and black, woollen or linen cord with three amulet gems in it. This was followed by the bridegroom tying to her body (?) *madhūka* flowers. Subsequently, making her take her seat behind the fire, while she held him, he made four oblations with the *mahāvyāhṛitis*. All these acts were accompanied with appropriate mantras.

The more solemn rites now begin when the bride's father or brother, blessing her with 'be queen with thy father-in-law,' holds the sruva or the point of a sword over her head, while she sits facing east. The groom seizes with his right hand her right hand with the thumb, both hands having their palms upwards; and as he murmurs the formula *amohamasmi*, etc., the priest fills with the words *bhuḥ, bhuvaḥ suvaḥ*, a new water-pot, throws into it branches of a tree with a masculine name together with kuśa grass, and hands it over to a student who observes silence. This is the *stheya* water placed to the north-east, round which they walk. The priest then places a stone to the north, and the bridegroom getting the bride to rise makes her tread on it. Then the couple circumambulate the fire, and, after this, the bridegroom gives her a second garment. Thereafter, the *lājāhoma*, or the sacrifice of fried grain, begins.

[1] For his arguments see S.B.E., Vol. XXIX, p. 33, footnote 12,5.

The bride's father or brother pours out of a basket fried grain mixed with *Śamī* leaves into the joined hands of the girl. She sacrifices them into the fire and while she does so, the groom mutters the *mantra*. This rite together with the preceding ones, the treading on the stone, etc., is repeated twice or thrice again.

The next ceremony is of making the couple walk seven steps[1] in a north-eastern direction and signifies the establishment of a life-long friendship between the two. The *āchārya* then wipes those steps with the *stheya* water which he sprinkles also on the bride's and bridegroom's heads. The bridegroom then offers him gift.

When the bride departs from the house of her father, she is made to smear the axle of the chariot, on which she is to start on her journey, with ghee. Similarly she does with the wheels and the bulls also. Then a bunch from a fruit-bearing tree is put into each of the pin-holes and the oxen harnessed. The bride is then taken away to her husband's house. In the way a number of expiatory *mantras* are recited and rites performed at different places.

Reaching home, the bridegroom makes her sit on a red bull's hide and, while she takes hold of him, offers four oblations with their proper *mantras*. With another *mantra* he besmears her eyes with *ājya* salve and, touching her hair, pours the remaining *ājya* over her head. Here, some place a boy of good birth from both the parents' sides in her lap. Into his hands the bridegroom gives fruits and requests the Brāhmaṇas to wish an auspicious day.

Then they drink curds together and sit silently until the polar star appears, which he shows her. The bride says—'I see it; may I obtain offspring.' They observe perfect *brahmacharya* for three nights, sleeping on the ground, eating together

[1] Regarding the significance of 'seven' which comes attached to the number from the most ancient times, see J. J. Modi's 'The Religious Ceremonies and Customs of the Parsees,' p. 33. Seven was a sacred number among the ancient Parsians and played a prominent part in the marriage ritual.

boiled rice with curds and serving the nuptial fire. For ten days they do not set out from house.

On the fourth day he makes eight offerings of cooked food. Śānkhāyana does not speak of cohabitation on the fourth night. He, however, describes the *garbhādhāna*, to take place after her monthly period. Since the monthly period did not necessarily fall exactly after the marriage, the fourth-night intercourse may not be implied by the rite of *garbhādhāna*. For this implication one may only count upon the injunction to observe *brahmacharya* for three days. So, the fourth-day intercourse was not forbidden, but there was no special rite belonging to it.

The other Gṛihya Sūtras are not so rich in description of details as the Śānkhāyana. The preliminary sacrifice by the bridegroom after the consent of bride's father was obtained is prescribed in much a passing manner by Āśvalāyana also. Pāraskara does not mention it. He describes the place where the fire at marriage should be kindled (I, 4, 2). From the abrupt manner in which he begins with the rites of marriage at the bride's house, omitting entirely the preliminary rites taking place at the bridegroom's, it seems that this was the same fire as kindled at the house of the bride and around which the wedding rites were performed. This is worthy of note that *āvāpa*, prescribed by Śānkhāyana to be inserted in the sacrifice preliminary to marriage at the bridegroom's own house, is here inserted after the sacrifice with the mahāvyāhṛitis which takes place at the bride's house.

Giving the opinion of others, Pāraskara says that the fire at marriage should be kindled by attrition.[1] Pāraskara is a Sūtra-author of the *Śukla* Yajurveda. Hiraṇyakeśī, a sūtra-author of the *Krishṇa* Yajurveda, also prescribes the laying of the fire in much the same fashion as Pāraskara. Hiraṇyakeśī also does not describe the preliminary rites performed at the house of the bridegroom. In Pāraskara, we

[1] Pār., I, 4,4.

find the bridegroom at once giving the bride the garment and being anointed together with her. Then follows the circumambulation of the fire, and then the *mahāvyāhṛitī* oblations, the *lājāhoma*, the seizing of the bride's hand (*paṇigrahaṇam*), the treading on the stone (*aśmārohaṇam*), the sacrifice to Prajāpati and finally the *Saptapadī*.

In Hiranyakeśī, after the fire is kindled, the bride is brought to the bridegroom and he looks at her. She sits to his south, then sips water, and then the groom sacrifices with the *mahāvyāhṛiti* oblations.[1] After this come in turn the treading on the stone, the seizing of the birde's hand, the sacrifice of fried grains, circumambulation of the fire and the *Saptapadī*. So also in Āpastamba and Bodhāyana, the ceremonies begin at the bride's house. In Āpastamba we have a peculiar rite, the very first one, which may have been entirely local, that the bridegroom puts on the bride's head a net-work of *darba* grass, on it a right yoke-hole, on it again a piece of gold, and then washes her (?) [2] Then as usual, he gives her a garment, seats her on a mat to the west of the fire, seizes her hand, makes her walk seven steps, circumambulates the fire with her, offers the *mahāvyāhṛiti* oblations, causes her to tread on the stone and then sacrifices with the fried grains. In the Bodhāyana too the description of marriage begins with the seizing of the hand.

In fact, leaving the sūtras of the Ṛigveda, almost all other sūtras begin with ceremonies at the bride's house. So the rites which were performed at the bridegroom's house had perhaps more of the nature of local customs, which differed from one another not only with the difference of well-divided localities but with that of the families of different *Ṛishis* as well, than any strict religious injunction. That such was the case may be gathered from the statement of Āśvalāyana[3]

[1] Hir., I, 6, 19, 4—7.
[2] Āp., II, 4, 1.
[3] अथ खलूभावपि जनपदधर्मग्रामधर्मांश्च तान् विवाहे प्रतीयात्। यतु समानं तद्गृह्यात:। —Āś., I, 7, 1-2.

also who omitting the points of difference describes only what was common. And then at once he proceeds to describe the common rites, the very same ones which begin and end round the nuptial fire at the bride's house. We can be certain beyond doubt that the really most important rites of the whole ceremony were the *pāṇigrahaṇa*, *aśmārohaṇa*, circumambulation of the fire, sacrifice of fried grains and the *Saptapadī*. All the Gṛihya Sūtras agree in recognising them though they disagree in their arrangement.

Most of the above rites have come down to this day and are universally followed, while a few have been divided among different parts of India. Some of them may be traced to as old a period as the Indo-Iranian, or even Indo-European times.[1] Of the forms in which they exist in various parts of India at the present time Mr. Gait has given the following description:—

"The essential and binding part of the marriage ceremony varies in different parts. In the Punjab it consists of the *phere*, or circumambulation of the sacrificial fire, which is held to imply the consummation of the vows

[1] Such a one is the *pāṇigrahaṇa*. See J. J. Modi, The Religious Ceremonies and Customs of the Parsees,' p. 33—"The priest fastens with raw twist their right hands which are grasped by each other. This rite is called Hathêvôrâ, *i.e.*, handfastening." Then, in the footnote, he goes on—"Among the ancient Greeks the ceremony of handfastening was considered as the ratifying agreement of marriage. Among the ancient Romans, the priest made the marrying couple sit on chairs which were put together, and on which wool was spread, and then fastened their hands. The modern Hindus also unite the hands of the couple. In Finland, it is the father of the bride who fastens the hands.....Among the Assyrians, it was the father of the bridegroom who fastened the hands of the couple with a woollen thread." *Cf.* also Hopkins in the 'Cambridge History of Ancient India,' p. 233—"Indeed, the author of the Āsvalāyana Grihya Sūtra (I, 7, 1) says expressly that in the matter of weddings, 'customs are diverse,' and he gives only that which is common usage. Thus he tells how the bride is to go about the fire.....etc., but does not mention other rites which other Grihya Sūtras enjoin. Some of these, however, are of universal interest; and a comparison of the Hindu ceremonies with those of other Āryan-speaking people shows that in all probability the Indian ritual has preserved elements reaching far back into pre-historic times."

in the presence of Agni and the other sacrificial gods. In the United Provinces the young couple walk round, not a fire, but the marriage shed or a pole. In the east of these provinces, and also in Bengal and Bihar and Orissa, the binding portion of the ceremony is generally the *sindurdan*, or painting of the bride's forehead with vermilion. That this is probably a survival of a blood covenant[1] is shown by the fact that amongst certain castes, such as the Hāri, the bride and the bridegroom smear each other with their blood, which they obtain by pricking their fingers with a thorn. In Bombay the higher castes follow the practice of circumambulation. The lower castes sprinkle rice over the bride and bridegroom, while some of Dravidian origin pour milk or water over the joined hands of the young couple. In Orissa, their right hands are tied together with *kusa* grass, or their left hands, when the bride is a widow. In Madras there are various ceremonies, such as making them eat from the same dish, or knotting their garments together, or pouring water over them so that it runs from the man to the woman. But the most common is the tying of the *tali*, or necklace, by the bridegroom round the bride's neck. The Brāhman bridegroom places the bride's foot seven times on a mill-stone, a symbol of constancy."[2]

The ceremonies which took place at the house of the bridegroom after the marriage were, as we have seen, fewer in number. In the way between the bride's and the bridegroom's house, and before starting, some minor rites, which often hardly

[1] We may not yield to this conjecture readily. Among the people of the Punjab, and U. P. also, the forehead of the bride, and specially of the bridegroom, is painted with a round or a vertical mark of *roli*, as the case may be, several times, not only in marriage, but on all auspicious occasions. Among the Parsees too they welcome the bridegroom by giving a mark of *kumkum* on his forehead and sticking rice on it. In the ancient *grihya* ritual, not even once do we find any reference to the existence of a blood covenant. The *kumkum* or *rolī* mark on the forehead is considered a sign of prosperity and good luck.

[2] Census of India, 1911, Vol. I, pp. 257-58.

amounted to more than a recitation of expiatory *mantras* at different places or in case some mishap occurred, took place. In the Śānkhāyana, we have seen, the bride smears, before starting, the axle, the wheels and the bulls and puts a branch of a fruit-bearing tree into each of the pin-holes (I, 15, 1—7). Then the two bulls are harnessed, the right one first, as it appears from the *mantra* used (I, 15, 8) and from the distinct mention of it in the Āpastamba (II, 5, 21). These observances look much like local customs or customs divided by time and had almost as many variations as the number of the Gṛihya Sūtras themselves. In the matter of their treatment of post-marriage rites the Gṛihya Sūtras have more of disagreement with one another than otherwise. We have seen how the wife starts for her new home according to Śānkhāyana. According to the Sūtra of the other *Śākhā* of Ṛigveda we find, however, that, after the final ceremony of marriage, the *Saptapadī*, has taken place, the bride dwells that night in the house of a *Brāhmaṇī* who has her husband and children alive. Here she sees the polar star, which, according to certain Gṛihya Sūtras, she is made to see after reaching her new home, and prays for longevity of her husband and for progeny. Then they start for the new home (I, 7, 21—8, 1).

The carrying of her to the house of a Brāhmaṇī agrees with the description given in the Sūtras of the Sāmaveda where, however, the house is of a Brāhmaṇa and situated in a north-easterly direction. Then to the west of the fire, on a red bull's hide, she is made to sit silently till the stars appear. There after, the husband offers six *ājya* oblations and shows her the polar and the Arundhatī stars.[1] Often they were also required to circumambulate the fire before he showed her the star (Kh., I, 4, 4).

In one case (Pār., I, 8, 10), when the *Saptapadī* is finished, there is mention of a strong man snatching her up from the ground and taking her in an eastern or northern direction in an

[1] G., II, 2, 17—3,10 ; Kh., I, 4, 1—4.

out-of-the-way house where she was seated on a red bull's hide. According to Gobhila and Khādira, the house itself was situated in a *north-easterly* direction.

The Gṛihya Sūtras of the *Kṛishṇa* Yajurveda are at one with Sānkhāyana in omitting mention of a Brāhmaṇa's or Brāhmaṇī's house. But in their other details they do not tally with one another or with Śānkhāyana. In fact, Hiraṇyakeśī and Bodhāyana have no ceremony for the bride's starting on her new home. Jaimini of the Sāmaveda shows her the pole-star before starting; otherwise, he too does not give any ceremony of starting. Āpastamba, on the other hand, requires after the sacrifice with the mahāvyāhṛītis the offering of *ājya* oblations, the sprinkling of water round the fire and the untying of the rope. With a certain *mantra*, the chariot is placed in the 'right position' and she seated therein. Then the bridegroom spread two threads, a dark-blue one and a red one in the right and the left wheel-tracks respectively, upon which he walked (II, 5, 12, 19—24). Both Hiraṇyakeśī and Āpastamba prescribe the carrying of the nuptial fire. This fire was to be kept constantly and if it went out a new fire was to be kindled by attrition, or fetched from the house of a *Śrotriya*, and one of the couple was to observe fast.[1]

On reaching the new house, there were often some women to greet the couple at the door and take her down from the chariot.[2] Often the custom also was to make the bride enter the house with her right foot first without letting her step on the threshold (Āp., II., 6, 8-9). In the house was usually placed a red bull's hide, in the eastern part of it, on which she was made to sit.[3] In Hiraṇyakeśī and Āpastamba both the bride and the bridegroom sit on the hide and, in Śānkhāyana, it is before they enter the house that the bride

[1] Āp., II, 5, 13—18; Hir., I, 7, 22, 1—5.

[2] G., II, 4, 6; J., I, 22, 2.

[3] Ś, I, 16, 1-2; Ā., I, 8, 9; G., II, 4, 6; Hir., I, 7, 22, 8-9; Āp., II, 6, 8—10; J., I, 22, 3.

is required to sit on it. Then sometimes some oblations were offered or *mantras* recited,[1] after which, in some cases, a boy was placed in her lap.[2] After sunset, the husband showed her the pole-star. According to Hiraṇyakeśī, after showing the star, he went outside to worship the quarters and the stars, whereafter, returning home, he made her sacrifice a 'mess of cooked food.' A Brāhmaṇa was then entertained with the remains of this food.

For the first three nights after marriage, the couple were strictly forbidden to have sexual intercourse. They were required to sleep on the ground and to avoid pungent or saline food. On the fourth night, cohabitation usually took place. That these injunctions were for the three nights after marriage and not for those of the women's monthly illness—an objection likely to be raised—is evident from various facts. Hiraṇyakeśī speaks of the three nights after marriage and the ensuing cohabitation quite distinctly from the three nights of her monthly illness and the subsequent intercourse; and his description of the latter immediately follows that of the former (I, 7, 23, 10—I, 7, 25). Āpastamba, before forbidding intercourse for the three nights, says in the previous sūtra that the bridegroom should *notice the day on which he brings his wife home.*[3] He becomes further explicit, when he, later, prescribes separate *mantras* for cohabitations on the fourth night after marriage and after her monthly illness. Gobhila after prescribing the rites for the day when the bride is brought to her new home, definitely points to the *ensuing* three nights for the observance of *brahmacharya.*[4] In the same way Āśvalāyana also does it (I, 8, 10). According to him, as well as to Bodhāyana, the *brahmacharya* may even

[1] Ś., I, 16, 2—4; Ā., I, 8, 9; G., II, 4, 6.

[2] Ś., I, 16, 8; G., II, 4, 7; Āp., II, 6, 11; J., I, 22, 3.

[3] एतदहर्विज्ञानीयाद्यदहर्भार्यामावहते। त्रिरात्रमुभयोरधश्शय्या ब्रह्मचर्यं क्षारलवणवर्जनञ्च।—II, 8, 7-8.

[4] तावुभौ तत्प्रभृति त्रिरात्रमक्षारलवणाशिनौ, etc.—II, 3, 15.

continue *for one year* if they would have a *Ṛishi* born as their son. And since monthly illness is recurring, this duration of one year may more reasonably be measured from the first day of their married life than from that of her menstruation period. If it somehow be urged that the menstruation period in question should have been the first under consideration, we have to face the difficulty of having a very narrow application of the injunctions to observe the three-day *brahmacharya*. Such a hypothesis would imply a permissible freedom of intercourse on the occasions of other monthly illnesses.

We know that the fourth-night intercourse was not compulsory in all cases, although, in some, it was. Śānkhāyana, Pāraskara and Gobhila think that the proper time for it is after the menstruation period.[1] But there were others, whom Gobhila does not disregard, who held that the fourth-night intercourse should take place (G., II, 5, 7).[2] We have seen that Hiraṇyakeśī and Āpastamba held it important. In much later times it had come to be considered to be a *samskāra* for the woman.[3] The custom seems to have survived in its outward form up to this day and corresponds to the *phūlaśayyā* of the Bengalees and the *suhāga-rāta* of the northern Hindus; although the day on which these ceremonies are to take place may not necessarily be the fourth and the ceremony may not necessarily result in consummation. The custom of actual intercourse may have become obsolete as time grew upon it, but that it was a real part of the marriage ceremony as a whole, we may infer with fair justice. In the Ṛigvedic times too, we see that "the festivities being over, the bridegroom took the bride to his home on a

[1] Ś., I, 19, 1; Pār., I, 11,7; G., II, 5,8.

[2] This differentiation by Gobhila of his opinion with that of others is again a proof that the *brahmacharya* and the intercourse in question belonged only to the days coming just after the bride had been brought home after marriage.

[3] See footnote 2, p. 190.

car in a marriage procession, all to the accompaniment of suitable stanzas. Then followed cohabitation." [1]

The first and the fourth days after marriage possessed a special significance. The latter was the concluding day of marriage rites. It was the opening day of their sexual relations which were made valid by the rites peculiar to it. The former was important as being one when the student of a few days back actually took charge of the responsibilities of a householder. On this day, almost universally,[2] the bride and the bridegroom performed small sacrifices in honour of gods and offered oblations to them, and on this day they entitled themselves to offer daily morning and evening oblations and to perform the new and full-moon sacrifices[3] on their domestic fire, originally the fire used at their wedding. What a heavy and sacred responsibility it was to keep this fire around which the ritual, the worship, in fact the all, that a twice-born had to do to be worthy of his caste, centred, will be evident from the nature of the fire itself.[4]

It requires little concentration to think what should the conclusion have been of a married life established round such fire, in an auspicious hour, and made blessed with the recitation of holy *mantras*. The whole process of marriage ritual should have expected a happy life characterised by mutual love, sympathy and respect—each of the couple resigned to the

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[1] Vedic Index of Names and Subjects, p. 484.

[2] *Cf.* Ś., I, 18; Pār., I, 11,1—5; Kh., I,4,12—16; G., II,5,26; Hir., I, 23,11—1,24,3; Āp., I,3,10; K., X, 79,1.

[3] Ā., I, 9; Pār., I, 9; Kh., I, 5; Hir., I, 7, 26, 1—3; Āp.. III, 7,19; *cf.* also Vyāsasaṃhitā, II, 17—स्नातं वैवाहिके वह्नौ श्रौतं वैतानिकादिषु ।

[4] *Cf.* Monier Williams, Brahmanism and Hinduism, p. 364—"The fire used in the ceremonial was kindled by the friction of two pieces of sacred wood called Araṇī (Ṛigveda, VII,1,1) and this same fire which witnessed the union of the young couple was brought by them to their own home. There a room on the ground-floor was consecrated as a sanctuary for its reception and perpetual maintenance. Great reverence was shown to the fire so kindled. It was never blown upon with the mouth. Nothing impure was ever thrown into it, nor was it ever used for warming the feet." (Manu., IV, 53.)

happiness of the other. We have already seen how the bride was blessed with wishes to be queen with her father-in-law.[1] For the high and responsible position she held in the household of her husband we may refer to Vedic Index, pp. 484-85. Matrimonial conflicts there would not have been many and there would have been little cause for divorce. Although some stray passages, here and there,[2] may point to a certain existence of adultery on the part of woman or man, such cases should not have been many to menace the innocent expectations of the *grihya* ritual. We do not hear of divorces in the ancient times and what the social treatment with such exceptional cases of adultery, as may have taken place, was, we do not exactly know.

As for the modern treatment of society, we may say with Mr. Frazer that "For all orthodox Hindus marriage is a sacred union and no woman can be divorced. She may be turned out of caste and thus lose all social status. As long as she remains within the caste, the marriage bond, if performed within Hindus, is binding as a sacrament."[3]

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[1] See p. 194.

[2] *Cf.* तस्मादे वंविच्छोत्रियस्य दारेण नोपहासमिच्छेदुतन्यवरिवत्परो भवति ।—Pār., Gr., Ś., I, 11,6.

[3] Indian Thought Past and Present, p. 272. *Cf.* also Mr. Gait, Census of India, 1911, Vol. I, p. 245—".....and although a woman convicted of adultery may be deprived of her status and turned out of her caste, divorce in the ordinary sense is an impossibility."

THE VERB IN THE RĀMĀYAN OF TULSĪDĀS

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§ 1. Primitive Indo-Aryan was a highly synthetical language. Just like its noun, its verb was entirely inflexional and had a very large variety of forms. It had ten tenses (including the moods) and three voices—active, medial and the passive, and its roots had two padas—*Ātmanēpada* and the *Parasmaipada.* A root generally had four forms—simple, causal, desiderative and intensive. For the sake of conjugation the roots were divided into ten classes—*gaṇas*—and were conjugated in three numbers and three persons. Besides the conjugational forms, a root had more than half a dozen infinitives, several absolutives and a large number of participles—present, past and future. Thus the forms of only one root sometimes numbered several hundreds.[1]

But the Indo-Aryan language has had a general tendency of going from the concrete to the abstract, *i.e.*, from synthesis to analysis and from complexity to simplification, in common with all the Indo-European languages. Even the later Primitive Indo-Aryan, *i.e.*, the language of the later *Samhitās* and of the *Brāhmaṇas*, bears clear evidence of this. The Subjunctive (*lōṭ*) has lost ground and the analytic alternative forms (ending in the auxiliaries from √*as* and √*kṛ*, *e.g.*, *āsa* and *cakāra*) of the Perfect (*liṭ*) come to be used. Certain forms of the Second

[1] *Cf.* John Beames: A Comparative Grammar of the Modern Aryan Languages of India (referred to in the following pages simply as Beames), Vol. III, p. 4. He makes a reckoning and arrives at 540 conjugational forms of a root. Adding to them certain alternative forms as well as the non-conjugational forms, the number will go higher up.

Future (*luṭ*), *e.g.*, *dātāsmi*, *dātāsvaḥ*, *dātāsmaḥ* are clearly analytic forms.[1] The variety of the Infinitive is lost which becomes generally restricted to the *tum* forms. This general tendency towards simplification was very early arrested as far as the literary dialect, *viz.*, Classical Sanskrit, was concerned but it continued unabated in the popular languages.

§ 2. During the Middle-Indian period, in Pāli we find further evidence of simplification and of analytical formation. Of the tenses the two *liṅ* forms—optative and potential—are confounded and have practically become one; the Second Future is absent and the forms of the Perfect are seldom met with. The forms of the Present tend to take the place of those of the Imperative. The *Ātmanēpada* is losing ground before the *Parasmaipada* and the Desiderative and the Intensive forms of the root have fallen generally in disuse. The Dual Number has entirely disappeared. Pāli has only seven conjugations—the 1st, 2nd, 3rd and the 6th having merged into one. The roots of the other six conjugations also have a general tendency to be conjugated on the model of the first. The phonetic changes, moreover, have rendered many of the verbal forms similar. In effect, therefore, Pāli verb has a much less number of forms than the Primitive Indo-Aryan (or even the Classical Sanskrit) Verb.

This process of simplification has been still further pushed on in the various Prakrits. More forms of the Present displace those of the Imperative. The Past tenses become jumbled up. The *Ātmanēpada* is entirely lost except for a few stray forms. The conjugations have normally given place to two only—one in *a* and the other in *e*. Further phonetic changes have rendered greater simplicity and similarity of forms possible.

The Apabhraṁśas carry simplification a step further. Several of the tenses fall in disuse and greater reliance is put

[1] *Cf.* Beames, Vol. III, p. 7.

on the various participles to express the ideas. The conjugation has practically become one.[1]

§ 3. The Modern Indo-Aryan languages represent a stage where synthetical forms have generally given place to analytical ones. In Awadhī[2] the present is generally expressed now by adding the forms of the auxiliary *hob*—(to be) to the Present Participle, *e.g.*, *dēkhati haũ*—I see (*lit.*, I am seeing), the Past is based on the ancient Passive Past Participle and the Future though representing the ancient Simple Future tense has at least for the first person plural a participial form—*dekhibā* (we shall see). For the Imperative the forms based on the ancient Present are employed except in the second person singular. A large number of periphrastic tenses come to be used—combining a participle with the forms of the root *hob* or *rahab*. The compound Verbs are very generally used to express the various shades of meaning which in Prim. Indian were expressed by verbal forms. The synthetic Passive has entirely given place to analytic Passive where the Participle is combined with the various forms of the root *jāb*—(to go), or *parab*—(to fall). The ancient distinction of the Padas or of the various conjugations is no longer kept. In effect, the verbal forms are much less in number than they ever were in any earlier stage of the Indo-Aryan.[3]

§ 4. The Rāmāyan of Tulsīdas is one of the early texts of Awadhī, and its forms, therefore, well illustrate the stage of the passing of the language from the Middle-Indian period to the Modern Indian.

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[1] Woolner: Introduction to Prakrit, § 113.

[2] *Cf.* Baburam Saksena: Lakhīmpurī—A Dialect of Modern Awadhī, J.A.S.B., XVIII (N.S.), No. 5 (referred to in the following pages as Lakhīmpurī), §§64—121.

[3] Taking a typical root in Lakhīmpurī, for instance *dēkhab*—(to see), we have 32 forms of it; its causal will have another 32 which makes a total of 64 forms of a root. It will, of course, have to seek the aid of the various auxiliaries but its own forms will not be more than 64 as contrasted with several hundreds of Primitive Indo-Aryan as shown above.

§ 5. The roots almost all are the ancient roots except some borrowed stems from other contemporary languages, *e.g.*, *newājē* < Persian *nawāz*, dāgē < Per. *dāg*, or *gudarata* < Per. *guḏar*.[1] Sometimes the ancient participle is taken as a root and then conjugated, *e.g.*, *hataḥ*—(killed) from which the Rāmāyan has *hataũ*—(I kill). The Verbs are either transitive or intransitive, simple or causal. The roots are generally active in sense but a few passive ones are also found, *e.g.*, *chījai*—(is cut or destroyed),—or *kahāvaũ*—(I am called). Of these *chījai* is based on the ancient Passive from √*chid*—(to cut) and *kahāvaũ* is a modern formation somewhat akin to the causal. A large number of denominative roots chiefly onomatopoetic are seen, *e.g.*, *hihināhī*, *carapharāhī*, *talaphata*, *kilakilāi*, *kaṭakaṭāi*, *kasamasāhī*, *lahalahāta*, etc.

The root form, for the purposes of this paper, may be obtained by cutting off the particle *-ana* or *-aba*, as the case may be, from the Verbal Noun, *e.g.*, *karana* : √*kar-*, *ānaba* : √*ān*—. In cases of roots ending in vowels, only *-na* or *-ba* should be cut off, *e.g.*, √*ho-* < *hōna* or *hōba*.

§ 6. In the Rāmāyan we normally find the Awadhī forms of verb. But occasionally here and there other forms are also met with. For instance Sanskrit *paripālaya*, *vibhañjaya*, *dāraya*, *vistāraya*, Braja *gayō*, *bhayō*, *nayō*, *māryō*, *bēdhyō*, —Hindustānī *Pāvahugē*, *Karahīgē* or Bhojapurī *marāyala*, *ghāyala*. The Sanskrit forms are met with generally in prayers (*stuti*) and the Braja ones in metres other than the Dōhā and the Caupāī. The Hindustānī and Bhojapurī forms are very rare and may probably be due to the corruption of the text. Only the Awadhī forms are dealt with in these pages. A root has sometimes double forms, *e.g.*, *cahata*, *cāhata*; *baḍhata*, *bāḍhata*; *lagā* : *lāgā*.

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[1] *Cf.* Alld. Univ. Studies, Vol. I, the article on Persian Loan-words in the Rāmāyan of Tulsīdas, pp. 71, 72.

Present Tense (Indicative).

§ 7. The following are the terminations:—

	Singular.	Plural.
I	*-aũ*	
	-ũ	
II	*-asi*	... *-ahu*
	-si	... *-hu*
III	*-ahi, -ai*	... *-ahĩ, -aĩ*
	-hi, -i	... *-hĩ, -ĩ*
	-a	

First person singular—the termination *-aũ* is added to consonantal roots and *-ũ* to vowel roots, *e.g.*, *√samujh-* + *-aũ* > *samujhaũ* and *√jā-* + *ũ* > *jāũ*; similarly *kahaũ, cahaũ, ḍaraũ, pāvaũ, pūchaũ baranaũ, lahaũ, uṭhāvaũ, lahaũ, hoũ.*

First person plural forms of this tense are not met with. I have found only one example—*kahihi*, p. 228[1] (in which case the termination will be *-ihi*) which probably is of this number. The sense of this particular number of the first person is generally conveyed in the Rāmāyan by a Passive formation.

Second person singular *-asi* and plural *-ahu* are added to the consonantal roots while the other two *-si* and *-hu* are added to the vowel-roots, *e.g.*, *kahasi, karasi, cāhasi, jiāvasi*; *ahahu, cāhahu, karahu, uṭhāvahu.*

Note 1.—There is an exceptional usage on p. 76[1] *taĩ ghālai* where the termination of the II sg. would be *-ai.*

Third person singular terminations *-ahi, -ai* and plural *ahĩ, -aĩ* are added to consonantal roots while *-hi, -i* and *-hĩ, -ĩ* are added to vowel roots, *e.g.*, *citavahi, jānahi, barakhai, mākhai, milai*; *cikkarahĩ, jāgahĩ, dēkhahĩ, karaĩ, dharaĩ.*

[1] The references are to the pages of Tulasī Granthāvalī, Vol. I.

NOTE 2.—The aspirated forms are very common in the plural while uncommon in the singular. The unaspirated forms (*i.e.*, ending in *i* and *ī*) are very common in the singular while uncommon in the plural.

NOTE 3.—An alternative III sg. form ends in *-a*, *e.g.*, *kaha, dēkha, bhāva, lāga, saka, hara*, etc.

NOTE 4.—Exceptionally *jāya* (pp. 227, 269, 295) is found for *jāi* and *jāyā* (p. 227) for **jāī*. But I am pretty sure that these forms do not represent different terminations *-ya* and *-yā* but are only alternative orthographic representations of *-i* and *-ī*, respectively. Similarly, in other persons also, *e.g.*, *-ai*, *-au* are sometimes found written as diphthongs but not at others.

§ 8. The use of this Present tense is the same as that of the old Indo-Aryan Present (*Laṭ*) or of the Modern Awadhī Present Indicative.[1] It is also used to express immediate future, *e.g.*, *ulaṭaũ* (p. 115). The alternative forms where they exist do not appear to indicate any difference in meaning—for instance, *sūjhai* and *sūjha* convey the same sense.

NOTE.—The Present Participle (Active) is used with the various persons to express the sense of the Present Indicative, *e.g.*, *saba nāvata sīsā, calē jāta siva, jāhi na jānata vēda* (p. 27). More about this will be said when dealing with the Participle.

THE IMPERATIVE

§ 9. The following are the terminations:—

	Singular.	Plural.
I	*-aũ* (after consonantal roots) *-ũ* (after vowel roots)	
II	*-u* *asi* or *-ahi* (after consonantal roots) ...	*-ahu* (consonantal roots)

[1] *Cf.* Lakhīmpurī, § 70 and § 78.

	Singular.	Plural.
III	*-si* or *-hi* (after vowel roots) *-au* (after consonantal roots) *-u* (after vowel roots) *-ahi* or *-ai* (after consonantal roots) *-hi* or *-i* (after vowel roots)	*-hu* (vowel roots)

First person singular forms of the Imperative are the same as the forms of the Present Indicative.

The second person singular forms in *-u* are more common than the *-asi*, *-ahi* or *-si*, *-hi* forms, *e.g.*, *taju*, *dharu*, *sunu*, *dekhāu*, *bilagāu*, *sunahi*, *karahi*, *utārahi*, *lehi*, *dehi*, *karasi*, *marasi*, *kahasi*, *hōsi*. The second person plural forms of this tense are the same as those of the Present Indicative. The aspiration is absent, however, in one instance, *viz.*, *Karau* (p. 30). The forms of the first person plural and the third person plural are not met with. The Impersonal forms in *-iya* (or *ia*) and *-iahi* (or *-iahɪ*), *e.g.*, *kahā kahiya*, *hama dēkhi āiya*, *yaha chabi jehi paṭatariya*, *bāyasa paliahi ati-anurāgā*, *avasi dēkhiyahi dēkhana jōgū*. The third person singular forms in *-au* or *-u* are much more common than the *-ahi*, *-ai* or *-hi*, *-i* forms, *e.g.*, *chūṭau*, *basau*, *hou*, *rahau* and *cukai*, *nasāi*.

The use of the Imperative is just like that of the ancient *lōṭ* or of the Modern Awadhī Imperative. The subject is almost always understood.

The Present Conjunctive

§ 10. The Present Conjunctive (or Conditional) uses the forms of the Present Indicative, the condition being expressed by some such particle as *jau*, *jaũ*, *jaũ pai*, *e.g.*, *jau cāhasi ũjiāra*, *jaũ mahesa mohi āyasu dēhī*, *jō bilōki rījhai kuari tab mēlai jayamāla*, *jō sakhi inhahɪ dēkha naranāhū*, *pana parihari haṭhi karai bibāhū*, *asa bibēka jaba dēi bidhātā*.

Sometimes the Conjunctive particle is not at all used, the sense of the condition being implied ; the counterpart of the particle (*taba*, *tau*, etc.) is seldom used.

Future Indicative

§ 11. The following are the terminations of this tense :—

	Singular.		Plural.
I	*-ihaũ*		
II	*-ihasi*	...	*-ihahu* (*iahu*)
III	*-ihi*	...	*-ihɪ*
	-ī	...	*-ihahɪ* (*iahɪ*)
		...	*-ihaɪ*

First person singular—*e.g.*, *karihaũ*, *ḍārihaũ*, *jaihaũ*, *deihaũ*, *mārihaũ*. The first person plural forms of this are not met with.

Second person singular,—*e.g.*, *jaihasi*, *pachitaihasi*. Second person plural—*e.g.*, *aihau*, *byāhiahu*.

Third person singular forms ending in—*ihi* are more often met with than those ending in *-ī*, *e.g.*, *karihi*, *pūjihi*, *lāgihi*, *sudhārihi*, *dēihi*; *hōī*, *hōihi*, *niyarāī*.

Third person plural forms in *-ihɪ* are less common than the others, *e.g.*, *karihahɪ* : *karihɪ*, *rakhihahɪ* : *rākhihɪ*, *hoihahɪ*, *hōihɪ*, *dekhiahɪ* : *dekhihahɪ*.

Note.—The aspiration in the forms of this tense is very unsteady, particularly in cases where more than one aspirated sounds occur (*e.g.*, in forms ending in *-ihahu* or *-ihahɪ*) where the tendency is to elide one *h* sound, *e.g.*, *rahi ahu*, *hoiahɪ*, etc.

§ 12. An alternative set of Future Indicative forms is found ending in *-ba*, *-bā*, *-bī*, *-bi* or even *-bai*. These forms are used in all the three persons and the two numbers. For instance :

I sg. *ānaba* (*maɪ*), *maɪ purauba*, *karabi*, *āuba*

I pl. *kahaba*, *karaba*, *lēba*, *dēkhaba*, *karavāuba*, *dēbā*, *lēbā*, *dekhibai* or *dēkhibē*;

II sg. *taṛ dēkhaba*
II pl. *tumha hōba, tumha jitaba, mānibī, pālibī*
III sg. *pitāhū pachitāba, lakhana bhūjaba*
III pl. *rāma (honorific plural) biyāhaba, janaka bolāuba sīya, karaba purāri.*

NOTE.—Two forms ending in *-gē, viz., pāvahugē* (pp. 62 and 384) and *karahṛgē* (pp. 330 and 378) are met with. They are not Awadhī (*cf.* §7 above).

FUTURE IMPERATIVE

§ 13. This is a peculiar tense which is Imperative in sense and at the same time Future in time. It is different from the ordinary (Present) Imperative and is probably peculiar to Hindi dialects. For instance *tumha karahu* means 'do this' and refers to the immediate action and is, therefore, practically Present Imperative. But it differs from *tumha karehu* which means 'you do this in future.' The literary Hindustānī as well has this usage, *e.g., yeh kām karō* is different from *yeh kām karẹnā* where the latter stands for the Awadhī *karehu*. The Rāmāyan has this usage for both the numbers of the second person like Modern Awadhī.[1] I call it Future Imperative for want of a better name in order to distinguish it from the ordinary Imperative which is more or less Present in sense. Its terminations are :

	Singular.	Plural.
II	*-esu*	*-ehu* (*-eu*)

e.g., *jamihahṛ paṅkha karasi jani*
cintā tinhahṛ dekhāi 'dihesu' taṛ
sītā ... ... p. 337
'māresu' jani suta 'bādhesu' tāhī ... p. 350
'jānesu' brahma anādi aja ... p. 477
jaisē jāi mōha bhrama bhārī
'karehu' so jatana bibēka bicārī ... p. 27

[1] *Cf.* Lakhīmpurī, § 71, Note.
The termination of II sg. is—*ē, e.g., tui jāē, tui karē.*

soi bicāri pati 'karehu' bibāhū
jehi na bahōri hōi ura-dāhū ... p. 35
aba ura 'rākhehu' jō hama kahcū ... p. 37
nātha umā mama prāna sama, gṛha kinkarī 'karēhu'; chamehu sakala aparādha aba, hoi prasanna bara dēhu ... ... p. 48
sena samēta 'raheu' tīniu jana ... p. 405

NOTE 1.—Just as the forms of the Present are sometimes used in the sense of the Imperative in the Rāmāyan, similarly the forms of the Future Indicative are sometimes used to express the sense of the Future Imperative, *e.g.*, *byāhiahu* —p. 131, *jānaba*,—p. 4, *dēta rahaba*,—p. 154.

NOTE 2.—The terminations of this tense are not added after the roots based on the ancient Past Participle, *e.g.*, *bhayehu* is not possible in this tense, *hōehu* will be used instead. Otherwise the termination of the plural here agrees with the Past Indicative plural second person just as in Modern Awadhī.[1]

PAST TENSE (INDICATIVE)

§ 14. The following are the terminations:—

	Singular.	Plural.
I	*-eũ* (*-yeũ, -yaũ*)	**-enha*
	-iũ	*-inha*
II	*-chi* (*yehi*)	*-ehu* (*-yehu, -yahu*)
		-ihu
III	*-esi* (—*yesi*,— *yasi*)	*-enhi* (*-yenhi*)
	-isi	*-inhi*
	-eu (*-yeu, -yau*)	

First person singular—The termination *eũ* is generally added to consonantal roots as well as vowel roots but the terminations within the brackets (in this person as well as in others as put above) are added only to vowel roots, *e.g.*, *kaheũ*,

[1] *Cf.* Lakhīmpurī, § 71, Note.

kīnheũ, raheũ, pāyeũ, āyeũ, pāyaũ. The termination *-iũ* is added to such roots as are generally intransitive and have a Feminine subject, *e.g., bhaiũ* (referring to *umā*), *rahiũ.*

NOTE 1.—It is only generally that the termination *-iũ* is found in forms of the Intransitive Verb when the subject is Feminine. There are cases where in spite of the verb being Transitive, forms ending in *-iũ* are found when the subject is Feminine, *e.g., sisa dīnhiũ tōhī*—p. 163 (Kaikei speaking to Mantharā), *mama anurūpa puruṣa jaga nāhī, dēkhiũ khōji lōka tihũ nāhī*—p. 300 (Sūpanakhā speaking to Rāma).[1]

First person plural forms have not been met with except *hama saba sānuja bharatahi dēkhē, 'bhainha' dhanya,* p. 244 (said by certain women who saw Bharata on the way). From this *bhainha* which is feminine I deduce a masculine form * *bhaenha* or * *bhayenha* and thence the termination *-enha.*

Second person singular termination *-ehi* is added to consonantal roots while *-yehi* to vowel-roots only, *e.g., sunehi* —p. 116, *jagāyehi, sunāehi*—p. 293.

NOTE 2.—A case is met with of a form ending in *-ē, viz., jānē nahī marama saṭha mōrā*—p. 344, and another of a form in *-yasi, viz., būṛha bhayasi na ta maratehũ tōhī* —p. 393.

Second person plural forms ending in *-ehu* (*-yehu, -yahu*), *e.g., kīnhehu, pūchehu, paricehu, baurāyehu karāyehu.* Note 1 above applies to forms ending in *-ihu, e.g., bhūlihu, rahihu* but *kīnhihu praśna jagata hita lāgī*—p. 53 (referring to

[1] On p. 259 there are two instances where these feminine forms are used with a masculine subject. Bharata is speaking of himself:—*jāriũ jāya janani kahi kāhū*, and *sahiũ saba sūlā.* This usage is very exceptional. The reading in an earlier edition (1915, Indian Press) for *sahiũ* is *sadeũ* (where *d* is probably a misprint for *h*) which removes the difficulty. The other case *-jāriũ* is unintelligible unless it be a corruption.

Pārabatī) and *svāmini kahihu kathā mohi pāhī* (referring to Kaikēī) where the feminine form is found in spite of the transitive verb. But in these two cases the subject and the object both are in the feminine gender.

Third person singular forms ending in *-esi* (*-yesi, -yasi*) are generally used with both the genders, *e.g., racesi, kīnhesi, gahesi, ghēresi, bāḍhesi, pahūcāyesi, sunāyasi, (Kaikēyi) māresi*—p. 169, while the forms ending in *-isi* are used only with a subject in the feminine gender, *e.g., kahisi*—p. 164, *prabodhisi, kīnhisi*—p. 165, *dīnhisi*—p. 169.

NOTE 3.—These forms in *-si* are used always implying contempt for the subject. For instance, the subjects of these verbs are Māra (Infatuator), Mantharā, Kaikēī and Girā when they act wickedly. The forms in *-eu* (*-yeu, -yau*), *e.g., kaheu, jāneu, thakeu, dēkheu, uyeu, pāyeu, gayau.* I have not found the corresponding feminine forms in *-iu.**

The third person plural forms in *-enhi* (*-yenhi*) and *-inhi* do not show any difference of gender, *e.g., daccha sutanha upadēsinhi, (muni) bālaka dēkhinhi jāī, (dēvanha surasā) paṭhainhi, (niṣāda) caṛhāinhi dhanahī, baiṭhārenhi, kahenhi, marāyenhi.*

NOTE 4.— In one case *raheni tahā raci raci nija rūrī* (an alternative reading found in 1915 edition for *rahe nija nija anīka raci rūrī*) the aspiration has been dispensed with.

NOTE 5.—On p. 25 (*kīnhahu praśna manahū ati mūṛhā*) the II sg. *kīnhahu* for *kīnhehu* is found. It is unintelligible or may be the Present tense form.

NOTE 6.—Various forms of the Past Participle are used with the various persons to express the sense of the Past Indicative, *e.g., mai nihōrā kīnha mai kathā sunī, hama phalu pāyā, tumha parīchā līnhi, māla khasī, jehi jaga upajāyā una ghālā, caukai sumitrā pūrī.* More about this will be said when dealing with this participle.

Past Conditional

§ 15. The following are the terminations :—

	Singular.	Plural.
I	*-ateñ* (*-atehñ*)	...
	-teñ (*-tehñ*)	...
II	...	*-atehu*
III	...	...

Forms of this are found only in the case of first person singular and second person plural. For instance *jañ janateñ* (had I known), *tau hōteñ na hasāī* (then I would not have become a laughing-stock), *na ta karateñ kachuka sahāya tumhāra* (otherwise I would have rendered you some help), *khātehñ puni tohī* (then I would have eaten you), *lai jāteyñ sītahī barajōrā* (I would have taken away Sita by force), *nata marateñ tōhī* (else I would have killed you), *milateñ tāta kavana bidhi* (how would have I met you, dear), *sunateñ kimi harikathā suhāī* (how would have I heard the beautiful story of Hari), *jañ tumha milatehu* (if you had met), *jañ tumha avatehu* (had you come).

Note.—The Present Participle with or without the particle *jañ*, *jañ pai*, etc., expresses this sense, *e.g.*, *jañ pai jia na hōti kuṭilāī*—if there were no evil in the heart, *hōta janama na bharata kō*—if there had not been Bharata's birth ; similarly *ācarata kō*, *apaharata kō*, *karata kō* ; *jō raghubīra hōti sudhi pāī*, *karatē nahī bilamba raghurāī*.

Present Participle

§ 16. The Present or Imperfect Participle ends in *-ata* in the case of consonantal roots, *e.g.*, *karata*, *japata*, *jāta*, *āvata*, *achata* and in *-ta* in the case of vowel roots, e.g., *lēta*, *hōta*. A feminine form ending in *-ti* (lengthened to *tī* in *phiratī bārā*, p. 350), *e.g.*, *aghāti*, *āvati*, *parati*, *birājati* and a masculine plural form in *-tē* are also found.

§ 17. This participle is used either adjectively or as a verb. As an adjective it does not appear to undergo any change for gender or number, *e.g.*, (*bānī*) *kahata sādhu mahimā sakucānī* — speech (while) describing the greatness of the good felt diffident, *kahata sunata eka hara abibēkā*—one on being said or heard takes off indiscretion, *khojata bipina phirata dou bhāī*—both the brothers wander in the forest searching, *baranata pantha bibidha itihāsā, Bisvanātha pahũce Kailāsā*—Bisvanātha reached Kailāsa narrating tales of various sorts, *sūkhata dhānu parā janu pānī*—as if rain poured on drying paddy (crop).

As a verb it is used in all the three persons and in both the numbers and denotes the Present tense. For the third person singular, however, it ends in *-ti* instead of *-ta*, provided the subject is feminine. The form in *-tē* is found only twice in the text and in both cases is connected with the third person plural subject. A few examples are:

Haũhu kahāvata, sou pragaṭata, kṛpā aghāti, girā lagati pachitānā, sumirata sārada āvati dhāī, saba jānata prabhu prabhutā, pada paṅkaja prēma na jē karatē.

NOTE 1.—The differentiation of gender mentioned above is not, however, met with when this participle is used in periphrastic passive forms, *e.g.*, *so* (*sādhumahimā*) *mo sana kahi jāta na kaisē* where one would have expected *kahi jāti*.

NOTE 2.—There appears to be no distinction between the Present sense expressed by this participle and that expressed by the ordinary Present tense. The Participle is very often used single (unaided by any form of the verb *hōba*—to be) except in the following instances :—*cahata hahĩ* —p. 144, *jānati hahu*—p. 163, *japata hahu*—p. 296, *karata hahĩ*—p. 316, *cahata hahĩ*—p. 365, *jānata ahaũ*—pp. 376, 379, *sakucata ahahĩ*—p. 456.

NOTE 3.—This participle also expresses the sense of the Past Conditional (*vide* § 15, Note).

Past Participle

§ 18. The following forms of this participle are found in the Rāmāyan:

(*a*) Masculine singular—ending in *-ā* (in the case of consonantal roots) or *-vā, -yā* (in the case of vowel roots), *e.g., avagāhā, ānā, jitā, bācā, āvā, pāvā, gāvā, kahāvā, pāyā, upajāyā.* Even in case of vowel roots the termination is sometimes only *-ā, e.g., chuā.*

Note 1.—In a few cases, however, instead of *-ā*, the termination is *-a* only, *e.g., baiṭha, kīnha, līnha, dīnha, dīkha, ṭūṭa.*

(*b*) Feminine singular in *-ī*, e.g., *sunī, samujhī, baṛhī, bāṛhī, khasī, ānī, gāī, calī, pāī, chāī, daī, bhaī.*

Note 2.—In a few cases this *-ī* is shortened to *-i*, *e.g., bhai, gai, dīnhi, līnhi, kīnhi, dīkhi, ḍagamagāni.*

(*c*) Masculine plural in *-ē* (or *-yē* in the case of vowel-roots only), *e.g., anhavāyē, āvē, āē, upajāē, kiē, gāē, gayē, chāē, ugharē, udhārē, calē, takē, dalē*, etc.

Note 3.—The *-ē* is sometimes *metri causa* shortened to *-e, e.g., bahu bidhi munihi prabodhi prabhu taba 'bhae' antaradhyāna*, p. 63.

(*d*) Feminine plural in *-ĩ, e.g., āĩ, dēkhĩ, paṭhāĩ, pūrĩ, dhāĩ, jēĩ, calĩ, gaĩ.*

Note 4.—The *-ĩ* is sometimes *metri causa* shortened to *ĩ, e.g., āgē hoi calĩ pantha tehi*, p. 28.

Note 5.—Certain intransitive roots ending in *-ā* insert *-n* between the root and the terminations of this participle,[1] *e.g., *ḍerāba* gives the form *ḍerānā, *sakucāba*: *sakucānī*, similarly, *thirānā, cirānā, akulānī, kumhilānī, ḍagamagāni, lapaṭānī suhāna, hulasānī, juḍānē, parānē, lalacānē, lukānē, sihānē.*

§ 19. This participle is used either as an adjective or as a verb. When used adjectively the gender and the number of the participle agree with the gender and the number of the noun or pronoun defined, *e.g., bidhi prapañca guna avaguna 'sānā,' udadhi 'avagāhā'; bidhubadanī saba*

[1] *Cf.* Lakhīmpurī, § 100, Note.

bhāti 'sāvārī,' ajahũ prīti ura rahati na 'rōkī'; āvata hiya 'hārē' kāmī kāka balāka bicārē, dampati bacana parama priya lāgē/mṛdula binīta prēma rasa 'pāgē'; prēma pulaki tana mana 'anurāgī' maṅgala kalasa sajana saba lāgī, sīyamātu tahi samaya paṭhāī dāsī dekhi suavasaru āī.

§20. The participle is used as a verb with all the three persons and two numbers. When the verb is transitive the participle agrees in gender and number with the object while if it is intransitive it agrees with the subject, *e.g., maī nihōrā kīnha, maī...sunī kathā, nātha na maī samujhē muni bainā, hama phalu pāyā, (tumha) parichā līnhi, bharōsa āvā, upajā hiya ati haraṣu, surēsa ḍerānā, tinha (carita) gāvā, bhai kabi buddhi bimala avagāhī, Rāma sudhi kīnhi, sura astuti kīnhi, sāgara śrī daī, sura āsana dayē, satī satabarasa gāvāē, bhūpa dhāē, dasi dhāī, saba kāhū asīsa daī, caukaī cāru sumitrā purī, (sītā) sāsu dēkhī, dāsī āī.*

NOTE 1.—In the case of transitive verbs also, however, the participle agrees with the subject if the object is not in the Direct case but in the Oblique, *e.g., tumhahī maī khāvā*, p. 291.

NOTE 2.—The participle is used without any auxiliary but in stray cases the forms of *hōba* serve as auxiliaries of this participle also just as in the case of the Present Participle (*vide* § 17 Note 2—above). For instance: *baiṭha ahaũ*—p. 27, *thakita hōhī*—p. 89.

NOTE 3.—The Past Participle retains certain *ardha-tatsama* forms, *e.g., jita, thakita.* A case of the Active Past Participle is also found in *mūrativanta tapasyā jaisī* where the participle does not agree with its noun in gender.

NOTE 4.—Certain verbs which are very generally used have sometimes shorter forms of this participle, *e.g., bhā, gā, bhē, gē.*

CONJUNCTIVE PARTICIPLE

§ 21. The Conjunctive Participle or the Absolutive ends in *-i, e.g., āi, ughāri, chāṛi, jōri, dēkhi, dhari, nahāi, pahicāni, bujhāi, māgi, lagi; lāgi, samujhi, hasi.*

It is generally used to express any action which is finished before the beginning of the second action by the same agent, *e.g.*, *asa bicāri pragaṭaũ nija mōhū / harahu nātha kari jana para chōhū.* In this sense it is generally used without the aid of any auxiliary word. But the following cases occurring in the Rāmāyan probably show the beginnings of the Modern Awadhī usage with an auxiliary :[1]

sudhāri kai—p. 301, *nihāri kai*—p. 301, *jāi kara*—p. 338, *khāi kari*—p. 399.

§ 22. Another very common use of this participle is to form the periphrastic sentences, *e.g.*, *chāṛi sakahī*—p. 173, *cali jāi*—p. 378, *suni pāvā*—p. 293, *būjhi pareu*—p. 175, *bōli lēhī*—p. 222, *bōri dēta*—p. 226.

NOTE.—*Samujhāya*, (p. 352) shows only a different mode of expressing the sound *-i* in writing and does not warrant a separate termination. *Akani*, (p. 174) is a direct descendent of Sanskrit *ākarṇya.*

PERIPHRASTIC TENSES

§ 23. Periphrastic tenses are very seldom used in the Rāmāyan unlike Modern Awadhī where they have greater scope. The Rāmāyan has the Present Indicative in general use, while that tense has become very restricted in use in Modern Awadhī where the Present Imperfect is employed instead. Even where we do not find the Present Indicative tense in the Rāmāyan, we find the Present Participle instead, unaided by any auxiliary. It is probably in the stray cases of the Present Participle being accompanied by the auxiliary verb *hōba* in the Rāmāyan that the beginnings of the modern Present Imperfect are to be found. The cases mentioned in § 17, Note 2, are the only ones which I have met with.

§ 24. Another peculiar tense is formed by combining the Present Participle with the Past tense forms of *hōba* (*e.g.*, *bhā, bhaeu*). This is used in the sense of the past and lays

[1] *Cf.* Lakhīmpurī, § 91.

emphasis on the initiation of an action and its continuity afterwards. The following are the instances I have met with:

Janamata bhaĩ, mārata bhayau, calata bhaĩ, calata bhaẽ, chāṛata bhayō, sōbhata bheu and *gāvata bhaẽ.*

§ 25. The Past Continuous (Imperfect) is formed by combining the Present Participle with the forms (in the Past tense) of *rahaba*—to be. The following instances are found in the Rāmāyan:—

Japata raheũ (I was meditating), *jāta raheũ, karata raheũ, citavata raheũ, khēlata rahā, karata rahē, dēkhata rahē, rahē kahāvata* (?), *jogavata rahahĩ* (?)—p. 241, *manāvata, bilōkata rahahĩ* (?)—p. 451.

§ 26. The Present Perfect is formed by combining the Past Participle with the forms of the verb 'to be.' The instances noted in § 20, Note 2, are the only ones which I have met with.

§ 27. The Past Perfect is formed by combining the forms of the Past Participle with the forms (in the Past tense) of *rahaha*—to be. The following are the instances:—

Gaĩ rahĩ (had gone), *gaẽ rahẽ, ṭhāṛha rahā.*

NOTE.—There is one instance where the form of √*as* is combined with the Past Part., *viz.*, *gaĩ hĩ*, p. 379. The meaning is the same as that of *gaĩ rahĩ.*

PASSIVE VOICE

§ 28. The Active Voice is more generally used than the Passive in the Rāmāyan. Besides the tenses which are based on the Passive Participles, only a few forms of the Synthetic Passive are found.

§ 29. The Passive Present Participle ending in *-iata* is used with the various nouns and pronouns as a verb like the Active Present Participle (*vide* § 17 above), *e.g.*, *Girā aratha jala bīci sama, kahiyata bhinna na bhinna* (word and meaning like waves of water *are said* to be different but are not so)—p. 13, *prathama pūjiata nāma*

prabhāū (who *is worshipped* first on account of the influence of the Name)—p. 13, *sarāhiata*—p. 283, *dēkhiata*—pp. 331, 409.

§ 30. A form in *-ia* (or *-iya*) and another in *-iahi* are impersonally used in the sense of the Present or the Imperative—the first when the object is singular and the second (*-iahi*) when it is plural. For instance :

Karia na saṁsaya asa ura ānī (having kept this in the mind, *let* no doubt *be entertained*), p. 19.

Sunia kathā sādara rati mānī (*let* the story *be heard* with respect and affection), p. 19.

Kahia bujhāi kṛpānidhi mōhī, p. 25.

Cahia amiya jaga jurai na chāchī (nectar *is wanted* but even whey is not available in this world)—p. 7, *jānia bhagati na pūjā* (neither devotion nor worship *is known*—to us)—p. 81.

Bandiya malaya prasanga (*is respected* owing to its connection with Malaya), p. 8.

Khāia pahiria rāja tumhārē (eating and clothing is done under your 'protection'), p. 164.

The following are the examples illustrating the use of the forms in *-iahi* :—

Bāyasa paliahi ati anurāgā /hōhī nirāmisa kabahũ ki kāgā (*let* the crows *be nurtured* with great affection, do they ever become vegetarians?), p. 5; *lakhi subeṣa jaga-bañcaka jēū/ bēṣapratāpa pūjiahi tēū* (the swindlers of this world are being seen in gentlemen's guise, they also *are worshipped* owing to their guise), p. 6.

(*Kabita-mukutā*) *pōhiahi*, p. 9.

Aṅga aṅga para vāriyahi kōṭi kōṭi sata kāma, p. 96.

avasi dēkhiahi dēkhana jōgū, p. 99; *kariahi, paraṣiahi, parakhiyahi, ōṛiyahi.*

NOTE.—A form in *-iē* (*e.g., kariē, hariē, dhariē, pāiē, gāiē, cariē, āniē*) and another in *ījai* (*dījai, kījai, karījai, jījai, kahījai*) are found used in the same sense.

§ 31. There are certain roots which are passive in sense in spite of being used actively, *e.g.*, *haũhu kahāvata*—I also am called, *rahē kahāvata*—were called, *chījahɪ̃*—are destroyed.

§ 32. A Periphrastic Passive is formed by combining the forms (*a*) of the Past Participle or (*b*) of the Conjunctive Participle with the various forms of *jāba*—to go. For instance:

(*a*) *Jānā jāi* (is known)—p. 180, *Jāni jāi*—p. 183, *bakhānā jāi*—p. 191, *kahi jāti*—p. 195, *bahē jāta*—p. 166, *jīti na jāihi, jananī bisari jāi*—p. 184, *sahī na jāi*—p. 414, *jōī jāi*—p. 170, *tari na jāi*—p. 496, *jōē jāhɪ̃*—p. 219, *jāta na jānī, pahirāi na jāī, barani na jāi.*

(*b*) *Barani na jāhɪ̃ mañju dui sālā*—p. 209, *na jāhɪ̃ bakhānī*—p. 392.

§ 33. Another Periphrastic Passive is formed in the following cases by combining the conjunctive Participle with the forms of *paraba*: *būjhi kā pareu*—p. 175, *mohi lakhi parata*—p. 270, *samujhi parā*,—p. 381.

Causative

§ 34. The Causative is freely used in the Rāmāyan and is formed in two ways, *viz.*, (*a*) by adding *-ā* to a root at the end or (*b*) by modifying the vowel of the simple root by ablaut. For instance:

	Causative.		Simple.
(*a*)	*janāyeu*	from	*jānaba*
	divāi	from	*dēna*
	pahũcāu	*cf.*	*pahũcesi*, similarly
	jagāvahu		
	baṛhāvaũ		
	sahāvau		
	samujhāvā		
	mãgāvā		
	jitāvahɪ̃		

Causative.	Simple.
pahirāē	
calāvahi	
karāi	
milāyesi	
lagāvā	

NOTE 1.—When this root so lengthened is conjugated, the first syallable if long is made short (*cf.* Lakhīmpurī, § 7).

NOTE 2.—Where the root itself ends in *-ā*, a *-n* is augmented, *e.g.*, *ānesu* (bring) from *āvai* (comes).

NOTE 3.—Sometimes instead of augmenting *-ā*, *-ārā-* is augmented, *e.g.*, *baithā*: *baiṭhārā*, *dēkhī*: *dekharāī*.

(*b*)	*mēṭai*	from	*miṭai*
	mēlai	„	*milai*
	phērahi	„	*phirahi*
	bōrahi	„	*būṛahi*
	phōri	„	*phuṭai*
	utārahi	„	*utarahi*
	nikāsau	„	*nikasai*

DENOMINATIVE

§ 35. The denominatives are formed by augmenting *-ā* to a word and are generally distinguished as such as they have the insertion of *-n*—between the root (so augmented) and the terminations of the Past tense. They are all intransitive in sense. For instance * *bhulla*: *bhulānā*, * *ḍera*: *ḍerānā*, similarly *lajānā*, *cirānā*, *thirānā*, *lapaṭānī*, *sakucānā*, *lukānā*, *hulasānā*, *sihānā*, *kadarāi*, *niarāī*: * *niarānī*, *khaṭāhī*, *baurāyahu*, *khuṭānī*.

VERBAL NOUN

§ 36. The Infinitive or the Verbal Noun in the Rāmāyan has generally two forms: (*a*) one ending in *-ana* (*-na* only in case of certain vowel roots) and (*b*) in *-aba* (*-ba* only in case of some vowel roots). For instance:

(*a*) *karana, dēkhana, bulāvana, hōna, parusana, uṭhana, paṛhana, bhajana, uṛāvana, jurana*

(*b*) *milaba, bhulāba, jāba, tōraba, caṛhāuba.*

NOTE 1.—Stray cases end in *-u* : *-uṭhabu* 355, *gāvanu.*

NOTE 2.—A feminine form of the Verbal Noun is sometimes found and it ends in *-ni* and not *-na, e.g., bōlani, milani, bilōkani, hāsani, calani, ṭhavani.*

§ 37. The oblique case of the masculine verbal noun ends in *-ē, e.g., pachitānē, laribē, hāsibē.*

NOTE 1.—An oblique case of it is found ending in *-ai* to the root, *e.g., tōrai lāgā*—p. 349, *karai lāga*—394, *kahai lāga*—p. 396, *baranai pārā, jarai na pāvā*—p. 471, *calai kara*—p. 356.

NOTE 2.—Another form which to all appearances is an oblique case of the verbal noun is deduced by adding *ē* to a root, *e.g., ujarē, basērē, pahicānē, hāsē, anhavāē, pūjē, bōlē, avarādhē, baurāyē, tōrē.*

§ 38. The Direct case of the verbal noun is used—

(*a*) Either as a subject or as an object of a verb, *e.g., bhīṣaṇa banagavanū* (terrible is the going to the forest), *kahaũ milana munivarya kara* (I shall describe the meeting of the great sage), *rahana kahahṛ mohṛ rāmā* (let Rāma say that I should stay), *rāma bilōkani bōlani calanī / sumiri sumiri socati hāsi milanī* (Aṅgada recollecting the seeing, speaking, walking and meeting with a smile of Rāma feels sorry); *dui ki ēka sāga hōi bhuālū / hāsaba ṭhaṭhāi phulāuba gālū* (O king, can two things happen together with some one —laughing a hearty laugh and keeping morose—with the mouth closed), *bacaba ādēsā* (escape is doubtful), *tehi uṭhabu na bhāvā* (he did not like rising up), *tumhahi kohāba parama priya ahahī* (anger is extremely dear to you).

(*b*) The *-na* (and not *-ba*) form is also used in a Gerundial sense, *e.g., pūchana āvā* (came to ask) *dēkhana jāũ* (I go to see), *lēna calē* (started to receive), *bidā karāvana* (in order to take—her away).

(*c*) The *-na* form is also used with √*lag*— and √*cah* —to form compound verbs.

§ 39. The oblique (found by substituting *-ē* for the *-a* of the Direct) is very rare and the forms mentioned below are the only ones I have met with. *Kā pchitānē* (what is the use of regret), *laribē joga*—fit for fighting, *hāsibē joga*—fit for laughter.

The oblique in *-ai* also is rare and is used to form the compound verbs as shown above (§ 37, Note 1) : *tōrai lāgā*—began to break, *baranai pārā*—could describe in full, *jarai na pāvā*—could not be burnt. But *calai kara*—of going.

The oblique in *-ē* (§ 37, Note 2) is very common in the Rāmāyan and is used to express various concrete case-relations. For instance :

Ujarē haraṣa biṣāda basērē—(to them) delight on (others') being desolated and sorrow on (their) getting settled ; *rāma-carita sara binu anhavāyē*—without having bathed them in the lake of Rāma's story, *hamārē bhāyē*—according to my liking, *muyē karai kā sudhā*—what can nectar do on one's being dead, *samaya cukē*—on missing the opportunity.

Noun of Agency.

§ 40. The following forms of the Agent are found :

(*a*) Masculine in *-ana*, *e.g.*, *dahana* (one who burns), similarly, *samana*, *dalana*, *harana*, *nasāvana*, *baṛhāvana*.

The corresponding feminine form ends in *-ani* or *-nī* (in case of certain vowel-roots) which is sometimes shortened to *-ni*, *e.g.*, *haranī*, *karanī*, *dēnī*, *tarani*.

(*b*) Masculine singular in *-avāra* (*e.g.*, *rakhavāra*), and correspondingly masc. plur. in *-avārē* (*e.g.*, *rakhavārē*).

(*c*) Masc. sing. in *-anahāra* or *-anihāra* (*e.g.*, *mēṭana-hāra*, *bhañjanihāra*), and the plural in *anahārē* or *-anihārē* (*e.g.*, *dēkhanihārē*), and the feminine in *-anahārī* or *-anihārī* (*e.g.*, *baṛhāvanahārī*).

NOTE 1.—There are certain *ardha-tatsama* forms, *e.g.*, *juārā, sūpakārī, dāyī, hārī*.

NOTE 2.—One form in *-ārē* (plur.), *viz.*, *sukhārē*, p. 371.

COMPOUND VERBS.

§ 41. The compound verbs do not have that common use in the Rāmāyan which they have in Modern Awadhī. They are obtained by combining the forms of the various participles and of the verbal noun with the different verbs. The following cases are met with in the Rāmāyan.

§ 42. Combined with the Conjunctive Participle:

(*a*) *sakaba* and *pāvaba* denote the ability to do an action, *e.g.*, *jāri saka*—can burn, similarly, *hoi na sakē, chāṛi sakahī, pūchi sakahī, lari sakasi, jāsu carita lakhi kāhu na pāvā* (whose conduct none could perceive), *suni pāvā* (could hear).

NOTE 1.—*Sakaba* in one case (*tōraba saka*) is combined with the verbal noun and similarly *pāvaba* also is sometimes combined with the oblique verbal noun in *-ai* in the same sense, *e.g.*, *jarai na pāva dēha birahāgī*, p. 355.

(*b*) *paraba* expresses suddenness of an action, *e.g.*, *kūdi parā*—jumped in, *khasi parā*—fell down.

(*c*) *lēba, jāba* and *āvaba* express the completion of an action in its entirety, *e.g.*, *suni lehu, lōli liē, duhi lēhī, jāni lēu, chui lēi, bolāi līnha, corāi līnha*; *chuṭi jāihi, pari gaī, caṛhi gaē, chui gaeū, hoi gai, sukhāi jāi, coli jāi, cali gaeu, baṛhi āī*.

(*d*) *dēba* expresses intensity of an action, *e.g.*, *choṛāi dīnha, bōri dēta, calāi dīnheu, calāi diē, dekhāi dihesu, ḍāri dēhī*.

NOTE 2.—Combined with the verbal noun it gives the sense of permitting a person to do an action, *e.g.*, *dēhī taba jānā*—p. 372 (then they allow 'him' to go).

§ 43. *Rahaba* combined with the participles expresses the sense of the continuity of an action, *e.g.*, *āvata jāta rahehu, hoi rahē, lukāi rahā, sukhāi rahē, ghēri rahē*.

§ 44. *Lāgaba* combined with the *-ana* or the *-ai* form of the verbal noun expresses the beginning of an action, *e.g.*, *prasaṁsana lāgē*—began to praise, similarly *parana lāgē*, *tōrai lāgā*, *karai lāga*, *kahai lāga*, *jūjhai lāga*, *mardai lāga*.

§ 45. *Cahaba* is combined with (*a*) the verbal noun in *-ana* and with (*b*) the Past Participle either to express a wish or a near completion of an action, *e.g.*, *grasana cahata* —desire to eat up, similarly *parana cahai*, *bhagāna cahata*, *dēkhā cahaũ*, *mōhā caha*, *cīkhā cahati*, *kīnhā cahahũ*, *dēkhā cahaũ*; *bigarana cahati* (*bātā*)—the thing is about to get spoiled, *cāhata hōna akājū* (wrong is about to be), *nāsa bhā caha* (destruction is about to happen).

HISTORY OF THE FORMS.

§ 46. The Present Indicative (§ 7 above) goes back to the *laṭ* of Prim. Indian. For instance :

pṛcchati > *pucchai* > *pūchai* or *pūchahi*
pṛcchasi > *pucchasi* > *pūchasi*
pṛcchāmi > *pucchāmi* > **pucchaṙ* or *pucchaũ* > *pūchaũ*
pṛcchatha > *pucchaho* > *pucchahu* > *pūchahu*
pṛcchanti > *pucchanti* > *pucchaṙ* > *pūchahṙ*

In the case of the third person singular and the plural forms an aspiration is brought in to avoid the hiatus at the end. The II plural and the I singular forms are met with at the Apabhraṁśa stage with *-hu* and *ũ* at the end.

N.B.—In the alternative III singular form in *-a*, the *i* of the *-ai* form is lost.

§ 47. The forms of the ancient imperative were giving place to those of the present as early as Pāli. This is evidenced by such forms as Pāli *dētha*, *karōtha* (Pkt. *dēha*, **karōha*) in the II plural for *dadata* and *kuruta* of the Sanskrit. In the Prakrits the forms of other persons and numbers have also been replaced. In the Rāmāyan, the terminations *-u* and *-hi* of the second person singular and *-au* (*-u*) of the

third person singular are the only representatives of the ancient imperative. The form in *-u* of the II singular would go back to the ancient forms such as *śṛṇu, kuru.* The *-hi* form is traceable through Pāli, Prakrits and the apabhramśas. The form in *-au* of the III singular goes back to the ancient form, *e.g., yātu > jādu > jāu.* These forms also only alternate with the corresponding forms of the Present and have generally in Modern Awadhī given place to the latter. The *-u* form of II singular has a tendency to survive, however.

§ 48. The Future *-h* forms go back to the ancient Simple Future. The only point to be noted is that the *-sya*— which Pāli and the Prakrits generally represent by *-ssa* (*e.g., gamiṣyati* > Pkt. *gamissai*) is represented in the Rāmāyan by *-h* -. The *-h* alternated with *-ssa* even in the time of the Prakrits,[1] *e.g.,* Hāla's *Sattasaī* gives the form : *pavasiihi* (Skt. *pravatsyati*), I, 46.

The *ba* forms of the Future are surely based on some Passive Participle since they are used in the Rāmāyan with all the persons. Beames (Vol. III, § 53) suggested the Participle in *tavya* which had a future implication to be the basis of these forms and he is right in that. For instance *bhavitavyam > hōavvam > *hōabbam* or **hōabiyam* > the forms *hōba, hōub, hobi,* etc.

§ 49. The Past tense (§ 14 above) is passive in origin and is based on the passive past participle (ancient *kta*). The regular terminations which are appended to the Present (*viz.,* the representatives of the ancient *-mi, -si, -ti,* etc.) are added to the participle[2] to restrict it to the various persons and numbers, otherwise the singular participial form would be

[1] *Cf.* Woolner : Intro. to Pkt., § 118, Note.

[2] Beames, III, p. 148, and Hoernle : Gram. of the Gaudian Languages, § 503. Grierson states that the enclitic pronouns are added to the Eastern Hindi forms (*vide* L. S. I., Vol. VI, pp. 4-5). To me there does not appear to be much difference between the two views considering that the same forms would result by holding either view.

applicable to the singular in all the persons and similarly the plural. That by the time of Tulsīdās the passive character of this tense was not lost sight of is proved by such examples as *mohi sama yahu anubhayau na dūjẽ*—p. 158, *dīnheũ mōhṛ rājya bariyāī*, and others (see Note 1 under § 14), where the form agrees with the object in number and person. The confusion suggests the passing stage of the forms of this tense from the Passive to the Active.

§ 50. The Past Conditional is based on the Present Participle. We have seen that the Present Participle by itself indicates a past condition (§ 15, Note); in this conditional tense only the enclitics are appended to the Present Participle.

§ 51. The Present Participle is the outcome of the ancient form in *śatṛ* which in Pāli and Prakrits invariably ends in *-anto, e.g., gacchanto, janto.* In the Rāmāyan as well as in modern languages the nasal is lost somehow. Ordinarily of the combination *-nt-* of terminations only a nasalization survives, *e.g.*, Skt. *yānti* > Pkt. *janti* > *jāṛ* and *jāhṛ* and therefore ordinarily the descendent of *janto* would be *jāõ* or *jaũ*. But instead we find *jāta.* It is probable that this was a fresh formation, therefore, adding the termination *-ata* to the root form.

NOTE.—The form in *-ti* is found by adding the feminine termination to the Participle.

§ 52. The Past Participle is based on the ancient Passive Past Participle in *-kta* generally, *e.g., kṛta* > *kṛtaka* > *kiaa* > *kiā* whence obl. *kiẽ* and feminine **kiī* : *kihī*—in *kihā*—the aspiration is to avoid the hiatus; *varṇita* > *varaṇia* > *baraṇā* (*ia* > *ā* by contraction [1]), similarly *hārita* > *hārā*; *baiṭha* < *upaviṣṭaka-uvaiṭṭhaa vaiṭṭhaa—baiṭhā*; *rītẽ* < *riktaka* and so forth.

There are some forms which are not traceable to Sanskrit but to Prakrits only, *e.g., dīnha* < Pali *dinna*, the conjunction of consonants being simplified, the previous vowel lengthened as

[1] Jules Bloch : La Formation dela Langue Marathe, § 65.

a compensation and an aspiration brought in to avoid the 'hiatus.' In the Prim. Indo-Aryan the Pass. Past Part. had two forms either in *-na* or in *-ta*, *e.g.*, *lūna*, *hīna*, *līna*, *pūrṇa* in *-na* and *gata*, *bhūta*, *prōta*, etc., in *-ta*. The root *dā* and some others had probably double forms at the beginning, of which only *-ta* form survived in the Classical Sanskrit. Similarly in the Rāmāyan we find *hūna* (for Skt. *huta*), *līnha*, *kīnha*, etc.

The oblique form and the feminine form of the participle are on the model of the noun.[1]

§ 53. The Conjunctive Participle has a form which probably has come from two different sources, *viz.*, (1) from the Absolutive of the Prakrits in *-ia* and (2) from the Infinitive in *-iuṁ* (Skt. *tumun*). For instance *kari* < Pkt. *karia* where *a* by and by became very weak and at long last was lost, similarly *kari* > *kariuṁ* > *-kariū*— *kariu* where *u* being weak is lost at long last.

The Conjunctive Participle is ordinarily derived from the absolutive in *-ya* (Pkt. *ia*) only but I am led to believe from certain usages in the Rāmāyan that it is the descendent of two ancient forms—the Absolutive and the Infinitive. If we refer to the compound verbs (§ 41 and the following) we see that the Conjunctive Participle is combined with various verbs. For instance with *saka*, *e.g.*, *jāri saka* which exactly represents Sans. *dagdhum śaknoti*. √*śak-* was very generally combined with the infinitive in *tumun* and it seems improbable that this idiom was lost and the absolutive in *-ia* came to be employed instead. Similarly the Infinitive was employed with the forms of √*yā* very generally in Sanskrit as well as in the Prakrits (*e.g.*, Karpūramanjarī, I, 30 : *vēḍhiuṁ jāi*, *vilihiuṁ jāi*) chiefly in the latter as a beginning of analytical passive—and I am pretty sure that this very idiom has survived in the Rāmāyan. Using the *-ia* form in these cases would be impossible. Moreover,

[1] *Cf.* Noun-Declension in the Rāmāyan of Tulsīdās. Ind. Antiquary, Vol. LII, 1923, pp. 71—76, where the history of the oblique case has been dealt with fully.

it seems impossible that the Infinitive in *-tumun* which has all along been so generally used should have lost all representation in the Rāmāyan and that too all of a sudden.[1]

The Passive

§ 54. The passive is represented in the Prakrits by inserting *-ia* -or *-ijja-* between the root and the personal termination. But in the Prakrits themselves beginnings of analytic formation of the Passive are traceable as evidenced by the example quoted above from Karpūramanjarī. In the Rāmāyan we find a stage where the synthetic passive is losing ground and the analytic passive is coming into use.

§ 55. The ancient Passive is represented by (*a*) the Passive Present Participle which is still used in a passive sense unlike the Pass. Past Part. which is losing it on account of being used in an active tense, (*b*) the forms in *-ia* and *-iahi* (§ 30 above) and (*c*) certain roots which are passive in sense being derived from passive forms.

§ 56. The Pass. Pres. Part. is the descendent of the Passive Part. in *śānac*. In the Prakrit times this was substituted by the *Parasmaipada* termination so that we have such forms as *dhavalāantē* for Skt. *dhavalāyamānē*. Thus the form in Prakrit for *kriyamāṇa* would be *karijjanta* or *karīyanta*, the latter being represented in the Rāmāyan by * *kariata*. I have found only a few forms which have been noted in § 29.

§ 57. I am sure that the forms in *-ia* and *-iahi* as illustrated in § 30 are passive in character since they are used impersonally. The form in *-ia* is derivable both from the Pass. Pres. III sg. and Pass. Imp. III sg. For instance, Skt. *kriyatē* will become either *karijjai* or *karīai* in the Prakrits. Some dialects have adopted the former, *e.g.*, *karījai* in Braj while others have adopted the latter, *e.g.*, the Rāmāyan,

[1] My respected friend Dr. S. K. Chatterji tells me that phonetically *-iu* > *u and* not *-i*. But there are certain stray cases where *-iu* is represented by *ī*, *e.g.*, *ghī* : *ghiu*.

where *karīai* > *kariai* > *karia*. The form is similarly derivable from Skt. *kriyatām*, Pkt. *karijjau* or *karīau* whence *kariau* > *karia*. That the Rāmāyan form has descended from both the forms probably is shown by the double use which it has.

The form in *-iahi* is a plural of the *-ia* form obtained by adding *-hi* to it. *-hi* is seen to be the distinctive marks of the plural in some of the tenses above.

§ 58. Certain roots are derived from the ancient passive and therefore give the passive sense in spite of active formation, *e.g.*, *chījaba* < *chidyatē* *-chijjai*, similarly *bisaraba*. Modern Awadhī has a large number of these and hence has come to have four forms of the root, *viz.*, passive, active, causal and double ausal.[1]

§ 59. The analytic passive has a fair number of examples as given in §§ 32-33. Modern Awadhī has developed quite a number of forms from the same combinations.[2]

§ 60. The causative of the Rāmāyan is also to be derived from the ancient causative. There were two ways in which the causative could be formed either by (*a*) modifying the vowel of the root, *e.g.*, *bhinatti* : *bhēdayati*, *karōti* : *kārayāti* or by (*b*) adding a *pa*—between the root and the termination, *e.g.*, *dadāti* : *dāpayati*. In Sanskrit the use of the latter forms is very restricted but it is commoner in the Prakrits. The Rāmāyan has both the forms, for instance (*a*) *milati* : *mēlayati* would in the Rāmāyan become *milai* : *mēlēi*—*mēlei*-*mēlai*, similarly *tarai* : *tārai* and then prefixing the form by *u* *-utārai*. The (*b*) forms are much commoner, *e.g.*, **vardhāpayati* : *vaḍḍhāvēi* : *bāṛhāvei*, *baṛhāvai*, similarly *paṛhāvai*, *karāvai*, etc.

NOTE.—The insertion of *r* in such forms as *baithārā*, *dekharāvā*, is probably a dialectic variation of the *v* which results from ancient *p*.[3]

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[1] *Cf.* Lakhīmpurī, § 115, Note 2.
[2] *Cf.* Lakhīmpuri, §§ 105—111.
[3] *Cf.* Beames, III, p. 80.

§ 61. The augmentation *-a* in the Denominative is the representative of the Skt. *āya* in the same sense. The Awadhī denominative is thus traceable to its parent *āya* > *āa* > *ā*, *e.g.*,**sthirāyatē*: *thirāai*: *thirāi*, similarly *cirāi*, etc.

§ 62. The verbal noun, in *-ba* (obl. *-bē*, etc.), goes back to the ancient participial forms in *-tavya* on which the Future tense is also based. For instance *kartavyam* (to be done) will have a Prakrit form *kariavvam* from which *karabba* and then *karaba*. The transition of the meaning from 'to be done' to 'to do' is quite intelligible as being one more instance of the passive form losing its passive sense and so in effect becoming active.

The *-ana*[1] form (obl. *-anē*) goes back to the verbal noun in *lyuṭ* so commonly used in Sanskrit as well as in the Prakrits. The use of the same in the Rāmāyan also points to the same conclusion. Besides its use as a noun, it was alternately employed in the sense of the infinitive *tumun*; for instance one could say either *yaṣṭum yāti* or *yajanāya yāti*. It has retained the same sense in the Rāmāyan also (§ 38 *b*). The use of the verbal noun with √*lag* also supports the same conclusion, *e.g.*, Skt. *karaṇē lagnaḥ* has its representative in the Rāmāyan in *karana lāga*.

NOTE 1.—The feminine forms are formed from the masculine by adding *-i*.

NOTE 2.—I have not been able to connect the oblique form in *-ai* to any ancient form except if it has an affinity with the causal form of the *tumun*, *e.g.*, *karāiuṁ* > *karāiũ* > *karai*. The oblique in *-ē* (§ 37, Note 2) is a riddle to me, still.

[1] Hoernle derives this form from Skt. *-anīyar* and is supported in that view by Kellogg. I would, however, agree with Beames in deriving this Eastern Hindi form of the *-na* infinitive direct from the ancient forms in *lyuṭ*. A point to be marked is that this infinitive in *-na* has a peculiar usage (*vide* § 38, *b* and *c*) which the *ba* form has not. Were it a descendent of *-anīyar* form, it would be strange that a descendent of *tavya* could not be used in the same sense.

§ 63. The noun in *-na* had sometimes in Sanskrit (*e.g.*, *dahanaḥ*—one which burns, *karaṇaḥ*—Ved. Sans. one who does) as well as in the Prakrits the sense of an agent. This has been represented in the Rāmāyan by the Noun of Agency in *-na* (§ 40 *a*). The (*b*) and (*c*) forms go back, as suggested by Beames, to the verbal noun plus-*pālakaḥ* (Pkt. *vālaō* > *vāla* or *vāra*) and the verbal noun plus *-dhārakaḥ* (Pkt. *hāraō* > *hāra*) respectively.

NOTE.—*Sukhārā* < *sukhakāraka* through *sukhaāra.*[1]

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[1] I have not dealt with certain minor phonetic changes found here and there in the Rāmāyan while dealing with the verb in general above. The Rāmāyan doubtless needs a separate elaborate study of sound-change.

PHYSICAL THEORY OF SOUND AND ITS ORIGIN IN INDIAN THOUGHT.*

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तीर्थराजं नमस्कृत्य जयदेवपदाम्बुजम् ।
ध्यात्वा भक्त्या यथाशास्त्रं शब्दतत्त्वं विरूप्यते ॥

I. INTRODUCTORY NOTE.

In the history of philosophical as well as of common thought in India, as everywhere else, the theory of sound occupies a very important place. An attempt is being made here to trace its origin and discuss its nature.

In India, however, the so-called 'sound' represents a particular phase of the wider problem of 'Çabda,' of which it is, in common parlance, described as a synonym. We shall, therefore, to make our discussion thorough and complete, take up also those aspects of the *Çabda* which, being occult and mystic, are not generally considered in popular works on philosophy.

II. THE ORIGIN OF ÇABDA OR NĀDA.

When by gradual fructification the Karman of all the living beings is exhausted, the Primordial Cause (Māyā), wherein the entire universe has dissolved itself, becomes extinct in the conscious Īçvara.[1] This is known as Universal Destruction (Pralaya). There the universe is not for ever lost (ātyantikanivṛtti), which only is possible, when every Jīva belonging to it has realised its self; but it exists there potentially, that is, in the subtle

The Process of Universal Destruction and Creation : Genesis of Nāda.

* I owe much to my teachers—Dr. Jhā and Pandit Gopīnātha Kavirāja, for this paper.

[1] (i) प्रकृतौ प्रविलीनेषु भेदेष्वेकेत्वदर्शिनाम् ।
द्रव्यसत्त्वं प्रपद्यन्ते स्वाश्रया एव जातयः ॥—Bhartṛhari.

(ii) *Vide* Yoginīhṛdayadīpikā, pp. 9 and 35. The Princess of Wales Saraswatī-Bhavana Texts Series, Benares Ed.

form of Çakti (Potency).[1] In course of time, due to the force of the Adṛṣṭa of the beings, a kind of desire for creation is produced in Īçvara, also known as Çiva, when He manifests His Duplicate Shape, namely, the forms of Çiva and Çakti (the Supreme Energy),[2] after which the Çakti vibrates gently[3] and produces the Bindu.[4] The Bindu represents the equilibrium of three factors,[5] namely, Bīja, Nāda and Bindu, among which Bīja and Bindu stand for its non-conscious (acit) and conscious (cit) aspects, respectively ;[6] and Nāda their combination.[7]

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[1] *Vide* Durbalācārya's Com. on Mañjūṣā, p. 173 [7-9], Chowkh. Ed.

[2] यदेकलो न शक्नोति रन्तुं स्वैरञ्जरप्रभो ।
तदिच्छा तव योत्पन्ना सेव्या शक्तिरभूत्तव ॥
त्वमेको द्वित्वमापन्नः शिवशक्तिप्रभेदतः ॥ —Kāçīkhaṇḍa.

This is also known as His Līlā stage.

[3] There is a difference here between the view of the Vyākaraṇa as has been given above and that of the Tantra represented by the Sāradātilaka. Here the Tantra holds that from Çakti, Nāda is produced, and from Nāda, Bindu is produced. This Bindu is sub-divided into Bindu, Nāda and Bīja—*vide* Sāradātilaka, p. 1, verses 7-8, Jīvānanda's Ed.

[4] 'The perfect of the Continua is Pure Cit, and the lowest limit of discreteness is the Bindu as a form reme Energy—Woodroffe's 'Power as Matter,' p. 187 [18–20].

[5] That is, the *Acidaṁça* and not the *Cidaṁça* which is Çiva Himself. In other words, as it appears to me, Bīja stands here for Çakti, which is also corroborated by the Tantra; *vide Infra*, Foot-note 8. But then there is another difficulty. Bālaṁ Bhaṭṭa says in his Com. on the Mañjūṣā—'अचिच्छब्देन न माया तस्या एतद्वनंशत्वात्,' p. 174 [27-28], which cannot be justified, for Māyā after all here is nothing but Çakti—*Vide* Com. on the Sāradātilaka, p. 9[5], Benares Ed.

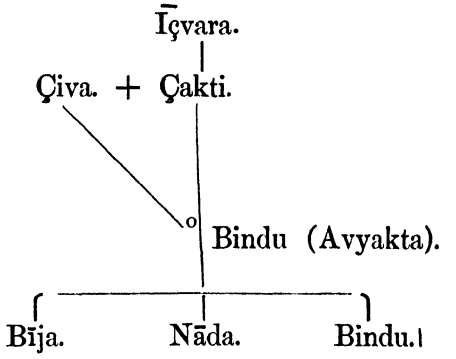
[6] (i) सा तत्वसंज्ञा चिन्मात्रज्योतिषः सन्निधेस्तदा । .....स बिन्दुर्भवति त्रिधा—Prapañcasāra.

(ii) वैन्दवं चक्रमेतस्य त्रिरूपत्वं पुनर्भवेत्—Yoginīhṛdaya, paṭala I, verse 12, Saraswatī-Bhavana, Benares Ed.

[7] The connotation of these three sub-divisions as given in the Sāradātilaka Tantra is as follows: *Bindu* is described as Çiva (Çivātmaka), that is, consciousness ; *Bīja* as Çakti ; and *Nāda* as the amalgamation of the two—*vide* Sāradātilaka, p. 1, verse 9,

For facility of reference a graphical representation of the order of creation, as already described, is given below :—

Graphical Representation of the Creation



1. PARĀ VĀK.

Thus we see that Nāda is produced from the Bindu. It is mixed with consciousness which predominates there and is inarticulate ;—this is known as *Çabda-Brahman* (Eternal Verbum). It is the immediate cause (Upādāna-kāraṇa) of the Universe,[1] according to the Vaiyākaraṇas ; *Rava* and *Parā*, etc., are its synonyms. Though this Nāda is all-pervading (Sarvagata), it is manifested only in the *Mūlādhāra*—a mystical centre of spiritual energy supposed to be located at the base of the spinal column—by a peculiar type of rarefied air (Saṁskṛta-Pavana)

Characteristics of Nāda.

[1] (i) विन्दोरस्तस्मादिमद्यमानाद्रवो व्यक्तात्मकोऽभवत् ।
स एव श्रुतिसम्पन्नं शब्दब्रह्मेति गीयते—quoted in the Mañjūṣā, p. 175, Chowkh. Ed.

(ii) वागेव विश्वा भुवनानि जज्ञे—quoted by Bālaṁ Bhaṭṭa in his Com. on Mañjūṣā, p. 177.

(iii) Doctrine of Pratibhā in Indian Philosophy—by Pandit Gopīnātha Kavirāja. Published in the Annals of the Bhāndārkar Institute, p. 11, sec. 3.

(iv) अनादिनिधनं ब्रह्म शब्दतत्त्वं यदक्षरम् ।
विवर्ततेऽर्थभावेन प्रक्रिया जगतो यतः—Vākyapadīya of Bhartṛhari, I. 1.

(v) ब्रह्मेदं शब्दनिर्माणं शब्दशक्तिनिबन्धनम् ।
विवृतं शब्दमात्राभ्यस्तास्वेव प्रविलीयते—quoted by Puṇyarāja in his Com. on Vākyapadīya, I. 1.

generated on the spot.[1] This manifested Nāda is free from all so-called vibrations (niṣpanda) and is known as Parā (Transcendent) Vāk. It is very subtle and is described by certain authorities as amenable to the hypersense of the Yogins in the state of *Samādhi.*[2] This is also known as the Supreme Kalā (Paramā Kalā) and remains as an impartial spectator of its own modifications—Paçyantī, etc.[3] In fact, it is only an undisturbed state of consciousness (sāmarasyamāpannā prakāçāmṁçamātrā).

2. PAÇYANTĪ VĀK.

The Nāda, in course of further manifestation, rises up to the navel and assumes a distinct character when it is known as *Paçyantī.* It has Īçvara as its ruling deity.[4] It is an object of cognition through Manas in the state of deep concentration. It is described as undivided, free from succession, and eternal. It does not require the instrumentality of any external object to bring out its inner content. It remains ever fresh and pure, and all the impurities are from without as a matter of accident upon it and are not essentially connected with its nature. In the Tāntric Literature, therefore, it is described as representing the Sixteenth Kalā of the Moon,[5] which is never affected by the

Nature and characteristics of Paçyantī.

[1] देहेऽपि मूलाधारेऽस्मिन् समुद्गति समीरणः—quoted in Mañjūṣā, p. 176.

[2] *Vide* Mañjūṣā, p. 175. But we will see that Parā is above the reach of the yogins also, though some hold it amenable to the hypersense of the yogins—*vide Infra*, p. 245 [12-14].

[3] आत्मनः स्फुरणं पश्येत् यदा सा परमा कला ।
अग्निचक्रोपमापन्ना परा वाक् समुदीरिता—Yoginīhṛdaya, I, 36.

[4] (i) *Vide* Mañjūṣā, p. 178. (ii) This Īçvara is identified with Ramā. *Vide*—
रौद्री विन्दोस्ततो नादात् ज्येष्ठा बीजादजायत ।
वामा ताभ्यः समुत्पन्ना रुद्रब्रह्मरमाधिपाः ॥—Sāradātilaka, I. 10.

[5] It is believed that the fifteen Kalās (digits) of the moon, which are subject to constant change,—sometimes waxing, and sometimes waning, represent the world of flux. The Sixteenth Kalā, on the contrary, is never associated with change. It is the eternal, self-luminous witness, ever-bright and spotless, watching silently the play of cosmic forces—which too are its own emanations.

rays of the sun, and remains always shining by its own light. Puruṣa or the Pure Self is the philosophical term usually assigned in technical literature to this Immortal Kalā or the Paçyantī Vāk. It is also known as Daivī Vāk,[1] and is very subtle.[2]

According to the Yoginīhṛdaya, Paçyantī Vāk is described to be at the stage of Will-power[3] and because of this the universe which was in the form of Bīja begins to be manifested. It is, therefore, known as *Vāmā*—that which vomits, that is, that which manifests the universe.[4] Puṇyarāja has identified it with Pratibhā and the Veda, in his commentary on the Vākyapadīya,[5] and there he clearly points out that this Paçyantī is the Prakṛti—Primordial Cause—of the modifications in the form of words.[6] According to the Sāradātilaka it is the modification of the Bīja aspect of the Unmanifested Bindu.[7]

It is beyond any doubt the cause of the mental dispositions of persons, for discriminating between right and wrong; but even then its nature remains unchanged, pure and above the sphere of empirical exigencies. In other words, it lends itself to the ecstatic vision of the Yogins alone.[8]

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[1] (i) अविभागा तु पश्यन्ती सर्वतः संहृतक्रमा ।
स्वरूपज्योतिरेवान्तः सैषा वागनपायिनी ।
सैषा संकीर्य्यमाणापि नित्यमागन्तुकैर्मलैः ।
अन्तर्या कलेव सोमस्य नात्यन्तमभिभूयते ।
तस्यां दृष्टस्वरूपायामधिकारो निवर्त्तते ।
पुरुषे षोडशकले तामाहुरमृतां कलाम् ॥—Com. on the Vāky. I. 144.

(ii) विन्देम देवतां वाचमृतामात्मनः कलाम् ॥—Bhavabhūti's Uttaracarita, I .1.

[2] उद्भतार्था (=आन्तरार्था-आन्तरं स्वरूपज्योतिरेव) च पश्यन्ती सूदना वागनपायिनी—quoted in the Com. on Mañjūṣā by Bālam Bhaṭṭa, p. 181.

[3] इच्छाशक्तिस्तदा सेयं पश्यन्ती वपुषा स्थिता—Yoginīhṛdaya, I. 38.

[4] बीजभावस्थितं विश्वं स्फुटीकर्तुं यदोन्मुखी ।
वामा विश्वस्य वमनाद्दङ्कुशाकारताङ्कता—Yoginīhṛdaya and Yoginihṛdaya-dīpikā, I. 37.

[5] *Vide* Com. on Vākyapadīya, I. 14.

[6] वाग्विकाराणां प्रकृतिं पश्यन्त्याख्याम्—Ibid.

[7] बीजादजायत वामा—Sāradātilaka, I. 10.

[8] *Vide* Bālam Bhaṭṭa's Com. on Mañjūṣā, p. 182[5] ; and also Puṇyarāja's Com. on Vākyapadīya, I. 144.

It is of an infinite variety according as it reveals itself without any reference to the existence of the external object; as it reveals itself along with the object which appears intermixed with it; as it reveals itself together with the particular object having limited connotation; again, as it is formless and as it is with a form; the latter, that is, which has form, is that in which the knowable is merged; with which the knowable is mixed; and which is common to both the Moving Principle and the Principle of Rest; and so on.[1]

Varieties of Paçyantī.

3. MADHYAMĀ VĀK.

When the same purified air rises up and reaches the heart, there is another manifestation of the Çabda—Brahman,[2] known as *Madhyamā* Vāk. It is described as an object of our intellectual cognition. If our ears be closed, for instance, a sound will be heard within as that of rumbling and so forth owing to the forcible contact (abhighāta) of the inner air. The intraorganic sound as thus heard is quite distinct, though as a matter of course, it is not audible to others. It is the subtlest form of *Praṇava*.[3] Jyeṣṭhā is another synonym of this sound.[4] It has Hiraṇyagarbha as its presiding deity[5] which is its own modification.[6] It is identified with the conscious aspect of the Supreme Power (Jñāna-Çakti). It is the support of the universe and its usage.[7] So when the universe is

Origin of Madhyamā Vāk.

Nature and characteristics of Madhyamā.

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[1] पश्यन्ती तु सा चलाचलप्रतिबद्धसत्ताका, सन्निविष्टज्ञेयाकारा, प्रतिलीनाकारा, निराकारा च; परिच्छिन्नार्थप्रत्यवभासा, संसृष्टार्थप्रत्यवभासा च; प्रशान्तसर्वार्थप्रत्यवभासा चेत्यपरिमितभेदा—Puṇyarāja's Com. on Vākyapadīya, I. 144.

[2] *Vide* Mañjūṣā, pp. 178-179.

[3] सूक्ष्मप्रणवरूपम्— *vide* Mañjūṣā, p. 179.

[4] *Vide* Durbalācārya's Com. on Mañjūṣā, p. 173 [7-9]; also Yoginīhṛdaya, I. 38-39.

[5] *Vide* Mañjūṣā, p. 179 [1].

[6] *Vide* Sāradātilaka, I. 10.

[7] *Vide* Mañjūṣā, p. 182[5].

reduced to the unmanifest, it also dissolves itself into the Bindu from which it originally sprang up.[1]

The cardiac region is conceived as the seat of Madhyamā Vāk. It has really no succession but it appears to possess it because of its close proximity to it. It can be known through the instrumentality of Buddhi (intellect) only. It is also very subtle. Being pure and transparent, it seems to take on any variation which the bio-motor power of the organism (Prāṇa-Vāyu) induces within the system.[2]

These are the three subtle forms of Vāk. Out of these, we have seen above, Parā is Transcendent beyond time, while the other two are Immanent in time. As such, Parā is above all predication in thought and language even of the yogins,[3] while in Paçyantī, the yogins can in their mystic experience realise the distinction as well as the unity between the subject and the predicate of all judgments. Though the latter is equally eternal with Parā, it differs from it, in being luminous as the very nature of it indicates.[4] The stage of Madhyamā,[5] however, is not so subtle. They describe it as *Çrutigocarā* or audible, though to one's ownself only.

Résumé of the above.

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[1] ज्ञानशक्तिस्तथा ज्येष्ठा मध्यमा वागुदीरिता।
ऋजुरेखामयी विश्वस्थितौ प्रथितविग्रहा॥
तत्संहृतिदशायान्तु बैन्दवं रूपमास्थित॥—Yoginihṛdaya, I. 38-39.

[2] मध्यमा तु अन्तःसन्निवेशिनी परिगृहीतक्रमेव बुद्धिनालोपादाना सूक्ष्मा प्राणवृत्त्यनुगता (प्राणवृत्तिमनतिक्रम्य) प्रतिसंगृहीतक्रमा सत्यप्यभेदे समाविष्टक्रमशक्तिः—Puṇyarāja in his Com. on Vākya, pp. 56-57.

[3] It is because of this we do not agree with Dr. Prabhāta Chandra Chakravartī who says "the first three forms being comprehensible only by the *yogins*." *Vide* his translation of the Mahābhāṣya, Foot-note 3, page 8.

[4] *Vide* 'Doctrine of Pratibhā'—Gopīnātha Kavirāja.

[5] It seems to be so called because out of the four varieties of Vāk, Parā is beyond time and hence is out of question; while out of the remaining three Madhyamā is the middle one. It may be also due to the reason that it is the modification of Nāda which comes between Bīja and Bindu.

4. VAIKHARĪ.

Origin of Vaikharī.

Now we turn to the last manifestation of Vāk, known as *Vaikharī*. When the Vāyu, passing through the *Suṣumnā*, reaches the cranium (Mūrdhan), as the way to the above is generally closed for lack of intuitive knowledge, it turns back and finds a way out, through our mouth.[1] In the mouth there are various places, such as, larynx (kaṇṭha), palate, tooth, etc., which the air touches in passing and where it gives rise to ordinary sound called *Vaikharī*.

Nature and characteristics of Vaikharī.

This is the sound which we ordinary people use and hear. Some are of opinion that only a portion of this Vāk is used by us, while the remaining portion is beyond the average use.[2] According to the Sāradātilaka, it has the Bindu for its source; and out of this (Vaikharī), *Rudra* manifests himself. This accounts for its name *Raudrī*.[3] It is at this stage that the Çabda-Brahman has its gross (Sthūla) manifestation and, therefore, this has *Virāṭa* as its presiding deity. It arranges our mode of breathing.[4]

Varieties of Vaikharī.

Vaikharī stands for the *Kriyā* aspect (Kriyā-Çakti) of the Supreme Power. It is the body of the universe in the form of speech.[5] It appears in various forms, such as articulate (vyakta); inarticulate (avyakta); and so on.[6]

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[1] (i) वैखरी शब्दनिष्पत्तिः—

(ii) अथ यदा सैव (मूलाधारादुदिता वाक्) वक्त्रे स्थिता तास्वोष्ठादिव्यापारेण बहिर्निर्गच्छति तदा 'वैखरी' इत्युच्यते—Nyāyakoça. Foot-note under Çabda, p. 789, Second Ed.

(iii) तुरीयं वाचो मनुष्या वदन्ति—Ṛgveda, I. 22. 164. 45, Max Müller's Ed.

(iv) *Vide* Çatapatha Brāhmaṇa, 4. 1. 3. 13—17, Ajmer Ed.

[2] तत्रापि चास्याः किञ्चिदेव व्यावहारिकमन्यत् सामान्यव्यवहारातीतम्—Puṇyarāja's Com. on Vākya, I. 144.

[3] *Vide* Sāradātilaka, I. 10; Yoginīhṛdaya, I. 40.

[4] स्थानेषु विदृते वायौ कृतवर्णपरिग्रहा।

वैखरी वाग् प्रयोक्तॄणां प्राणवृत्तिनिबन्धिनी—quoted in the Com. on Vākya, p. 56.

[5] (i) प्रयत्नाद्दत्पिण्डमेधीयं शङ्खाटवपुरुत्थला।

क्रियाशक्तिस्तु रौद्रीयं वैखरी विश्वविग्रहा—Yoginīhṛdaya, I. 40.

(ii) वायूपप्रपञ्चनयवैखरीरूपा जाता—Dīpikā on Yoginīhṛdaya, I. 40.

[6] (i) श्लिष्टव्यक्तवर्णसमुच्चारणप्रसिद्धसाधुभावा, भङ्गसंस्कारा च दुन्दुभिवेणुवीणादिशब्दा चेत्यपरिमितभेदा—quoted in the Com. on Vākya, I. 144.

(ii) *Vide* Mañjūṣā, p. 179.

These are the four kinds of Vāk.[1] Patañjali, the great commentator on Pāṇinīya Sūtras, is of opinion that the Çruti,[2] that says,—'there are four kinds of words (padajātāni); and these are known to those Brāhmaṇas only who are learned; of these, three are very subtle and hence are not used by ordinary people who speak out the fourth only,' means by 'four kinds of words,' Nāma (nouns), Ākhyāta (Verbs), Upasarga (Prefixes), and Nipātas; each of which is sub-divided into Parā, Paçyantī, Madhyamā and Vaikharī.[3] Thus the three sub-divisions of each being very subtle

Patañjali while explaining the Çruti—'Catvāri, etc.,' gives his own view about the four kinds of Vāk.

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[1] (i) परा, पश्यन्ती, मध्यमा, वैखरी, इति चत्वारि वाच : पदानि । एकैव नादात्मिका वाक् मूलाधारादुदिता सती 'परा' इत्युच्यते । सैव हृदयाभिगामिनी 'पश्यन्ती' इत्युच्यते । सैव बुद्धिं गता विवक्षां प्राप्ता 'मध्यमा' इत्युच्यते । अथ यदा सैव वक्त्रे स्थिता तालोष्ठादिव्यापारेण बहिर्निर्गच्छति तदा 'वैखरी' इत्युच्यते —Nyāyakoça, Foot-note under Çabda, p. 789.

(ii) चत्वारि वाक्परिमितानि पदानि, तानि विदुर्ब्राह्मणा ये मनीषिणः ।
गुहा त्रीणि निहिता नेङ्गयन्ति, तुरीयं वाचो मनुष्या वदन्ति—Rgveda, I. 22. 164. 45.

(iii) *Vide* Çatapatha Brāhmaṇa, 4. 1. 3. 13—17.

(iv) *Vide* Mahābhāṣya, p. 39; Nirṇayasāgara, Pandit Shivadatta's Ed.; and also Kaiyyaṭa's Pradīpa, Nāgeça's Uddyota and Shivadatta's Foot-notes on the above, pp. 39-40.

(v) *Vide* Nyāyakoça, p. 789, Foot-note, Second Ed.

[2] *Vide Supra*, p. 247, Foot-note (ii).

[3] (i) The sense of this sub-division is brought out from the letter '*ca*' of the Mahābhāṣya itself, is the opinion of my father Mahāmahopādhyāya Jayadeva Miçra, Benares, who was considered as an authority on Pāṇinīya grammar.

Now as far as the Mahābhāṣya is concerned, the meaning of the Çurti is almost clear, when we take the letter 'ca' into consideration. But Kumārila Bhaṭṭa does not appear to take any notice of this explanation. He says, "if by four kinds of Vāk we mean Nouns, Verbs, Prefixes and Nipātas, then the secondhalf of the Çurti (Guhā trīṇi nihitāni, turīyaṁ vāco manuṣyā vadanti) seems to have no connection with the first half; for human beings do use all the four kinds of words." This criticism of Kumārila apparently shows that according to him, Patañjali did really mean by four kinds of Vāk—Nouns, etc., only, and that the letter 'ca' has no significance. For the sake of facility I quote here the whole passage from Kumārila—यत्तु नामाख्यातोपसर्ग-निपातचतुष्टयानुगतं वैयाकरणमतमाश्रित्य तदपि लोकसिद्धत्वादेव नार्तीव व्याकरणापेक्षम् । इतद्विषयत्वे च वर्ण्यमाने 'तुरीयं वाचो मनुष्या वदन्ती'त्यसम्बद्धमेव स्यात् । चतुर्णामपि पदजातानां मनुष्यैरुच्चयानात्त्वात् —Tantra-Vārttika, pp. 214-215, Benares Sans. Series, Ed. 1903.

are not used, while the fourth only is spoken. Kaiyyaṭa also supports the above view.[1]

We have seen that these divisions of Vāk are really the modifications of the Eternal Supreme Power.[2] As such, all

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According to Kumārila himself—'चत्वारि वाक्परिमिता पदानि' means that by which Vāk is known is of four kinds—Pratyakṣa, Anumāna, Upamāna and Arthāpatti. Ibid.

(ii) To say that Parā and Paçyantī, in accordance with the above explanation of the Mahābhāṣya, are also sub-divided into Noun, etc., does not appear quite logical; for it is very difficult to say that there can be any distinction possible between Nouns, Verbs, etc., even in the Parā and Paçyantī stages, although some appears to hold distinction at the Paçyantī stage (*vide* Com. on the Sāradātilaka, p. 4^{14-17}, Ben. Ed.). It is perhaps because of this difficulty that Nāgeça, in his Uddyota also explains the Mahābhāṣya in the following manner: Vāk is divided into Parā, Paçyantī, Madhyamā, and Vaikharī of which the last is sub-divided into Nouns, Verbs, etc. This interpretation of Nāgeça seems only to remove the difficulty of making distinction between Nouns, Verbs, etc., at the Parā and Paçyantī stages but is not in the order in which perhaps the author of the Mahābhāsya wants to have.

[1] (i) *Vide* Mahābhāṣya, p. 39, also Kaiyyaṭa and Nāgeça on the same; Nirṇayasāgara, Pandit Shivadatta's Ed.

(ii) *Vide* Bālaṁ Bhaṭṭa's Com. on Mañjūṣā, p. 182^{17-19}.

(iii) *Vide* Foot-note of Yajuh-Prātiçākhya, p. 6, Benares Ed.

[2] There seems to be somewhat different order as to the modifications of this Çakti. The Sāradātilaka again gives this order in the following form:—Out of Çakti, Dhvani is produced, then comes Nāda, which is followed by Nirodhikā, which produces Arddhendu, then comes Bindu, which gives rise to Parā (Vāk) which is followed by Paçyantī, after which comes Madhyamā and then follows Vaikharī. Now this Nirodhikā is Vanhi; Arddhendu is the Moon (of course this moon cannot be the moon which is visible to us) and Bindu is Arka (the sun) wherein the two other have combined and thus is the fountain of light. As Parā and others are produced out of Bindu, they are not different from Soma (the moon), Sūrya and Agni—*vide* Sāradātilaka, I. 110–116; and also a quotation from Kāmakalāvilāsa, *vide* Dīpikā on Yoginīhṛdaya, I. 10-11.

the modifications possess Consciousness.[1] Leaving Parā aside, we find the other three—Paçyantī, Madhyamā and Vaikharī, represent Indu (the moon), Sūrya (the sun), and Agni (the fire) respectively.[2] It appears that this also suggests the idea of Creation (Sṛṣṭi), Protection (Sthiti—rakṣaṇa) and Destruction.[3]

This is in brief the process of creation of Sound. Out of these four, the first three lead to mysticism and are more or less connected with Tantra and Yoga. Hence I leave that aspect of it and confine myself, in the present paper, to the nature and characteristics of the Vaikharī, with which we are closely concerned. Henceforward, instead of the term Vaikharī, sound or çabda will be used.

III. NATURE OF PHYSICAL SOUND.

By sound we mean that object (artha) of which the organ of apprehension is ear.[4] Before proceeding to discuss at length the nature of sound and all particulars connected with the problem, it is desirable in the outset for the purpose of clarity of understanding to find out the category under which it is usually put by the philosophers. The Upaskāra explains the necessity of this, thus: we find soundness and perceptibility by the ear existing in sound and because the difference is not observed both in homogeneous objects—the twenty-three attributes, and in the heterogeneous objects—substances and actions (Karmāṇi),[5] hence the doubt about its classification.

Meaning of the term Çabda.

Doubt about the classification of sound.

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[1] (i) एवञ्चैतद्विवर्त्तभूतं पश्यन्त्याद्यवस्थात्रयमपि चेतनमिति बोध्यम्—Bālam Bhaṭṭa's Com. on Mañjūṣā, p. 178[2-3].

(ii) *Vide* Com. on Vākya, I. 144, p. 57[5-6].

[2] ते ज्ञानेच्छाक्रियात्मानो वह्नीन्दुकंस्वरूपिणः ।
भिद्यमानात्पराद्विन्दोरव्यक्तात्मा रवोऽभवत्—Sāradātilaka, I. 11.

[3] *Vide* Dīpikā on Yoginīhṛdaya, I. 11-12.

[4] श्रोत्रग्राह्यो योऽर्थः स शब्दः—Vaiçeṣika Sūtra, II. 2. 21, Gujarātī Press Ed.

[5] शब्दे शब्दत्वं श्रोत्रग्राह्यत्वं चोपलभ्यते, तच्च तुल्यजातीयेषु लघीयःश्रुतौ गुणेषु अर्थान्तरभूतेषु द्रव्येषु कर्मसु च विशेषस्य व्याहतेः उभयथा उभयत्र दर्शनात् (अदर्शनात्) शब्दः किं गुणो द्रव्यं कर्म वा इति संशयं जनयति—Upaskāra on Vai. Sū., II. 2. 22, Gujarātī Press Ed.

(*a*) Sound is a substance because it is apprehended by direct contact of the sense-organ, according to the followers of Tūtāta—the Bhaṭṭa School.

At the very outset, we start with the view of the Mīmāṁsakas of the Bhaṭṭa School, as expounded in some of the Nyāya-Vaiçeṣika and Mīmāṁsā works, according to which sound is a substance.[1] The following are the arguments put forward in support of this view:

(*a*) Sound is a substance, as it is apprehended by the direct contact of the sense-organ, like a pot. There can be no question as to the possibility of a substance being cognised by the auditory-organ because the Manas which is admittedly an organ is

Auditory organ being Niravayava apprehends Sound.

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[1] (i) अनु द्रव्यं शब्द इति तौतातिता:—Udayanācāryya in his Nyāyapariçuddhi, Ms., page 930[13] —lent by Dr. Gangā Nātha Jhā.

(ii) शब्दो द्रव्यं—Nyāyalilāvatī, p. 75[16], Nirṇayasāgara Ed.

(iii) भट्टास्तु शब्दो द्रव्यं—Mahādeva Paṇḍita in his Nyāyasāra, p. 185[7]. Reprint from the Paṇḍit.

(iv) *Vide* Tārkikarakṣā, pp. 133[1] and 143[2]. Reprint from the Paṇḍit.

(v) *Vide* Kusumāñjali-Bodhinī of Varadarāja, pp. 75-76, Saraswatī-Bhavana Text.

(vi) *Vide* Nyāya-Mañjarī, p. 229[5], Vizianagram Ed.

(vii) *Vide* Prakaraṇapañcikā of Çālikanātha Miçra, p. 145[10], Chowkh. Ed.

(viii) *Vide* Padārthadīpikā of Kauṇḍa Bhaṭṭa, p. 39[19].

(ix) Gāgā Bhaṭṭa's Bhāṭṭa-Cintāmaṇi, published in the Pandit, Old Series, Vol. V, p. 239, col. 2[17], or Chowkhamba Benares Ed., 1900, pp. 20[11] and 21[23].

(x) Dr. Gangā Nātha Jhā's Prabhākara School of Pūrva Mīmāṁsā, p. 94[4].

(xi) Dr. A. B. Keith—Karma Mīmāṁsā, p. 53[18-20]; Heritage of India Series, 1921. Dr. Keith clearly mentions here that "Kumārila is credited with admitting also the substantiality of sound" and he gives for his reference—Ślokavārttika, p. 404 (v. 183). But I am sorry to note that his reference is altogether wrong.

(xii) Dr. Satiç Chandra's Indian Logic, p. 109[7-8].

(xiii) Çālika Nātha Miçra and Varadarāja Miçra quote a Kārikā—वर्णात्मकाश्च ये नित्या: शब्दा: सर्वगतास्तथा। पृथग्द्रव्यतया ते तु न गुणा: कस्यचिन्मता ॥ in Prakaraṇapañcikā, p. 145, and Tārkikarakṣā, p. 133, which supports the view that sound is a separate substance.

known to apprehend a substance. The only condition necessary is that the sense-organ be *Niravayava.*[1]

(*b*) Sound is a substance as it is the substratum of qualities like loudness, dullness, etc.

(*b*) Sound is a substance is also proved on the ground that it is a substratum of soundness and qualities like perceptibility by the ear, omnipresence,[2] number, velocity (Vega) etc.,[3] for a substance is that which is a substratum of qualities,[4] or to put it in the words of a Naiyāyika—that which is not the substratum of the absolute non-existence of a quality.[5] We cannot say, the Mīmāṁsakas hold, that the presence of quality in sound is a case of mere imposition (āropa); for no apprehension of qualities, which do not belong to sound, is possible by the auditory organ; that is, qualities belonging to other substances will never be cognised by the organ of hearing. As a matter of fact, however, the qualities described above are, in fact, apprehended by the ear only. We cannot deny this fact, on the ground that just as it is possible to have the perception of a piece of sweetmeat by one sense-organ—the eye, while its taste—a quality—by another sense-organ—the organ of taste, so the sound may be said to be cognised by the auditory organ, while its qualities by any other sense-organ; for the Mīmāṁsakas hold, if the auditory organ be destroyed, the above-mentioned qualities

Presence of qualities in sound is not a case of mere imposition.

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[1] Nyāyalīlāvatī, p. 75 [16-17]; Padārthadīpikā, p. 39 [19]; Tārkikarakṣā, p. 133 [3-4]; Prakaraṇapañcikā, p. 145 [10-13].

[2] Nyāyalīlāvatī, p. 75 [18]; Upaskāra on Vai. Sū., II. 2. 22.

[3] *Vide* Padārthadīpikā, p. 39 [17-19]. That sound is all-pervading (Vibhu) is clear from the fact that a particular letter, which was heard at one place, can be uttered in another.

[4] क्रियागुणवत्समवायिकारणमिति द्रव्यलक्षणम्—Vai. Sū., I. 1. 15.

[5] गुणात्यन्ताभावानधिकरणं द्रव्यम्—Udayanācāryya's Lakṣaṇāvalī, p. 3 [11].

Reprint from the Paṇḍit.

will never be apprehended; while in the case of the instance quoted above, it is possible to have the taste even when the organ of vision does not exist. They also disprove the argument held by the Naiyāyikas that the qualities of sound are apprehended by recollection (Smṛti), on the ground that if the qualities of sound be apprehended by Smṛti, then the *inference* of the presence of colour in citron, because of taste as held by the Naiyāyikas, will become a case of *pratyakṣa*.[1]

The qualities of sound are not apprehended by recollection.

(*c*) Vallabhācārya quotes the view of the Mīmāṁsakas that sound is a substance also because of recognition (pratyabhijñānācca).[2] This form of recognition is supplied by Kauṇḍa Bhaṭṭa; thus: Viṣṇu utters the very letter 'ga' which was uttered by Çiva; and the same letter, for instance, 'ga,' which was uttered a watch before is being uttered just now.[3]

(*c*) Sound is a substance because of recognition.

(*d*) That sound is a substance is also proved by the fact that it possesses Karman.

(*d*) Sound is a substance, as it possesses a Karman.

It is not the earlier writers alone who have mentioned this view but even such a late writer as Gāgā Bhaṭṭa, *alias* Viçveçvara Bhaṭṭa, supports this view in his Bhāṭṭa-Cintāmaṇi, where he enumerates Çabda as one of the dravyas.[4] He adds there that sound being an eternal and all-pervading substance, the relation with it will be the *Saṁyoga* only and not the *Samavāya* as others think. As to the argument held by some that, sound is a quality, because it is apprehended by

Gāgā Bhaṭṭa's view about sound as a substance.

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[1] Nyāyalīlāvatī, p. 75[16-22].

[2] Nyāyalīlāvatī, p. 75[17].

[3] Padārthadīpikā, p. 39[15-17].

[4] Bhāṭṭa-Cintāmaṇi, p. 21[22-23]. Chowkhamba Ed.

an external organ of sense, Gāgā says that such a reasoning will lead to fallacies. Thus, if the above ground be accepted as valid to prove that sound is a quality, then it also can very well establish that *air* and the *generality-colourness* (rūpatva-sāmānya) are also qualities; for they are apprehended by external organs of sense, namely, the tactual organ and the visual organ respectively.[1] Moreover, he further adds, that the absence of qualitativeness (guṇatva) in sound is inferred by the perceptual knowledge (pratyakṣa) characterised by the absence of qualitativeness belonging to a visible substance. That is, wherever there is the perception of an object which is not a quality of a visible substance, there is the absence of qualitativeness; sound is known as such; hence, it does not possess qualitativeness. In other words, it is not a quality.[2]

A question can be raised here that there will be no *Saṁyoga* relation possible as held above between sound, which is, as held by the Mīmāṁsakas, an eternal and all-pervading substance, which is proved by the fact that sound is cognised everywhere, and the auditory organ, which is limited Dik[3] and hence all-pervading. Both sound and Dik being all-pervading cannot have conjunction; for there cannot be any activity in all-pervading substances to cause the conjunction required. Activity is the asamavāyi-kāraṇa of conjunction and the presence of an asamavāyi-kāraṇa, hold the Naiyāyikas, is necessary to produce a positive effect (bhāva-kārya). To this the Mīmāṁsakas

An objection: both sound and Dik being all-pervading, there will be no activity and hence no conjunction between the two.

[1] According to the Naiyāyikas the same sense-organ which gives the direct perception of an object also gives the perception of the generality belonging to that object. Hence the visual organ which perceives the colour also perceives the generality-colourness (rūpatva-sāmānya).

[2] प्रत्यक्षद्रव्यगुणत्वाभावविशिष्टप्रत्यक्षेण गुणत्वाभावानुमानाच्च—Bhāṭṭa-Cintāmaṇi, p. 20.

[3] *Vide Infra*, pages 268-269.

reply, that activity (Karman) is not a necessary precondition of conjunction, as the latter is known to follow from conjunction produced by conjunction (saṁyogaja-saṁyoga). Again, by a valid inference it is proved that there can be such a conjunction. Thus:—Two all-pervading substances (vibhunī) meet together; as there is nothing to create an obstacle between the two substances; like a jar and the Ākāça.[1]

The Mīmāṁsakas reply: activity is not a necessary precondition of conjunction; and therefore, there will be conjunction between the two all-pervading substances.

The Mīmāṁsakas point out that time, space, Ākāça, etc., being all-pervading, any product—be it a substance, or quality, or action—may in a sense be described as residing in it, but this is hardly sufficient to justify sound's being classed as a quality.[2]

Sound cannot be a quality.

There is the School of Madhva which also holds that the articulate form of sound (Varṇātmaka-çabda) is a substance.[3]

The Madhva School holds that sound is a substance.

It may be mentioned here that it is not the Mīmāṁsakas only who hold that sound is a substance, but the Vaiyākaraṇas represented by Nāgeça also support the view. The reason adduced by them is that it possesses qualities, *viz.*, loudness, dullness, etc., and consequently satisfies the definition of substance.[4]

Sound is a substance according to the Vaiyākaraṇas.

IV. ARGUMENTS AGAINST THE ABOVE VIEW.

The Naiyāyikas and the Vaiçeṣikas take their stand prominently against the view held above. They

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[1] Bhāṭṭa-Cintāmaṇi, p. 20 [11-23], Chowkh. Ed.

[2] Nyāyamañjarī, p. 229 [5-10], Vizianagram Ed.; Mañjūṣā, a Com. on Nyāyasiddhānta-muktāvalī, p. 367 [12], Mylapore, Madras Ed.

[3] *Vide* Pramāṇādipadārthaprakāçikā, by Laugākṣi Bhāskara, p. 11, quoted by Bhīmācārya in his Nyāyakoça, p. 790, Foot-note, Second Ed.

[4] Mañjūṣā, p. 218 [4-5]; Nyāyakoça, Foot-note under Çabda, p. 791, Second Ed.

Nyāya-Vaiçeṣika view is that sound is not a substance as it resides in a single substance.

are of opinion that sound cannot be a substance, because it resides in one substance only, while all that are produced substances (Kāryadravyas) do not subsist in a single substance.[1]

As regards the inferences and arguments put forward in support of sound being a substance, Vallabhācārya holds that they are untenable, because the grounds adduced are not free from fallacies. Thus regarding the inference 'sound is a substance, because it is apprehended by the direct contact of the sense-organ,' he suggests whether sound is apprehended by the method of Residue, taking all the categories into consideration; or by only denying its being a quality, taking only one of the categories into consideration. In the case of the first alternative, the answer is that it is the very instrument by which the Naiyāyikas prove it a quality; and in the second, the Mīmāṁsakas cannot deny the possibility of its being an action (Karman). Thus, the ground (hetu)—'apprehended by the direct perception of the sense-organ'—as supplied above, is fallacious.

Sound cannot be a substance on the alleged ground that it is cognised by the direct perception of the sense organ.

Again, regarding the inference that ear can apprehend a substance, it is argued by the Naiyāyikas in reply that it cannot do so, if the substance be eternal, as held by the Mīmāṁsakas. The reason is that an external organ of sense does not come in contact with eternal substances; like the ocular organ. This is a contradictory inference (Satpratipakṣa) to that which has been given above in support of the view. It is further said that even if ear be able to cognise *eternal* substances, it can never have the apprehension of an *all-pervading* substance, because no contact is possible with the latter.

The auditory organ cannot apprehend a substance.

As regards the evidence of Pratyabhijñā (Recognition), it is said that so far as sound is concerned it is an impossibility,

[1] एकद्रव्यत्वाच्च द्रव्यम्—Vai. Sū., II. 2. 23; Nyāyamañjarī, p. 229[17-20].

for nobody feels that the sound produced at a later moment is identical with that which was produced at an earlier moment.

Pratyabhijñā of sound is impossible.

It has been said, by the Mīmāṁsakas, that 'the qualities of sound' are also cognised through the ear, as otherwise the existence of colour in citron cannot be proved through *inference*. To this the Naiyāyikas reply that it is really the recollection (Smṛti) which gives rise to the idea of number, etc., belonging to sound; for even in an ordinary inference of fire from smoke it is seen that it is the recollection of the generalisation (vyāpti) which leads to the conclusion. As to the case of inferring the presence of colour in citron on the ground of its having taste, it is said by the Naiyāyikas, that even if the connection of the sense-organ with the citron be cut off, the inference can be established by recollection. Similarly, when the connection of the qualities of sound with the sense-organ is cut off, there will be no difficulty in apprehending the qualities of sound by means of recollection.[1]

The so-called qualities of sound are apprehended by recollection (Smṛti).

Gangeça Upādhyāya refutes the above view of the Mīmāṁsakas, in the following way: the qualities of loudness, dullness, etc., really belong to air and not to sound through which they are apprehended only; just as the qualities (*e.g.*, dirt, etc.) belonging to a mirror appear to belong to the face. If it be so, a question can be raised that loudness and dullness, etc., being the qualities of air cannot be apprehended by the organ of hearing which is limited Ākāça. To this the answer is given that the auditory organ never apprehends these qualities; but we know that the organ of touch, which is the manifester of air, pervades the entire body and as such it is also present in the auditory organ. It is due to this organ

Gangeça Upādhyāya is of opinion that the qualities of loudness, dullness, etc., belong to air and not to sound.

And the qualities are apprehended by the organ of touch (skin) present in the ear-cavity.

[1] Nyāyalīlāvati, pp. 75-76.

of touch that the qualities of dullness, loudness, etc., belonging to air are cognised.[1] Rucidatta Upādhyāya supplies an instance here. He adds 'just as the organ of touch, present in the eye-ball or the visual organ, gives us the knowledge of smoke when the latter comes in contact with that sense-organ, similarly, the organ of touch apprehends loudness, etc., belonging to air when the air comes in contact with that organ.'[2]

Rucidatta supports the view of Gangeça.

Again, a question comes in: if it is due to the organ of touch that dullness, loudness, etc., belonging to air are cognised, then, if the skin, that is, the touch sensation, present in the ear-cavity, be destroyed by leprosy, etc., there will be no apprehension of these qualities. The answer is that then we can say that even the auditory organ itself can apprehend these qualities of air; for we see that the organs of visual perception and Manas being non-earthly organs (apārthivendriya) can very well apprehend the qualities of the earth. Similarly, the organ of hearing, not being an airy organ, can very well cognise the qualities of air.[3]

Further Gangeça holds that even the auditory organ can apprehend the qualities of air just as the visual organ and Manas apprehend the qualities of earth.

As regards the question of imposition, it is said that it is an obvious instance of imposition, just like the imposition of 'fair complexion' as expressed in the judgment—I am of fair complexion. Hence it is clear that sound cannot be a substance, as accepted by the Mīmāṁsakas.[4]

The imposition, as criticised by the Mīmāṁsakas, is accepted by the Naiyāyikas.

But there is another objection. It has been said above that sound is not a substance because it inheres in a single

[1] Cintāmaṇi, Çabda-Khaṇḍa. Published in the Pandit, Vol. VI, Old Series, 1872, page 282, col. 2 $^{15-18}$.

[2] Rucidatta's Com. on the above. Published in the Pandit.

[3] Cintāmaṇi, Çabda-Khaṇḍa, Pandit Ed., p. 283, col. 1^{2}; and Rucidatta's Com. on the above.

[4] Nyāyalīlāvatī, p. 76^{7}.

substance. Although this reason can disprove its being a substance, but it can very well, on the other hand, prove that sound is an action (karman). To this also the Naiyāyikas give an answer that it cannot be so; for all actions are objects of perception by the organ of vision while sound is never perceived by the eye. Moreover, an action does not produce a similar action, while sound does produce a similar sound. Again, action is found to exist in substances having colour while sound does not exist in such a substance.[1]

Objection: sound can be an action on the ground that it resides in a single substance.

Answer to the above objection

Similarly, it can be proved that sound cannot be either the Generality (Sāmānya), or the Inherence (Samavāya), or the Viçeṣa.[2] For these categories do not possess a generality while sound does possess it. It cannot also be included under the seventh category—Abhāva—Non-existence; for sound has a positive character.

Sound cannot be either the Generality, or the Inherence or the Viçeṣa or the Abhāva.

Thus by the method of exhaustion sound is proved to be a quality.[3] Çālikanātha Miçra, a Mīmāṁsaka, also supports the Naiyāyika-view and says that which is perceived by a single sense-organ is a quality; sound is cognised by a single organ of sense, that is, the auditory organ; hence it is a quality like colour, etc.[4] It is not only an ordinary quality but a specific one.[5]

Çālikanātha Miçra—a Mīmāṁsaka—supports the view that sound is a quality.

Sound is a Viçeṣa guṇa.

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[1] Candrakānta's Bhāṣya on Vai. Sū., II. 2. 24, p. 116 $^{7-9}$, Gujarātī Press Ed.

[2] Jayanārāyaṇa's Vivṛti on Vai. Sū., II. 2. 24.

[3] Nyāyakusumāñjali Prakaraṇa, pp. 275-276^{1} and 277^{5}, Bibliotheca Indica Ed.; and Bodhinī on the above, p. 75^{30}.

[4] (i) Prakaraṇapañcikā, p. 145 $^{14-15}$.

(ii) Nyāyamuktāvalī, pp. 84^{11}—85^{1}, Vindheçvarī Prasād's Ed., Benares.

[5] (i) Kiraṇāvalī, p. 106 $^{13-16}$. Vindheçvarī Prasād's Ed., Benares.

(ii) रूप गन्धो रस: स्पर्श: स्नेह: सांसिद्धिको द्रव: । बुद्ध्यादिभावनाख्यश्च शब्दो वैशेषिका: गुणा: ॥

(iii) Bhāṣāpariccheda, verses 90 and 91.

The Vaiyākaraṇas hold sound as a quality also

We have seen above that the Vaiyākaraṇas hold sound as a substance, but as it inheres in the Ākāça—a substance, it is also a quality.[1]

The question here is: if sound is a quality, it must have a substratum to inhere in, and that substratum can but be a substance.[2] Now what that substance can be? As sound is a specific quality (Viçeṣa-guṇa) it cannot have Dik, Kāla, and Manas as its substratum; for these do not possess any specific quality; and also because sound is cognised by the auditory organ, while no quality belonging to Dik, Kāla and Manas is apprehended by the organ of hearing. Nor can it be the specific quality of the Ātman, because sound is apprehended by an external sense-organ unlike the specific qualities of the Ātman, just like colour which also is not a quality of the Ātman; and moreover, sound can be known by another self, that is, it can be heard by more than one self; it does not inhere in the Ātman, nor is it ever cognised together with the Ego (ahaṁkāra) as it is found in judgments expressed in forms like 'I am happy,' 'I am feeling pain,' etc.; for all the qualities of the Ātman have a common substratum along with the Ego.

What is the substratum of sound?

Sound is not a specific quality of Dik, Kāla, Manas and Ātman.

Similarly, it is proved that it is not a quality of either earth, or water, or air or fire. The reasons are: It cannot be a specific quality like Touch (sparça) for being perceived (pratyakṣatvāt); it does not inherit the qualities of its cause; it does not exist as long as its substratum exists; and it is to be found

Sound is not a quality either of earth, or water, or air, or fire.

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[1] *Vide* Mañjūṣā, p. 218.

[2] (i) Nyāyamuktāvalī, p. 85 [1–2], Vindh. Ed.

(ii) Indian Logic and Atomism—by Dr. Keith, pp. 229-230.

in places other than its substratum.[1] Hence it is proved by the method of exhaustion that sound is a specific quality of Ākāça.

V. VARIOUS OTHER VIEWS ABOUT SOUND.

'Sound is a quality of Ākāça. It is all-pervading and eternal, and it is liable to manifestation only.[2] This view is held by an old Mīmāṁsaka. According to this view, the air-waves set in motion by the impact move forward, until they reach the tympanum and manifest the sound already subsisting in the Ākāça inclosed in the ear-cavity.[3]

Sound is an all-pervading and eternal quality of Ākāça. It is only manifested —Jarannaiyāyika view.

On the other hand, the Tāntric School holds that the ultimate principle is God Çiva and as Çabda-Brahman inheres in it, Çabda becomes a quality.

Sound is a quality—the Tāntric School.

The Sāṁkhya along with the Vedāntins hold that sound does not inhere in the Ākāça but in earth, in water, in fire and also in air along with and in the same manner as odour, colour, etc., and is liable to manifestation only.[4] Vācaspati Miçra explains it further. He says according to this view, sound subsists in all such substances as the cow, jar, etc., being a modification of the earth and other elemental substances, each of whom is the aggregate product of the subtle

The Sāṁkhya and the Vedāntins hold that sound is manifested and inheres in earth, water, fire and air, and not in Ākāça.

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[1] (i) Nyāyamuktāvalī. pp. 85-86.

(ii) Praçastapāda Bhāṣya, p. 58^{8-14}, Vizianagram Sanskrit Series Ed.

(iii) Kandalī on the above.

(iv) Kiraṇavalī, pp. 106—110.

[2] Nyāya Bhāṣya, II. 2. 13.

[3] Tātparyaṭīkā, p. 370^{17-19}, Vizianagram Series Ed.

[4] (i) Nyāya Bhāṣya on II. 2. 13, Vizianagram Series Ed.

(ii) Nyāyakoça, p. 788, Foot-note.

elements produced out of the five Tanmātrās; and also being a modification of Ahaṁkāra, it is all-pervading; so that when the sound happens to appear in a suitable place, it modifies the auditory organ that happens to be close by and thus sound is apprehended.[1]

Another Sāṁkhya view is that it is of the nature of the three guṇas.

There is also another view attributed to the Sāṁkhya that sound is of the nature of the three *guṇas*—Sattva, Rajas, and Tamas.[2]

There is another view held by the Svātantras that sound is produced in the drum, lute, etc., and as these are earthly objects, sound inheres in earth only.[3] Raghudeva Nyāyālaṅkāra in his commentary on the Padārthatattvanirūpaṇa or Padārthakhaṇḍana, as it is generally called, by Raghunātha Çiromaṇi, mentions this view as '*Pare tu*' that is, 'others, on the other hand.' There he says that according to them sound is the quality of the drum, etc., and it is also supported by the usual usage—sound is (produced) in the drum. In other words, the material cause of sound is the drum.[4] Now a question arises: if the drum be the material cause, then its product—the sound of the drum—should continue to remain as long as the drum exists; for the destruction of the drum is the cause of the destruction of the specific qualities of the drum. To this Rāmabhadra Sārvabhauma, in his commentary —the Padārthatattva-Vivecanaprakāça on the Padārthakhaṇḍana of Raghunātha Çiromaṇi, says that this objection is not tenable; for the sound of the drum will be destroyed by

The Svātantras hold that sound is a quality of the drum, etc., and hence inheres in the earth only.

[1] Tātparyaṭīkā, pp. 307 $^{27-28}$-308 ^{1}.

[2] Çloka Vārttika, adhi. 6, verse 319, p. 811, Benares Ed.

[3] (i) Dinakarī and Rāmarudrī on Nyāyamuktāvalī on Bhāṣāpariccheda, verse 44, p. 370, Mylapore Ed.

(ii) Siddhāntacandrodaya by Çrīkṛṣṇa Dhūrjaṭi Dīkṣita, quoted in the Nyāyakoça, p. 788, Foot-note, Second Ed.

[4] Raghudeva's Com. on the Padārthakhaṇḍana, p. 7 $^{21-25}$. Reprint from the Pandit.

counter-qualities which destroy the other qualities of colour, etc., by heating process, and thus the difficulty is removed.[1] But there is one thing that can be said against the view. If sound be a quality of the drum, then by the *Saṁyukta-Samavāya-relation*, the sound should be perceived by the organ of vision also.

Padmanābha Miçra goes a step further and says that if sound be the quality of conch-shell, drum, etc., it will never be apprehended by the auditory organ. The reason for this is that the organ of hearing apprehends the qualities of other substances by the relation of *Saṁyukta-Samavāya*; and as the auditory organ has no conjunction with the conch-shell which is at a distance from it and thus can have no Saṁyukta-Samavāya relation with sound; hence sound will not be cognised by the organ of hearing.[2]

Padmanābha's criticism of the view of the Svātantras.

The Bauddhas, on the other hand, hold that sound is produced by disturbances in the basic elemental substances; it does not subsist in anything; it is liable to production and destruction.[3]

The Bauddha view of sound.

There is another view held by the Ārhatas—the Jains—that sound is a product of subtle *sound-pudgalas*. The sound when produced travels up to the ear-cavity and is thus cognised.[4]

The Ārhata view of the sound.

The Vaiyākaraṇas are of opinion that the word or sound which is heard is the manifestation of different letters (Varṇas)

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[1] Padārthatattvavivecanaprakāça, pp. $84^{2\,3}$-85^{1-11}. Reprint from the Pandit.

[2] Kiraṇāvalī-Bhāskara, p. 129^{22-24}, Saraswatī-Bhavana, Benares Ed.

[3] Nyāyabhāṣya, II. 2. 13.

[4] (i) आर्हतास्त्वाहुः सूक्ष्मैः शब्दपुद्गलैरारब्धशरीरः शब्दः स्वप्रभवभूमेः निष्क्रम्य प्रतिपुरुषं कर्णमूलमुपसर्पति, etc.—Nyāyamañjarī, p. 215^{23-24}—217, Vizia. San. Series Ed.

(ii) Çloka-Vārttika, adhi. 6, verse 319, p. 811.

which constitute the sound or the word. These letters are eternal and have no succession. This eternal object is known as *Sphoṭa*. Although this Sphoṭa is one and eternal, yet like the lower generalities of cowness, horseness, jarness, etc., it assumes various forms due to different upādhis (conditions) as in the Nāda. This Nāda has succession; and if not then there will be a great confusion in deriving meaning from the sound; for instance, there will be no difference, if succession is not observed, between the words *dīna* and *nadī*. But it should be noted that this Nāda is not capable of bringing out any clear meaning. It is only helpful to lead us up to the Sphoṭa which really has the 'meaning.' This is also clear from the very meaning of the word Sphoṭa—'from which a meaning comes out.' There exists the relation of *implier* (abhivyañjaka) and the *implied* (abhivyanjya) between the Nāda and the Sphoṭa. The former is the implier while the latter is the implied. This Ultimate Principle is the Çabda-Brahman of the Vaiyākaraṇas wherein inheres the qualilies.

The Vaiyākaraṇa view of the Sound—Sphoṭa-Vāda.

The various forms or sub-divisions of Sphoṭa, due to different upādhis, referred to above, are: Varṇa-Sphoṭa; Pada-Sphoṭa; Vākya-Sphoṭa; Akhaṇḍa-Pada-S p h o ṭ a; Akhaṇḍa-Vākya-Sphoṭa; Varṇa-Jāti-Sphoṭa; Pada-Jāti-Sphoṭa; and Vākya-Jāti-Sphoṭa.

Varieties of Sphoṭa.

But the Vaiyākaraṇas do not accept the validity of these except that of the Vākya-Sphoṭa.[1]

Kuṇḍa's view on the varieties of Sphoṭa.

Nāgeça Bhaṭṭa points out that the Sphoṭa is the Nāda-aspect of the Madhyamā Vāk.[2]

Nāgeça's view on the Sphoṭa.

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[1] Vaiyākaraṇabhūṣaṇa, ch. on Sphoṭa-Nirūpaṇa, p. 295, Benares Ed.

[2] (i) Mañjūṣā, p. 183^{3-4}.

(ii) Positive Sciences of the Hindus by Dr. Seal, p. 153, para. 1, 1915 Ed.

(iii) शब्दस्य व्यञ्जका ध्वनय उपाध्यायेनोत्पाद्यमाना भिन्ना अपि सादृश्यात्तत्त्वेनाध्यवसीयमानाः श्रोतुः पुनः पुनः श्रोत्रप्रदेशं गच्छन्तो व्यक्तिस्फोटरूपं जातिस्फोटरूपं वा शब्दमभिव्यञ्जयन्तीत्यर्थः— Pradīpa.

Naiyāyikas do not accept Sphoṭa Theory.

It will not be out of point to mention here that the Naiyāyikas do not accept this Sphoṭa theory of the Vaiyākaraṇas.[1]

In the Çukla-Yajuḥ-Prātiçākhya it is said that sound is identical with air, that is, sound is the quality of air and as there is no distinction between a quality and the qualified, sound is described as *that*, that is, the air itself. The process is that by the effort of the person within himself the air manifests itself as sound[2] in the form of 'ka,' etc.[3]

Sound is identified with air—Çukla-Yajuh-Prātiçākhya view.

The process of sound production is somewhat different in the Sangītaratnākara. It is said there—when the Ātman desires to speak, it moves the Manas, which in its turn inflames the fire of the body and that fire moves the air, which remains in the *Brahmagranthi*,[4] and it moves up and manifests itself as sound in the navel, heart, larynx, cranium, and mouth.[5] Thus according to the Sangītaratnākara

Sound is the manifestation of air is the view of the Sangītaratnākara

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[1] Upaskāra on Vai. Sū., II. 2.21.

[2] (i) शब्दस्तत्—वाय्वात्मकः(Ubbaṭa Bhāṣya) सङ्घातादीन् वाक्—Çukla-Yajuḥ-Prātiçākhya, I. 7. 9; शरीराद्वायुग्निर्गच्छन् कादिवर्णविशेषव्यक्तिमापद्यते—Ubbaṭa Bhāṣya on Sūtra, 13. Ibid., Benares Ed.

(ii) आत्मा बुद्ध्या समेत्यार्थान् मनो युङ्क्ते विवक्षया।
मनः कायाग्निमाहन्ति स प्रेरयति मारुतम्।
मारुतस्तूरसि चरन्मन्द्रं जनयति स्वरम्—Pāṇiniya-Çikṣā, quoted in the Com. on the Vākya; in Mañjūṣā; and in the Foot-note on the Yajuh-Prātiçākhya, I. 8.

(iii) वायो...शब्दत्वापत्तिरिष्यते—Vākya, I. 108; Mañjūṣā, p. 184.

(iv) लब्धक्रियः प्रयत्नेन वक्तुरिच्छानुवर्तिना।
स्थानेष्वभिहतो वायुः शब्दत्वं प्रतिपद्यते—Vākya, I. 109.

[3] तस्य कारणसामर्थ्यात् वेगप्रचयधर्मिणः।
सन्निपाताद्विभज्यन्ते रावस्थोऽपि मूर्तयः—Vākya, I. 110.

[4] Caturakallināṭha's Com. on the Sangītaratnākara, ch. I, verse 1, Ānandāçrama Ed.

[5] आत्मा विवक्षमाणो हि मनः प्रेरयते मनः।
देहस्थं वह्निमाहन्ति, स प्रेरयति मारुतम्॥
ब्रह्मग्रन्थिस्थितः सोऽथ क्रमाद्ध्वंपथे चरन्।
नाभिहृत्कण्ठमूर्धास्येष्वाविर्भावयति ध्वनिम्—Sangītaratnākara, ch. I, sec. 3, verses 3-4.

representing the Science of Music, sound is the manifestation of air. Pāṇinīya-Çikṣā also holds nearly the same view.[1]

Effort of Īçvara makes vibration appear in the form of Sound.

Some again hold that Īçvara by His Second Will (Saṅkalpa) turns Himself into Eternal Vacuum (chidra) and that becomes Ākāça. In that Ākāça by another Effort of Īçvara there appears, together with the velocity of air, a vibration in the form of sound.[2]

A similar idea is held by the Vedāntins. They are of opinion that from Brahman in the form of Ākāça a subtle air, otherwise known as *Sparça-Tanmātrā*, comes out. It possesses a quality, through its cause, namely, sound and also the touch sensation.[3]

A similar view is held by the Vedānta that sound is a form of subtle air.

Again, some identify sound with atoms. It is said that these sound-atoms,[4] because of their various capacities, possess the state (Vṛtti) of producing various effects by their multifarious combinations, and inherent potency being manifested by efforts, the sound-atoms collect together and appear as sound in which form it appears before us; just as small pieces of clouds collecting together appear as cloud in the sky.[5]

Sound is produced by sound-atoms.

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[1] *Vide Supra*, Foot-note 2 (ii). This view has been criticised by Çālikanātha in his Prakaraṇapañcikā, p. 163[22], etc.

[2] (i) Durbalācārya's Com. on Mañjūṣā, p. 184 [15—18].

(ii) तस्मिन् छिद्रे अन्तरं लब्ध्वा वायोर्द्वैः:—Harivaṁça, quoted by Durbalācārya on Mañjūṣā, p. 184.

[3] (i) Durbalācārya's Com. on Mañjūṣā, p. 184 [21—23],

(ii) *Vide* Mahābhāṣya on Sūtra आख्यातोपयोगे and Pradīpa thereon.

[4] Nāgeça means by atom (अणु) here the शब्दतन्मात्रपरमाणु—Mañjūṣā, p. 184[7—8].

[5] (i) अणव: सर्वशक्तित्वात् भेदसंसर्गकृत्तय: ।
कायातपतन: शब्दभावेन परिणामिन: ॥
स्वशक्ती व्यज्यमानायां प्रयत्नेन समीरिता: ।
अभागीव प्रवायन्ते शब्दाख्या: परमाणव: ॥—Vākyapadīya, I. 111-112.

On the other hand, some are of opinion that consciousness (jñāna) appears as sound. The process is thus explained: the inner consciousness existing in the form of subtle Vāk manifests itself as sound. It first appears as Manas, which, when heated there, enters into the vital air (Prāṇa-Vāyu) and then comes out. That is, the air becomes the support of the inner faculty (antaḥkaraṇatattva) and when it is helped by the inner fire, it appears as sound. The Prāṇa owing to that heat modifies itself by means of various Çrutis, that is, dhvanis, into so many letters. Thus ultimately consciousness appears, through this long process, as sound.[1]

Sound is the manifestation of consciousness.

The other view is that the sound (dhvani), which is in constant motion like the air and which is not cognised everywhere, because of its subtleness, manifests itself in the ear by the various causes of manifestation.[2]

Sound is the manifestation of the subtle and ever-moving dhvani.

Some read here 'आगामीव' (*cf.* Mañjūṣā) for अभागीव and this reading has been commented upon also by some, but the reading as quoted above seems to be far better.

(ii) Compare this with विवृतं शब्दनाम्ना: etc. *Vide Supra*, page 241, Foot-note 1 (v).

[1] (i) अथेदमान्तरं ज्ञानं सूक्ष्मवागात्मना स्थितम् ।
व्यक्तये स्वस्य रूपस्य शब्दत्वेन विवर्तते ॥
मनसो भावनापन्न तेजसा पाकमागत: ।
वायुमाविशति प्राणमयात्मा समुदीर्यते ॥
आन्त:करणतत्त्वस्य वायुरात्मतां गत: ।
तद्वर्णेन समाविष्टस्तेजसैव विवर्तते ॥
विभज्य स्वात्मनो ग्रन्थीन् मूर्तिरूपै: पृथग्विधै: ।
प्राप्तो वर्णानभिव्यक्त्य वर्णेष्वेवोपलीयते—Vākya, I. 113—116.

(ii) वायोरक्षूणां ज्ञानस्य शब्दत्वापत्तिरिष्यते—Ibid., I. 108.

(iii) ज्योतिर्वत्ज्ञानानि भवन्ति—Mahābhāṣya ; अथवेति-यथा ज्वालारूपं ज्योतिरविच्छेदेनोत्पद्यमानं रावृत्यादित्वेनाध्यवसीयमानं संततं तथैवापाध्यायज्ञानानि भिन्नानि भिन्नशब्दरूपतानापद्यमानानि रूपतानापद्यते । ज्ञानस्य शब्दरूपापत्तिरिति दर्शनमत्र भाष्यकारस्य—Kaiyyaṭa's Pradīpa on the Mahābhāṣya and *vide* Uddyota upon the same.

[2] अजस्रवृत्तिर्यः शब्द: सूक्ष्मत्वान्नोपलभ्यते ।
व्यञ्जनाद्वायुवित्र स्वनिमित्तात्मतीयते—Vākyapadīya, I. 117.

Sound is the manifestation of the potencies of Prāṇa and Buddhi.

Again, sound, which has as its seat the Prāṇa and the Buddhi (Intellect), being manifested by the potencies of Prāṇa and Buddhi, makes the meaning clear. It appears as non-eternal sound in various forms due to the variety of the manifesting places.[1]

Sound is the primordial cause of the universe.

Another view is that the entire universe, that is, the objects of the universe have for their support the sound. That is, it is the Çakti (energy) of the sound (wherein inheres the entire universe in its subtlest form) which manifests itself and appears as different kinds of objects. Thus it comes to this: whatever is perceived is Vāk; whatever is uttered is Vāk; the sound itself is the universe in its manifold appearance.[2]

Sound is an attribute of Īçvara, who is its material cause.

Some are of opinion, specially the followers of the Navya School of Nyāya, that Īçvara, instead of being an instrumental (nimitta) cause of sound, is the material (Samavāyi) cause. Here by Īçvara they mean Paramātman and not Jīvātman; for in the first place, there is no proof to say so; even

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[1] तस्य प्राणे च या शक्तिर्या च बुद्धौ व्यवस्थिता ।
विवर्त्तमाना स्थानेषु सैषा भेदं प्रपद्यते—Ibid., I. 118, and *vide* also Puṇya rāja's Com. on it.

[2] (i) शब्देष्वेवाश्रिता शक्तिर्विश्वस्यास्य निबन्धिनी ।
यन्नेत्रः प्रतिभात्मायं भेदरूपः प्रतीयते—Vākya, I. 119.

(ii) वागेव प्रकृतिः परा—Tai. Saṁhitā, 6. 4. 7. 3, quoted in the Footnote of the Mahābhāṣya, pp. 805-806, Bibliotheca Ed.

(iii) वागेवायं पश्यति वाग् ब्रवीति वागेवायं सन्निहितं सन्तनोति ।
वाचैव विश्वं बहुरूपं निबद्धं तदेतदेकं प्रविभज्योपभुङ्क्ते—quoted by Puṇyarāja in his Com. on Vākya, I. 119.
शब्दस्य परिणामोऽमिरयात्मायविदो विदुः ।
छन्दोभ्य एव प्रथमनेतद्विश्वं व्यवर्तत—Ibid., I. 121, and 130—133 along with Puṇyarāja's Com.

(iv) वागेव विश्वा भुवनानि जज्ञे वाच एतत्सर्वममृतं यच्च मर्त्यम्—Ṛgveda, quoted in Ibid.

(v) विभज्य बहुधात्मानं स्वच्छन्दस्यः प्रजापतिः ।
छन्दोमयीभिर्मात्राभिर्बहुधैव विवेश तत् ॥
शाश्वती वाग् ध्रुवमीयेषु पुरुषेषु व्यवस्थिता ॥—quoted in Puṇyarāja's Com. on Vākya, I. 121.

then if it be urged, then it can be said that just as Jīvātman being the material cause of pleasure and pain, we say 'I am happy,' etc., similarly, we would have to say 'I possess sound.' Again, like pleasure, pain, desire, etc., sound also will be apprehended by the instrumentality of the Manas. That is to say, even when the ear-cavity be destroyed, sound will be heard; but this seems to be against the reality. They go even so far as to say that the ear-cavity is not different from Īçvara under a certain limitation.[1] This view makes sound one of the attributes of Īçvara.

Sound is a quality of Dik, as the ear-cavity is identified with it.

It can be suggested that sound is a quality of Dik; for, as supported by Kumārila Bhaṭṭa and others, according to the Vedas, the auditory organ is described to be a limited Dik. Now the organ of hearing, as a limited Dik, apprehends sound, which is its quality. Dik being all-pervading and eternal like the Ākāça, there will be no difficulty in the production or manifestation of sound anywhere.[2]

Jayanta Bhaṭṭa's criticism of the above.

This view has been criticised by Jayanta Bhaṭṭa. He says that it is a great self-conceit to consider Dik as an ear-cavity; and moreover, the organs of sense are being proved material (bhautika) while Dik being an incorporeal substance (amūrta), can

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[1] (i) Padārthatattvanirūpaṇa, dp. 3—10. Reprint from the Pandit.

(ii) Dinakarī, Rāmarudrī and Prabhā on the Nyāyamuktāvali on the Bhāṣāpariccheda, stanza 44, p. 370, Mylapore Ed.

(iii) Nyāyakoça, p. 819.

[2] (i) यदि स्ववश्यं वक्तव्यस्तावत्कोत्तिविपर्ययः। ततो वेदानुसारेण कार्या दिक् श्रोत्रता नृणाम्:—Çlokavārttika, ch. on sound, verses 150—154, quoted by Jayanta Bhaṭṭa also in the Nyāyamañjarī, p. 226.

(ii) भाट्टास्तु दिशः श्रोत्रमिति श्रुतेर्दिगेव श्रोत्रमित्याहुः—Padārtharatnamālā, p. 26 [22]. Reprint from the Pandit.

(iii) Bhāṭṭa-Cintāmaṇi, p. 19 [21] and दिगात्मकश्रोत्रस्यापि विभुतया, etc. Ibid., p. 20[17].

never be an organ of sense. And again, the Vedic Text which is the basis of this view, occurs in a different context and means quite a different thing. Thus the Çruti says, "may the eye go to the Sun, the ear to the Dik, and the vital-air to the Antarīkṣa." Here the vital-air, although of the nature of air, is said to go to the Antarīkṣa with which the vital-air is not connected. Therefore, even if it is said that the ear may go to the Dik, it cannot be said that the Dik is the ear-cavity.[1]

These are the various views about sound. They have been criticised by different schools from their own point of view.[2] The prominent leaders of the views are: the Mīmāṁsakas, the Vaiyākaraṇas and the Naiyāyikas.

VI. THE ETERNITY AND NON-ETERNITY OF SOUND.

Having discussed the place of sound under the various categories according to the multifarious views, we now proceed to discuss another important aspect of it, that is, whether sound is eternal or non-eternal.

As before the Mīmāṁsakas of both the schools—Bhaṭṭa and Prabhākara—take a very prominent part here also. Çālikanātha Miçra following Prabhākara's view says, if sound were destroyed just after its production, it would be impossible to determine the true natural connotation of the words, on the basis of the use of the experienced people; but as a matter of fact we know the meaning of the words by marking their repeated use among the old people. This fact would be inexplicable if we were to accept the non-

Prabhākara is of opinion that without the eternity of sound knowledge is impossible.

[1] दिशां कार्यान्तरत्वेपाद्गमनान्यपरत्वतः ।
आदेयपुष्पिकामात्रं दिग्द्रव्यमोलूक्यकल्पनम्, etc.—Nyāyamañjarī, p. 226[9-10].

[2] Jayanta Bhaṭṭa summarises the views, he has criticised, in a fine couplet: शिष्याविदस्तु पवनात्मकमेव शब्दमाचक्षते तदसदभ्युपगमप्रतीतेः ।
अर्हन्मतप्रविलुप्तदृगन्धपर्युदासनीत्या च वाय्वन्वयेऽपि वारणीयाः, etc.—Nyāyamañjarī, p. 217.

eternal character of sound. For instance, each time the word will appear a quite new one, as if it has been uttered for the first time and never before, and will give no sense (to a man who is ignorant of the meaning of the word); and until the words afford any meaning, they cannot be regarded as a means of right knowledge. Therefore, if a man wishes to establish the prāmāṇya of words, that is, if he thinks to carry on his usage by having words as a means of right knowledge, the eternity of sound must be accepted, as it has to fulfil some purpose.[1]

Ideas can never be interchanged if sound were non-eternal.

Further it is urged that it must be eternal, because its pronouncement is made for the sake of conveying certain thoughts to another and this will be impossible if sound were not eternal, for it would not continue till the hearer, for whom it is meant, understands the meaning.[2] Again, the above view is supported by their being everywhere simultaneousness in the recognition of it by so many hearers. For example, when the word cow is uttered, many persons recognise the word alike as applied to all cows simultaneously.[3] Then again it is said that by the absence of number, sound is proved eternal; for example, when the word 'cow' is uttered eight times, we say, 'the word cow is uttered eight times' but not 'eight words of the form cow are uttered.'[4] Moreover, there is another reason to support the view. We do not find any cause to destroy it; as we find in the case of a cloth. That is, as soon as we see a new cloth, we

Simultaneity of cognition of words also supports the above view.

Absence of number in the sound proves its eternal character.

No cause is found to destroy sound.

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[1] (i) Prakaraṇapañcikā, ch. IX, p. 161 [5-13].
(ii) Prabhākara School of Pūrva Mīmāṁsā, p. 58.

[2] Jaiminīya Sūtra and Çabara Bhāṣya, I. 1. 18, Chowkh. Ed.

[3] Ibid., I. 1. 19.

[4] Ibid., I. 1. 20.

feel assured that it will be destroyed because it has a colour and also because it, being produced by the conjunction of threads, will be destroyed as soon as that conjunction or the thread itself is destroyed.[1] Finally, to put the seal upon the evidence of sound's eternity Çabara quotes a Çruti also to this effect.[2]

Çruti also supports its eternity.

Besides these the Mīmāṁsakas of the Prabhākara School say that 'sound is eternal, because it inheres in the Ākāça only, just as the dimension of the Ākāça'; or 'because of the force of a Recognition (Pratyabhijñā) in the form—it is the very letter 'ga' which was uttered by Rāma yesterday, and is being uttered by Çyāma to-day.' There exists a perfect identity between the two sounds. On the other hand, the Bhaṭṭa School says, 'it is eternal, because it is a substance which does not melt, or which has no touch, like the Ātman.'[3]

Some more arguments in favour of sound's eternity by Kumārila and Prabhākara.

It is not only that the Mīmāṁsakas are in favour of the eternity of sound but the School of Vyākaraṇa also supports it. It holds that letters are eternal, because they are *dhvanya letters*, like Sphoṭa. Taittarīya Saṁhitā also holds the same view. It says that there are two kinds of Çabda: One is a product which is used for our ordinary usages and the other is the fount of all such usages, devoid of succession and so on.[4]

Vyākaraṇa and Taittarīya-Saṁhitā support the view.

Then there remains the question—If the word is eternal, why is it not always present in our consciousness? The answer to this is: though the word is ever present, yet, in order that it may be cognised by us, it stands in need of a certain

[1] Ibid., I. 1. 21.

[2] Ibid., I. 1. 23. The Çruti runs thus—वाचा विरूपनित्यया इति.

[3] (i) Nyāyalīlāvatī, p. 75 [17]. (ii) Nyāyasiddhāntamañjarī of Jānakīnātha, quoted in the Nyāyakoça, p. 792.

[4] Taittarīya Saṁhitā, 6. 4. 7. 3, quoted in the Foot-note of the Mahābhāṣya, pp. 805-806, Bibliotheca Indica Ed.

auxiliary agency that manifests it, or makes it cognisable, or presents it to our consciousness.[1] This manifestive agency consists of the effort put forth by the man who pronounces the word. The Naiyāyikas regard this effort as the *Cause* of the word, bringing it into existence; but Prabhākara regards it as *a force or agency*[2] that serves to manifest to our perception the word that is already in existence. And as these efforts may be many, there need be no incongruity in the same word being pronounced and heard by several people; wherever the manifestive agency is present, the word will be heard; if there are many men putting forth an effort for pronouncing a word, it is only natural that there should be manifestations of the word in consciousness; that it is the same word that is cognised in each of these cases is proved by our direct cognition of all of them as one and the same, and this is another reason for regarding sound as eternal.[3]

Sound is manifested and not caused—Mīmāṁsaka's view.

From what we have said it is clear that there is not only one sound but many. But Uddyotakara introduces a quite different view held by the old Mīmāṁsakas.[4] They hold, says Uddyotakara, that there is only one sound. To this Uddyotakara replies that in that case every sound should be heard by

Uddyotakara's criticism of the view that there is only one sound and not many.

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[1] Nyāya Bhāṣya, II. 2. 32—34.

[2] (i) उच्चारणप्रयत्नेन व्यज्यतेऽसौ न जन्यते—Çāstradīpikā, I. 1. 6. 50. Nirṇayasāgara Ed.

(ii) नित्यप्रत्ययसामर्थ्यात् प्रयत्नेनाभिव्यज्यते—Çabara Bhāṣya, I. 1. 6 and 12.

[3] (i) Prabhākara School of Pūrva Mīmāṁsā, p. 59 [1—22].

(ii) *Vide* Prakaraṇapañcikā, pp. 162-163.

(iii) Çabara Bhāṣya, I. 1. 13 and 15.

For other references of this Section *vide* Jaiminīya Sūtra and Çabara Bhāṣya, I. 1. 6-26; Çāstradīpikā on the above; Nyāyamañjarī, pp. 208-209; Çloka-Vārttika—the whole of the 6th Adhikaraṇa; Nyāyasūtra with Vātsyāyana Bhāṣya, II. 2. 13—34; Vaiçeṣika Sūtra with the Commentaries, II. 2. 25—37.

[4] *Vide* Tātparyaṭīkā, p. 310[15].

all persons. To this again the Mīmāṁsakas say, what we mean is this—that 'we do not hold that every sound produces a number of other sounds, but that there is only one sound and it pervades over the entire Ākāça, like its dimension;[1] and this sound is heard only when it is manifested by the Conjunction and Disjunction, just as a jar, etc., placed in a room is apprehended, when manifested by the Conjunction of the lamp-light.' This is also rejected by the Naiyāyikas on the ground that if it were so then every sound should be heard by all men. They go on saying that even if the Mīmāṁsakas mean that a single sound, pervading over the entire Ākāça, becomes manifested by Conjunction and thus brings about the cognitions of the thing (expressed by that sound) to the person possessing the auditory organ, there will be the same difficulty that every sound thus manifested will bring about cognition to all persons having the organ of hearing. But this does not actually happen; therefore, the arguments of the Mīmāṁsakas are merely fanciful.[2]

There are several views regarding the manifestation of sound. Some hold that air is the manifester. That is, when air-current reaches the Ākāça in the form of our ear-cavity, the sound, subsisting in it, becomes manifested and thereby becomes audible.[3] Some, again, are of opinion that the manifester of sound is not air or air-currents, but a particular quality belonging to air called *Nāda*.[4] The third view seems to be that sound is manifested by

Views about the manifestation of sound.

[1] Tātparyaṭīkā, p. 310[1-7].

[2] Nyāya-Vārttika, pp. 286[27]—287[1]. The view that there is only one sound was also anticipated by Padmanābha Miçra—*vide* Kiraṇāvalī-Bhāskara, p. 132[4-5].

[3] Nyāya-Vārttika, p. 289[3-5]. Benares Ed.

[4] Ibid., p. 289[21-22].

the Conjunction and Disjunction of air.[1] All these views have been criticised by Uddyotakara and Vācaspati Miçra.[2]

Some of the arguments in favour of the non-eternity of sound, by the Naiyāyikas and others.

According to the Naiyāyikas and others, on the other hand, sound is non-eternal, because it has a cause (ādi); because it is apprehended through a sense organ; and because it is conceived and spoken of as a product.[3] Moreover, we find there is a difference of property between sound and things that are eternal. The most obvious reason for this seems to be this—that sound is subject to destruction while eternal things are not so. Again, it cannot be taken to be eternal on the ground that it is not caused but is manifested; for the manifestation will entail a defect. The defect will arise that in each case an invariable relation of the revealer and the revealed will have to be admitted in respect of things co-existent and capable of being perceived by the same sense. But the invariable relationship of the revealer and the revealed is nowhere observed of such things. If it be not assumed here, then it will follow that on the manifestation of one letter, say, '*Ka*,' all the letters will become manifest. The rejoinder that an invariable relation of the revealer and the revealed is in fact observed to obtain among the characteristic of being existent, the characteristic of being a man, and the characteristic of being a Brāhmaṇa, which are also co-extensive and are revealed by their individual difference, situation and origin, is invalid. For they lack in being co-extensive inasmuch as the extension of the characteristic of being a man, or of the characteristic of being a Brāhmaṇa, is not so large as that of the characteristic of being existent.[4]

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[1] Nyāya-Vārttika, p. 298 $^{22-23}$.

[2] Ibid., p. 289, and Tātparyaṭīkā, p. 312$^{2-13}$, Vizianagram Sans. Series Ed.

[3] Nyāya Sūtra, II. 2. 13.

[4] (i) Upaskāra (from the trans. of Nandalāl Sinha) on the Nyā. Sū., II. 2. 30.

Further it can be argued that sound is a product, for in the case of it, we see that the effort is made to utter a sound.[1] Again, sound is non-eternal because it possesses transitoriness, for beyond a moment, it is no longer perceived.[2] Moreover, we find that there is an uncontradicted usage in the form 'make a sound,' 'do not make a sound (noise),' etc. This making of sound shows that it is non-eternal like anything, which is thus an object of making.[3] Again, we see that a sound is simultaneously heard in various places. This fact becomes impossible if there be only one eternal sound. An eternal entity without any special characteristic (Viçeṣa) cannot possess this sort of maniness; while on the other hand, we find that a product can find place simultaneously in many places.[4] Lastly, we see that sound is non-eternal because by a multitude of utterers of sound there is an augmentation of it. This cannot be the case of manifestation, for in that case, there should be no difference in the manifested thing, whether there be many manifesters or a single manifester; while it is clear here that every man out of a multitude produces only a part of sound and thus the effort of the entire multitude makes one complete sound.[5]

Sound is non-eternal for an effort is made to utter it.

It is supported by an uncontradicted usage—'make a sound.'

Also because it is heard simultaneously in many places

It has non-eternal character is also proved by the fact that there is an augmentation of it.

There are other proofs also to justify sound's non-eternal character. The Naiyāyikas go on saying that there is no proof to prove its eternity; and moreover, it possesses the qualities of production and destruction, which are quite antagonistic to its

It is so, as it has the qualities of production and distinction.

(ii) Nyāya-Kusumañjali-Bodhinī, p. 65. Saraswatī-Bhavana Text Series, Benares Ed.

[1] Jaiminiya Sūtra and Çabara Bhāṣya, I. 1. 6.
[2] Ibid., I. 1. 7.
[3] Ibid., I. 1. 8.
[4] Ibid., I. 1. 9.
[5] Ibid., I. 1. 11.

being eternal. Moreover, it has a cause and that which has a cause cannot be eternal.[1] This we cannot deny, argue the Naiyāyikas, on the ground that it is not produced but is only manifested by certain manifester; for if it has a manifester, why all the words are not manifested at the same moment? For we know that a single revealer (abhivyañjaka) manifests at a time all such things which co-exist and are perceivable by the same organ of sense; just as we see that a jar, a cloth, a table, etc., which are the objects of perception through the same sense-organ become manifested when brought before a light, which is the single revealer. So is the case with the words and letters. And again, it can be said that sound, being the specific quality of Ākāça which is everywhere present, must be found to appear everywhere, whenever it is manifested in a place.[2] And moreover, the argument brought forward by the Mīmāṁsakas is vitiated with the fallacy of *Sandigdha* (Sādhyābhāvavadvṛtti, *i.e.*, that Hetu is known as such which exists where the Sādhya —the thing to be proved—is absent). That sound possesses the qualities of loudness and dullness also shows that it cannot be eternal, for these inherent qualities are of contrary characters and as such must have different substratum.[3]

The inherent qualities of sound show that it is non-eternal.

These are the arguments in support of the two views. We must bear in mind that the Mīmāṁsakas have to support the most vital problem of their philosophy—*the self-sufficiency of the Veda*, by proving the eternity of sound. The reason is that if sound were non-eternal, the validity of the word and the verbal cognition would be, not something inherent in the word itself, but due to the trustworthy character of the person pronouncing the word; and thus as the Mīmāṁsakas

Necessity of sound's eternity for the Mīmāṁsakas.

[1] Vai. Sū. Vivṛti, II. 2. 28, Gujarati Press Ed.
[2] Tātparyaṭikā, p. 310 $^{19-20}$.
[3] Ibid., pp. 312-313.

deny any personal agency in connection with the composition of the Veda, there would, *ipso facto*, be no validity in the Veda itself. Nor can the Mīmāṁsakas accept the Naiyāyika's view, by which the denotativeness of words is created and fixed by 'conventions' among people who introduce, and make use of, the words for the first time, according to the Naiyāyikas created by God Himself. This view necessitates the postulating of a God as the originator of all words, and hence also of the Veda; and this militates against the Mīmāṁsā Doctrine of the Self-sufficiency of the Veda, which must be independent of all personal agency.[1]

Udayanācārya's view about the self-sufficiency of the Veda.

It will not be out of place to mention here the view of one of the greatest Naiyāyikas—Udayanācārya—upon this view of the Mīmāṁsakas. He says that when we have proved that words are not immaculate self-sufficient entities, we can regard the Veda as the 'word of a reliable person,' and hence an Instrument of Right Cognition. Otherwise, if the Veda were eternal, it would be open to this suspicion that it may not be reliable; as no one knows when and by whom it was propounded; and in ordinary usage, all such words, as cannot have their source traced are regarded as of doubtful veracity.[2]

VII. OTHER CHARACTERISTICS OF SOUND.

The utility of articulate sound consists generally in conveying one's ideas to others. Sometimes a visible and

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[1] (i) Prabhakara School of Pūrva Mīmāṁsā p. 55 [130] —56 [1–13].

(ii) Dr. Ballantyne's 'The Eternity of Sound'—the Pandit, Vol. I, Old Series, p. 70.

[2] पदवाक्यवर्णाटरध्यशङ्का-ऽनुदासेनाप्रत्यूहनामोक्तत्वसिद्धौ वेदप्रामाण्यसिद्धिः । अन्यथा ह्यपौरुषेयत्वात् दोषप्रवृत्तौ यथाप्रामाण्यं तथा तदर्थोपलम्भप्रतिपादयिषा लक्षणगुणनिरूप्याप्रामाण्यनामंकयेत । अत एवानूनानां वाक्यानां लोकेऽप्रामाण्यदर्शनात्-Nyāya-Vārttika-Tātparya-Pariçuddhi, p. 930 15–20.—93[1] [1–2], Ms. lent by Dr. Jhā. *Vide* also Foot Note of Dr. Jhā's Translation of the Nyāya Bhāṣya and Vārttika Vol. II., p. 217.

immediate result (dṛṣṭaphala) is also found to issue from the repetition of certain sounds, namely, mantras, which help, for instance, in retarding the circulation of poison in case of snake-bites, etc., and the invisible result is said to follow from certain vows (Saṅkalpa).[1] This sort of vow is infallible and effective, if the person making the vow really possesses higher spiritual powers.[2] Not only this, but the orthodox opinion is that if a single word is thoroughly understood and correctly used, it will fulfil all the desires of the person knowing and using it, in this world as well as in the world hereafter.[3]

Utility of sound.

For the sake of thorough apprehension of the characteristics of sound, we have summed them up here. Sound is heard not only on the spot where it is produced, but even farther off. It is because of this that there appears a difference between far and near sounds.[4] It does not extend over the whole of its substratum nor does it exist after it has reached the ear.[5] It is a quality inherent in a substance having no limitation.[6] It is to be apprehended by an external sense-organ.[7] It is momentary in character.[8] Some are of opinion that it exists for two moments only[9] while others say that it remains for three moments. Sound is produced in that Ākāça only where air is present.[10] The Mīmāṁsakas suggest that it is all-pervading.[11]

Summary of the various characteristics of sound.

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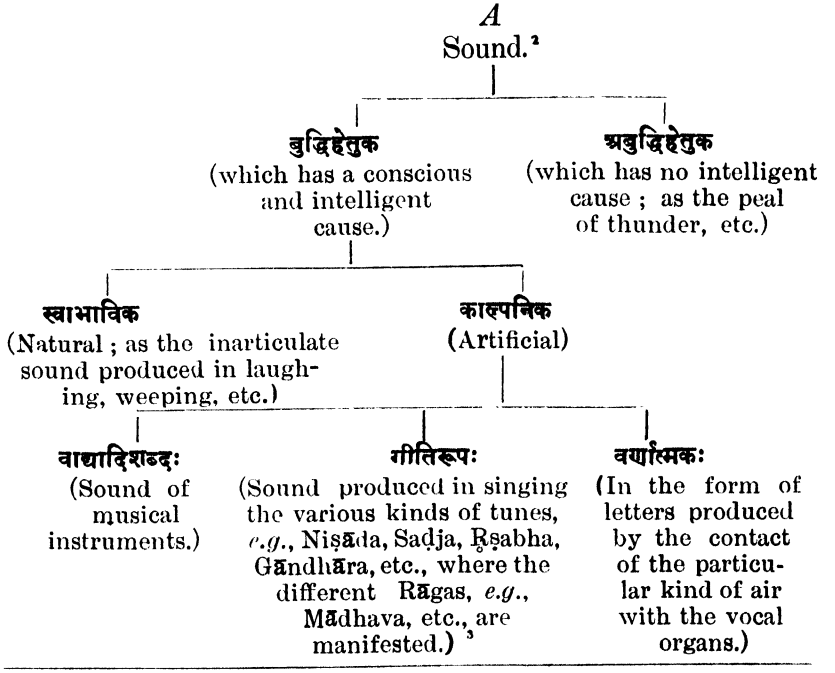
[1] Vākyapadīya, I.140.
[2] Consult Bhavabhūti's Uttaracarita—'ऋषीणां पुनराद्यानां वाचमर्थोऽनुधावति'.
[3] *Vide* 'एकः शब्दः सम्यग्ज्ञातः सुष्ठु प्रयुक्तः स्वर्गे लोके च कामधुग्भवति'।
[4] Praçastapāda Bhāṣya, p. 58, Vizianagram Sans. Series Ed.
[5] (i) Kiraṇāvalī p. 138, Vindheçwarī Prasād's Benares Ed.
(ii) Praçastapāda Bhāṣya and Kandalī, p. 102.
[6] Ibid., p. 95[10].
[7] Ibid., p. 96 [11].
[8] Ibid., p. 278[17].
[9] Padārtha-Dipikā of Kuṇḍa Bhaṭṭa, p. 39.
[10] Kiraṇāvalī p. 139.
[11] Padārthadīpikā, p. 39.

Similarity of Sound with Karman.

Although sound is a specific qaulity of Ākāça, it has some similarity with the category of Karman (action). Both of these exist in a single substance and have short duration. But as regards the latter, it is held that Karman exists for *four moments* and is destroyed in the fifth, while sound remains only for *two moments* and is destroyed in the third. But Keçava Miçra is of opinion that sound, like Karman and Buddhi, exists for three moments.[1]

VIII. SUB-DIVISIONS OF SOUND.

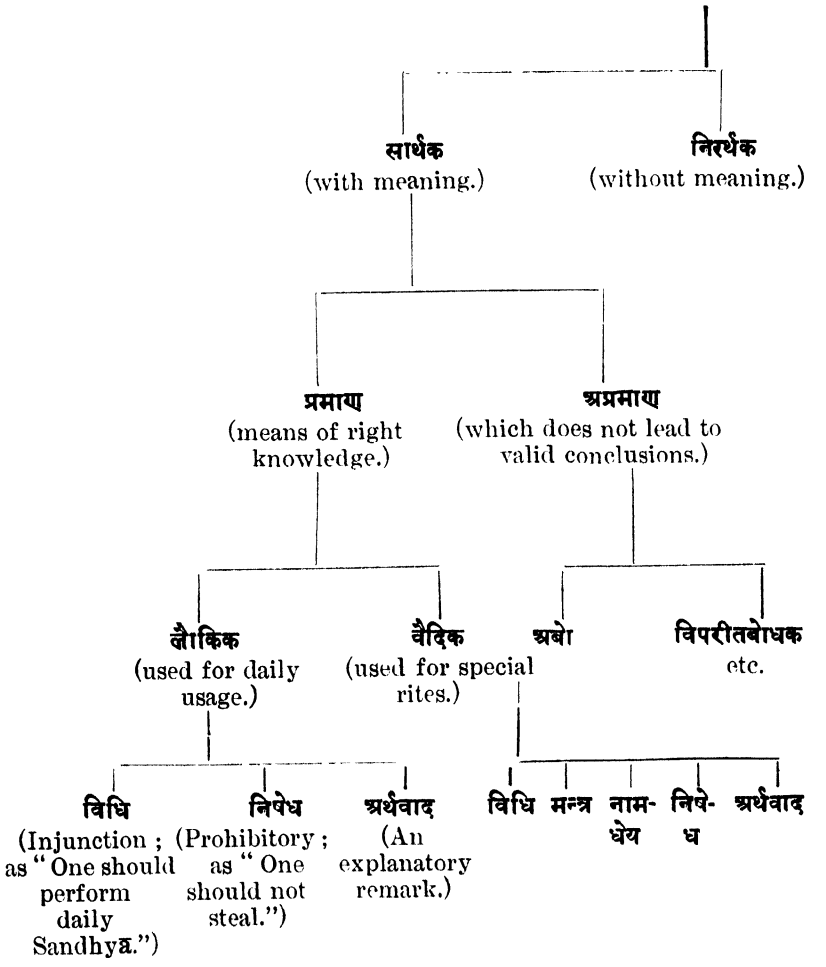
Having thus discussed the nature of sound we now proceed to point out its sub-divisions and varieties. Even here we find multifarious opinions. In the Vācaspatya we find an elaborate division of it which is as follows :



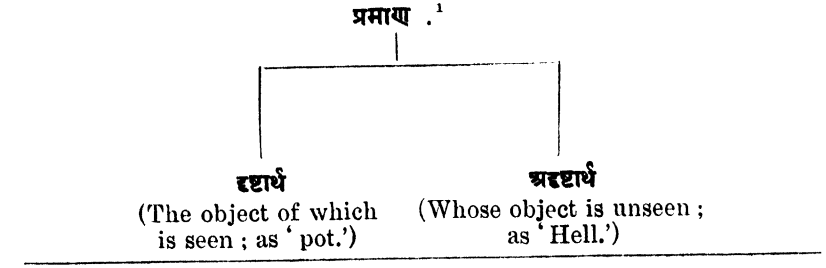
[1] Tarkabhāṣā, p. 138[7–8]. Reprint from the Pandit 1901 Ed.

[2] Nyāyakoça, pp. 788-789 ; Tarkasangraha Notes, edited by Bodas and Athaley, Bombay Sanskrit Series Ed., p. 171.

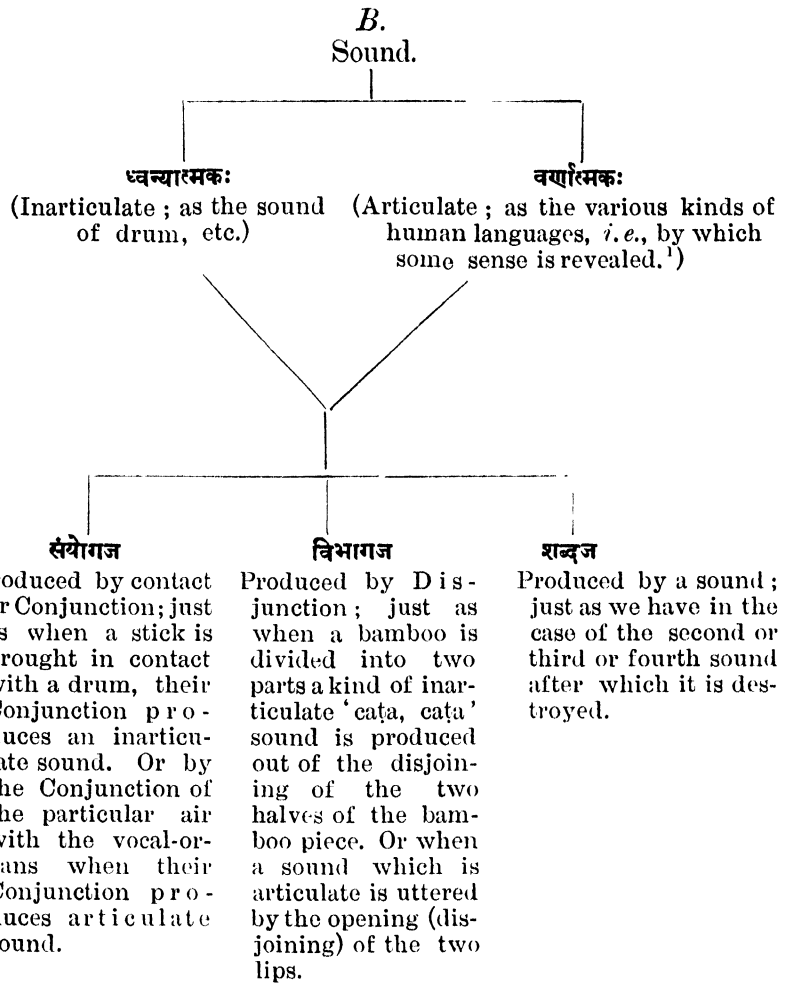
[3] Nyāyakoça, Foot-note under Çruti, pages 817-818.



Or this **प्रमाण** may be again sub-divided as follows :—



[1] Nyāya Sūtra, I. 1.8.



IX. PRODUCTION AND PROPAGATION OF SOUND.

We have seen above that sound is either articulate or inarticulate. According to this division, there is difference in its production and propagation also. As for the articulate sound the process is this—from the contact of the Manas with the Ātman influenced by the remembrance of the letter-sounds heard before, there arises a

Process of the articulate sound-production.

[1] Nyāya Bhāṣya, I. 1.3., p. 10[6], Viz. Sans. Series Ed.

desire to pronounce similar sound; then follows the effort on the part of the man; and by the instrumentality of this effort (which serves as the instrumental cause) as effecting the contact of the Ātman and Vāyu (which contact serves as the asamavāyi-kāraṇa), there is produced a certain action or motion in the Vāyu within the abdomen (Kauṣṭhya-Vāyu); and this air moving upwards strikes such sound-producing points in the body as the heart, the larynx, the palate, etc.; then by the instrumentality of the contact of the Vāyu with these points, as effecting the contact of Ākāça with the points (which serves as the asamavāyi-kāraṇa) there is produced the articulate sound.

Production of the inarticulate sound by means of Conjunction.

As for the other, when the stick strikes the drum, the force of the stroke effecting the contact of the drum and the Ākāça, the sound is produced from this contact, where the contact of the drum and the Ākāça serves as the asamavāyi-kāraṇa; the drumstick-contact and the force of the stick serve as the instrumental cause.[1]

Production of sound by Disjunction and sound itself.

Sound is also produced by Disjunction (vibhāga), as in the splitting of bamboo joints and by the disjunction of Ākāça and the bamboo. Again it is produced from sound itself. This is fully described in the process of the propagation of sound.

Propogation of sound as given in the Kandalī.

Generally there are two views as regards the propagation of sound to our ears. They are sometimes mutually confused. According to the Kandalī, when a sound is produced by conjunctions and disjunctions in the aforesaid manner, there appears a regular series of sound waves as it were; that is to say, just as ripple of water gives rise to another ripple in immediate contact with itself, and so on and on, there appear a regular series of ripples,

[1] Praçastapāda Bhāṣya along with the Kandalī (and Kiraṇāvalī), pp. 288-289.

in the same manner when one sound has been produced, it produces another sound in close contact with itself, and so on and on a regular continuous series of sound-ripples are produced; this is known as the *Vīcītaranga-Nyāya*. And when the line of ripples (Santāna) reaches the ear, the last unit of the series reaching it, comes to be apprehended by the ear.[1] That is to say, neither the first, nor the middle sound is ever heard but always the last sound is heard.[2]

Process of propagation of sound on the analogy of water-waves.

According to Viçvanātha, the author of Nyāyamuktāvalī, and also according to its commentary the Prabhā sound is brought to our ear by the wind. When a sound is produced in the drum, etc., it proceeds in all directions but more swiftly in the direction in which the wind is blowing, just like the waves which when produced proceed in all the sides, but more swiftly towards the wind-direction. The process is also clearly given in the Vivṛtti on the Vaiçeṣika Sūtras by Jayanārāyaṇa.[3] The first sound, produced by the Stick-drum contact, produces another single all-pervading (sarvadigavacchedena) sound, which again produces a similar third sound and so on and on till it reaches our ear and is apprehended there. This is known as the production of sound like *water-waves*.

Propagation of sound on the analogy of Kadamb-filaments.

On the other hand, the other theory is that when a sound is produced in the drum, etc., that first sound, in its turn, produces ten such distinct sounds moving towards all the ten directions; and these ten sounds in their turn produce another series of ten sounds and so on and on until they reach the tympanum of our ears and are apprehended; just as the first Kadamba filament produces around it, that is, in all the sides, similar filaments, and those filaments again in the very substratum,

[1] Kandali, p. 289, Vizianagram Sans. Series, Benares Ed.

[2] Tarkabhāṣā, p. 137 $^{5\text{-}6}$.

[3] Vai. Sū. Vivṛttī, II. 2. 37.

produce similar filaments in all the directions. This is known as the process of producing and propagation of sound like *Kadamba-bud.* As this theory involves a long and tedious process, Viçvanātha rejects it in favour of the former theory;[1] but Uddyotakara rejects the former in favour of the second.[2]

The difference between the two theories.

The difference between the two theories is that according to the former only one and all-pervading sound is produced at every time, while according to the second theory ten distinct sounds are produced at every time.

Sound is carried away in all the directions by the wind.

Whatever interpretation be correct, it is true that sound is produced and is carried away in all the directions, and it is, therefore, that the same sound appears to be heard by people living on all the sides. If an obstacle, like wall, etc., comes in the way of these sound-vaves, the air which carries it, is stopped and does not proceed further. Thus the last sound does not produce any more sound and consequently sound is not heard at a great distance.[3]

Necessity of wave theories for the propagation of sound.

Now the question is: what is the necessity of these wave theories? Çrīdhara in his Kandalī supplies an answer to this. As a matter of fact, he says, we find that the ear —the receiver of the sound—does not go up to the place where the sound is produced, nor does the sound produced in one place go up to the ear, as both of these, namely, the sound and the ear, are immobile (niṣkriya), the one because it is Ākāça itself and the other because it is a quality; and unless there is a contact, no apprehension is possible. Nor could we explain the perception of sound in any other manner, and in the case of waves we actually find that though the first ripple is itself destroyed, it produces another in

[1] Nyāyamuktāvalī and Prabhā on Bhāṣāpariccheda, verse 166, Mylapore Ed.

[2] Positive Sciences of the Hindus, p. 157.

[3] Kaṇādarahasya, pp. 27-28.

close proximity to itself and so on and on producing a regular series of waves, it finally reaches a distant point; and from this analogy we assume a similar series of sound-waves.

Nor would there be any *regressus ad infinitum* in this case, as the sound-waves would continue only so far as they could be carried by the air of the abdomen set in motion by the sound-producing effort. It is for this reason when a sound is produced against the direction of the wind it is not heard very far; the reason for this is that the air proceeding from the mouth is opposed and stopped by the contrary wind.[1]

A question can be raised: what is the necessity of these two theories? Viçvakarman in his commentary on the Tarkabhāṣā explains the point. He says—according to the Vīcītaranga-Nyāya it is not possible for a sound produced on a lower surface, to travel up to a higher level, or to proceed in all the directions so that a man standing on a higher surface or in other directions, will never be able to hear the sound; hence it is necessary to take the help of the other theory to explain such cases.[2]

Necessity of the two theories of propagation.

Now if this argument be accepted, it can be said that there is no necessity for the water-wave theory; for only by the help of the Kadambamukula-Nyāya it will be possible to explain the propagation of sound in all the directions.

Suggestion for accepting the Kadambamukula theory only.

From what we have seen above, we understand that there is a necessary relation between the hearing of sound and the air. We know that the Naiyāyikas do not accept the views set forth by some of the schools that sound is the quality

Necessary relation of air with the hearing of Sound.

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[1] (i) Kandalī, p. 289.
(ii) Kiraṇāvalī-Bhāskara, p. 130 $^{5-6}$.

[2] Nyāya-Pradīpa on Tarkabhāṣā, p. 83 $^{18-21}$. Reprint from the Pandit, 1901.

of air or air itself;[1] but according to them it is the specific quality of Ākāça which itself is motionless.[2] It appears, therefore, that if there be no air or air-waves to help the sound, it is impossible to hear any sound; because unless there is the object-sense-organ-contact, no perceptual knowledge (Pratyakṣa) is possible; and further because the particular sense-organ (*e.g.*, the auditory organ) is Aprāpyakārī—that is, which does not go up to the object. So has said Udayanācārya that as far as the air is in conjunction with the Ākāça, there is produced sound and in nowhere else; for otherwise, the perceptions like 'there is sound in the east,' 'there is sound in the west,' etc., cannot be had.[3] This clearly shows that if a drum be struck or a bell be rung in a place, from which air has been pumped out, no sound will be heard.

Sound cannot be produced in a place where there is no air.

We have seen above that the auditory organ, unlike the ocular organ, apprehends its objects in its own place and not in the place where its object of knowledge is produced.[4] The process involved in hearing is the same as we find in other kinds of direct perceptions. In other words, when the sound is brought to the ear by air-currents, then first of all it comes in contact with the sense-organ—the auditory organ, and then that sensation is carried to the Manas—the inner sense-organ, which in its turn, takes the sensation to the Ātman, wherein

Process of apprehension of sound according to the Naiyāyikas.

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[1] शब्दो वायुगुण: वायुर्वा यदि कल्प्येत—Çloka-Vārttika; वायुरेव तावदिन्द्रियानसंयोगात् शब्दगुणको निष्पद्यते, शब्दस्यापि वायुगुणत्वं वेदितव्यम्—Pārthasārathi Miçra's Nyāyaratnākara, quoted by Dr. Seal in his Positive Sciences of the Hindus, p. 153.

[2] न तावत् परिस्पन्दस्तस्य मूर्त्यनुविधायिन:—Tattvavindu of Vācaspati Miçra, quoted by Dr. Seal.

[3] यावति गगने पवनसम्बन्ध: तावत्येव शब्दो जन्यते नान्यत्रान्यथा प्राच्यां शब्द: प्रतीच्यां शब्द इति देशावच्छेदेन प्रत्यक्षानुपपत्ति:—Kiraṇāvali, p. 139^{3-5}, Benares Ed.

[4] Kiraṇāvali-Bhāskara, p. 130^{5-6}.

consciousness inheres, and that Ātma-Manas-contact brings out the apprehension of sound.

But there is another view as to the apprehension of sound. Jayanta Bhaṭṭa says that there is almost a Bauddha view (Çākyaprāyas) which holds that neither the sound goes to the ear, nor the latter to the sound, but the organ of hearing by its peculiar capacity apprehends the sound. Jayanta criticises this view that if it were so, there is no ground why the sound produced at a very great distance or that which has good many obstacles in the way, is not heard.[1]

Process of apprehension according to almost all the Buddhists.

Jayanta's criticism of the above view.

Here a question naturally arises: how are we to know the direction from which sound proceeds? The answer is supplied by Uddyotakara and Vācaspati Miçra. They hold that sound proceeds from such sources as the drum, the conch-shell, palate and the like. A certain definite part of the auditory organ lies towards that source. When the first sound produced happens to be produced in that part of the auditory organ, we infer that the sound has proceeded from a source located in a particular direction. That is to say, when a sound-series, emanating from the drum kept in a particular direction, produces a sound in the auditory organ, a particular peculiarity of sound is apprehended. Through the help of this peculiar characteristic, it is inferred that the sound is coming from the source existing in a particular direction.[2]

Naiyāyika's view of knowing the direction from which sound proceeds.

Some, on the other hand, are of opinion that we do not get any notion of direction as regards sounds; and the reason is that notions of direction arise only when the object from which the sound proceeds is visible to the eye; for, persons born

Another view about it, which is not accepted by the Naiyāyikas.

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[1] Nyāyamañjarī, p. 216 [13–15].

[2] Nyāya-Vārttika, pp. 291-292; and Tātparyaṭīkā, p. 315 [14–19].

blind have no knowledge of direction either of the east or of the west.[1] Vācaspati Miçra adds here that such persons can with great difficulty make out the direction of sounds produced in their front, or behind their back or on the two sides only.[2]

Having studied the origin of sound and its nature, and the mode of its propagation, we now propose to take up the question of its destruction. The process of destruction may be thus described. It is said that when a sound is produced, its production takes place in the first moment, it exists in the second and in the third it is destroyed. The first sound is destroyed by the second one, this again by the third and so on. The last sound (*i.e.*, the sound which reaches the ear) on destroying the one immediately before it, destroys itself. This is how Keçava Miçra has dealt with the question in his Tarkabhāṣā.[3]

Destruction process of sound; and views about its duration.

According to Keçava Miçra sound exists for three moments only.

But Kauṇḍa Bhaṭṭa holds that sound exists for two moments only, for we do not hear it after a moment. The sound of the first moment is destroyed by its own product—another sound, which destroys the first sound in the second moment after its (first sound's) production. Thus all sorts of sound exist for two moments. But as regards the last sound, some are of opinion that it is destroyed by its own cause—the preceding sound like the simile of Sunda and Upasunda; and hence it exists for one moment only. The process of the destruction of the last sound and the sound previous to it

According to Kauṇḍa Bhaṭṭa sound exists for two moments only.

Some, on the other hand, hold that the last sound exists for one moment only.

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[1] एके तु ब्रुवते नैव शब्दे दिग्देशप्रत्ययाः सन्ति। कुतः? चतुर्विषयसिद्धौ दिग्देशाध्यवसायात्। तथाहि. जात्यन्धानां पूर्वापरादिप्रत्ययाः शब्दे न सन्ति —Nyāya-Vārttika, p. 292[14-16].

[2] यद्यपि, जात्यन्धानामपि कथञ्चिदभिमुखतदुपारूढत: शब्दविवेकः सम्भवति तथापि पूर्वापरादि दिग्विभागो नास्ति—Tātparyaṭīkā, p. 315[26-27].

[3] Tarkabhāṣā, p. 138.

is so simultaneous that practically the last sound may be said to exist for a moment only. Some again hold that the last sound also exists for two moments and is destroyed by the sound which destroys the immediately preceding sound.

The Navyas, as pointed out by Kaunḍa Bhaṭṭa, however, hold that the destruction of the *Nimitta*, that is, the contact with the air (Nimitta-Vāyu-Saṁyoga) destroys the sound. Thus the process is: first of all there is the contact of the air, then follow the destruction of the previous action and the production of the sound. Then in the first moment there is the action (kriyā); in the second, separation from the previous space (pūrva-deça-vibhāga); in the third, the contact between the air and the sound is destroyed; and in the fourth, the sound itself is destroyed. Thus it is said, taking into consideration the destruction itself, sound exists for four moments.[1]

The view of the Navyas: sound exists for four moments.

A question is raised: if sound exists only for a few minutes, how is it possible to apprehend the meaning of a sentence, the pronunciation of which implies a large number of sound? To this the answer is: When a man hears a particular sound, a kind of disposition is produced in his Ātman, which remains impressed therein even when the sound is destroyed and no longer heard. When the second sound, which follows it, in immediate succession, is heard, the hearing implies the working up of the disposition consequent upon the first hearing. This process is carried on until the last sound is apprehended. From this it is evident that although each sound stands by itself, and is in reality isolated from similar other sounds preceding and succeeding it, the apprehension of meaning, which involves a sort of synthesis or order in the sounds, is possible.

The process of apprehending the meaning of a sentence.

[1] Padārthadīpikā, p. 39. $^{6-15}$. Reprint from the Pandit, 1900,

For the co-operation of the previous dispositions, which co-exist and come upon the threshold of perceptual knowledge of the hearing of the last sound, renders the meaning of the sentence possible.[1]

P. S.—

There appears to be a view that there are only three kinds of Vāk[2]—Paçyantī,[3] Madhyamā,[4] and Vaikharī.[5] These varieties are also denied by some who hold that there is, truly speaking, only one well-known Vāk called Vaikharī;[6] while Madhyamā[7] is nothing but intellect which discloses the internal-feeling (antaḥ-saṅkalpa) and hence it cannot be called one of the varieties of Vāk; as for Paçyantī,[8] it is only a synonym for the Nirvikalpaka-jñāna,[9] and a form of cognition can never be called a Vāk.

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[1] Tarkabhāṣā, p. 72-73.

[2] *Vide* Nyāyamañjarī, p. 373[24-25].

[3] या तु ग्राह्यभेदक्रमादिरहिताम्बप्रकाशसंविद्रूपा वाक् सा पश्यन्ती—Ibid., p. 374[7].

[4] या पुनरन्तःसंकल्प्यमानक्रमवती श्रोत्रग्राह्यवर्णरूपाऽभिव्यक्तिरहिता वाक् सा मध्यमा—Ibid., p. 374[3-4].

[5] (i) इयं स्थानकरणप्रयत्नक्रमनियम्यमानगकारादिवर्णसमुदायात्मिका या वाक् सा वैखरी—Ibid., p. 373[25—26].

(ii) It is so called because it is produced in the amalgamation of the body and the sense-organs (देहेन्द्रियसंघात) व खिखर इति देहेन्द्रियसंघात उच्यते तत्र भवा वैखरी—Ibid., p. 373[26-27].

Alaṅkārakaustubha describes the four kinds of Vāk thus:—

मूलाधारात् प्रयत्नमुदितो यस्तु तारः पराख्यः
पश्चात्पश्यन्त्यथ हृदयगो बुद्धियुङ्मध्यमाख्यः।
वक्त्रे वैखर्य्यथ रुरुदिषोरस्य जन्तोः सुषुम्ना-
बद्धस्तस्माद्भवति पवनप्रेरितो वर्णसंहः॥—Ibid., Kiraṇa 1.

[6] *Vide* Nyāyamañjarī, p. 386[16-17].

[7] अन्तः सङ्कल्पो वर्ण्यते मध्यमा वाक् सेयं बुद्ध्यात्मा नैव वाचः प्रभेदः।
बुद्धिर्वाच्यं वाचकं चोल्लिखन्ती रूपं नात्मीयं बोधभावं जहाति॥—Ibid., p. 386[18-19].

[8] पश्यन्तीति तु निर्विकल्पकमनेनान्तरं कल्पितं
विज्ञानस्य हि न प्रकाशवपुषो वाग्रूपता शाश्वती।
जातेऽस्मिन् विषयावभासिनि ततः स्याद्वाग्यमर्शी गिरो
न स्याद्वाऽपि न जातु वाग्विरहितो बोधो जडत्वं स्पृशेत्॥—Ibid., p. 386[20-23].

[9] The first stage of cognition in Nyāya-Vaiçeṣika.

THE WORD SALÁT AS USED IN THE KORAN

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The introduction of new and uncommon phraseology is the inevitable consequence of all inventions and introductions of new ideas and things. Such also was the case with the introduction of Islam in Arabia; and it is an indisputable fact that with the advent of Islam—or better, the Koran—the Arabic vocabulary was very considerably enhanced and enlarged, and thus became far richer than it was before. To be more precise, for the introduction of the new dispensation it was found necessary to express a good many ideas that were totally new to the ears of the Arabs. And this could not be achieved but by the employment of equally new and unheard-of phraseology, which would have naturally sounded strange and astounding to their ears. The word Rahmán is perhaps the finest example of such introductions, which puzzled the hearers of the Arabian Prophet. The Koran records the interesting event of the Arabs questioning the new preacher what Rahmán was. Here is the exact verse:—

واذا قيل لهم اسجدوا للرحمان ' قالوا وما الرحمان ؟

This led to a further question: انسجد لما تامرنا ؟ and the natural consequence was وزادهم نفوراً. The Prophet defined Rahmán thus: تبارك الذي جعل في السماء بروجا وجعل فيها سراجا منيراً ' وهو الذي جعل الليل والنهار خلفة لمن اراد ان يذكر او اراد شكوراً

The following fifteen verses then define the عبادالرحمان (creatures of Al-Rahmán). This epithet occurs in no less than fifty other verses, of which three lay still more emphasis on the recognition of "the Rahmán" as the true God. I mean simply to show that there are words in the Koran that have necessitated a repeated affirmation and a detailed expression.

Such words and phrases admit of a fairly long list: and SALA'T is one of them. I do not mean to assert that it is any fresh discovery. But I cannot help thinking that there has been a constant disregard shown (and I may say, and injustice done) to a better and more correct understanding of this word. The matter invites a closer and more serious study than has hithertofore been accorded to it. For, although the learned commentators of the Koran seem to have tried their best to come to a good and sensible explanation of this word wherever it occurs, yet they seem to have gone confused over the matter and have not been able to follow their own idea clearly. To come directly to the point, they (and I dare say, all of them) unanimously regard the word Salát as being of pure Arabic origin. There is, however, one verse where all of them do, for a moment, agree that the word does not form a part of the Arabic vocabulary, but comes from the sister-language, Hebrew.[1] And that is because they could not help doing so, as that particular verse (to which I will have the occasion to refer later on) does not, cannot, admit of any other interpretation.

Below I quote all the verses containing the word Salát (with all its derivative forms) as found in the successive order of the Koranic chapters:—

1. ويقيمون الصلوة—II, 1; IX, 71.
2. واقيموا الصلوة—II, 43, 83, 110; IV, 77; X, 86; XXIV, 56; XXX, 30; LXXIII, 20.

[1] Sic.

3. واستعينوا بالصبر والصلوة—II, 44, 153.
4. اولئك عليهم صلوات من ربهم—II, 156.
5. و اقام الصلوة—II, 177 ; IX, 18.
6. حافظوا على الصلوات
7. والصلوة الوسطى } —II, 236.
8. واقاموا الصلوة—II, 275 ; VII, 170; IX, 11, 18; XIII, 20 ; XXXV, 18, 29; XLII, 37.
9. و هو قائم يصلي في المحراب—III, 38.
10. لاتقربوا الصلوة وانتم سكارى—IV, 43.
11. فاقمت لهم الصلوة
فليصلوا معك } —IV, 101.
12. ان تقصروا من الصلوة—IV, 101.
13. فاذا اطمانننتم فاقيموا الصلوة—IV, 102.
14. فاذا قضيتم الصلوة—IV, 102.
15. ان الصلوة كانت على المومنين كتابا موقوتا } —IV, 102.
16. واذا قاموا الى الصلاة—IV, 142.
17. والمقيمين الصلوة—IV, 162.
18. اذا قمتم الى الصلوة—V, 6.
19. لئن اقمتم الصلوة—V, 12.
20. ليقيمون الصلوة—V, 55 ; XXVII, 1.
21. ويصدكم عن ذكر الله وعن الصلوة—V, 91.
22. تحبسونهما من بعد الصلوة—V, 106.
23. وان اقيموا الصلوة—VI, 70.
24. وهم على صلوتهم يحافظون—VI, 93.
25. ان صلاتي ونسكي.....—VI, 166.
26. الذين يقيمون الصلوة—VIII, 2.
27. ماكان صلاتهم عند البيت
الا مكاء وتصدية } —VIII, 36.

28. لايأتون الصلوة الاوهم كسالى—IX, 54.
29. لاتصل علي احد منهم—IX, 84.
30. وصلوات الرسول—IX, 99.
31. وصل عليهم
32. ان صلاتك سكن لهم } —IX, 103.
33. اصلوتك تامرك—XI, 87.
34. واقم الصلوة طرفي النهار—XI, 114.
35. الذين آمنوا يقيموا الصلوة—XIV, 31.
36. ربنا ليقيموا الصلوة—XIV, 37.
37. رب اجعلني مقيم الصلوة—XIV, 40.
38. اقم الصلوة لدلوك الشمس—XVII, 78.
39. ولاتجهر بصلاتك—XVII, 110.
40. و اوصاني بالصلوة—XIX, 32.
41. كان يامر اهله بالصلوة—XIX, 55.
42. خلف اضاعوا الصلوة—XIX, 58.
43. واقم الصلوة لذكري—XX, 15.
44. وامر اهلك بالصلواة—XX, 132.
45. واقام الصلوة وايتاء الزكوة—XXI, 75 ; XXIV, 35.
46. والمقيمي الصلواة—XXII, 34.
47. لهدمت صوامع وبيع وصلوات—XXII, 41.
48. اقاموا الصلوة وآتوا الزكوة—XXII, 40.
49. فاقيموا الصلوة وآتوا الزكوة—XXII, 78; LVIII, 13.
50. الذين هم في صلوتهم خاشعون—XXIII, 1.
51. والذين هم علي صلوتهم
يحافظون } —XXIII, 3 ; LXX, 34.
52. كل قد علم صلاته وتسبيحه—XXIV, 41.
53. من قبل صلوة الفجر—XXIV, 57.
54. ومن بعد صلوة العشاء—XXIV, 57.
55. واقم الصلوة
56. ان الصلوة تنهي عن الفحشاء
والمنكر } —XXIX, 45.

57. يابني اقم الصلوة—XXXI, 17.
58. واقمن الصلوة—XXXIII, 33.
59. هو الذي يصلي عليكم وملائكته—XXXIII, 42.
60. ان الله وملائكته يصلون علي النبي—XXXIII, 56.
61. يا ايها الذين آمنوا صلوا عليه—XXXIII, 56.
62. اذا نودي للصلوة من يوم الجمعة—LXII, 9.
63. فاذا قضيتم الصلوة فانتشروا—LXII, 10.
64. الذين هم علي صلاتهم دائمون—LXX, 24.
65. قالوا لم نك من المصلين—LXXIV, 47.
66. فلا صدق ولا صلّي—LXXV, 31.
67. وذكر اسم ربه فصلّى—LXXXVII, 15.
68. الذي ينهي عبداً اذا صلى—LXLVI, 10.
69. ويقيموا الصلوة—LXLVIII, 5.
70. فويل للمصلين—CVII, 4, 5.
71. الذين هم عن صلاتهم ساهون—CVII, 4, 5.

This is an exhaustive list of all the contexts containing the word صلوة in its various forms. As far as the external form of the word is concerned, even a cursory study of this list suggests the following issues:—

1. Of the 114 Chapters of the Koran, only 36 contain references to Salát.

2. The majority of these chapters are Meccan in origin. In fact they are double the number of the Medinite chapters—24 Meccan as against 12 Medinite ones.

3. (*a*) In its basic Noun form (Substantive, or Quasi-Infinitive, as Lane calls it) the word is written in two ways, *viz.*, (*i*) صلوة with the long vowel á of the Lám expressed in the form of a Wáv (و), and (*ii*) as simple Alif (الف) in the form صلاة.

(*b*) The only plural form used is صلوات—the regular feminine plural.

4. For its derivative form only II (تفعيل) has been adopted, and the only derived forms used are :—

(i) Preterite, Third Person, Masculine Singular صَلّي

(ii) Aorist, Third Person, Masculine, Singular يُصَلّي with its Pl. يصلون

(iii) Imperative, Masc. Sing. صَلِّ with its Pl. صَلُّوا.

(iv) Negative, Imp., Sing., لا تُصَلِّ

(v) Noun Agent, Masc., Pl. مُصَلّين

5. Leaving aside the derived forms of the word (as shown in 4 above) the pure Substantive form (صلوة) appears in connection with the following assertions and commandments only :—

اقامة الصلوة – اقامة.....لفلان – قيام الي الصلوة - استعانة بِ – الحفظ علي – قرب – قضاء – القصر مِن – الحبس بعد – الصد عن – اتيان – الجهر بِ – الامر بِ – اضاعة – هدم – خشوع في – علم – نهي الصلوة عن الفحشاء – النداء لِ – الدوام علي – السهو عن – الصلوة علي فلان.

It has already been said that the word Salát is not of pure Arabic origin. It is one of those which constitute a sufficiently long list of foreign words employed by the Koran to make the whole produce the effect and force of a "clear language" (لسان مُبين), strong and forcible enough to express and bring home to the minds of the readers and hearers the real force of the ideas that are so subtle, so searching and so catholic,—ideas that embody the last message of God to His creatures, ideas that propose to accomplish the establishment of a world-wide brotherhood based on the best mutual understanding and communion of acts and feelings of the son of man throughout the length and breadth of our planet. It is clear at the very outset that the word was wholly foreign to the

Arabs, as we do not find any use of it in any of the pre-Islamic utterances and productions.[1] Even the word "Allah," accepted on all hands to have been first invented and used by Islam, has been fondly thrust upon Nábighah and some other poets by some students of the ancient Arabian poetry. But this word[2] could never be so conveniently disposed of. Further, as has already been pointed out, the word Salát is written either with a small *alif* placed over the *wāv* or with only an *alif* after *lām* in the usual mode of Arabic writing. Even a hurried glance over the pages of the Koran will show that the first scribes of the Book were careful enough to express the long vowel (*alif*) sound in all the foreign words with a small *alif* placed over the letter bearing that long vowel. Quite a long list may easily be drawn of the words admitted in this script. Foreign names are always so written. اسماعيل - ابراهيم - اسحاق - هارون - سليمان - هامان - لقمان are invariably written as همن - سليمن - هرون - اسحق - اسمعيل - ابرهيم and لقمن. Among other words examples may be cited of شيطن (=شيطان), علمين (=عالمين), سبحن (=سبحان), رحمن (=رحمان), etc. I do agree that a good many words of the pure Arabic origin are also found written in this way. But that, I am convinced, is due to a feeling of facility in writing, and its apparent beauty—for compressed writing was regarded as particularly artistic and charming in the earlier periods of the growth and development of Arabic writing. This must have led the scribes to adopt this script in such cases. For, firstly, no principle seems to have guided them in the adoption of this script in connection with the purely Arabic words; secondly, a comparison of the different editions of the Book—and particularly so when the editions show a

[1] Save one solitary verse from the poet الاعشى, which contains the word صلى. But I doubt this reading very much. I shall quote the verse hereafter.

[2] Salát.

difference in the locality of publication (*e.g.*, India, Egypt, Persia, Turkey, etc.)—shows a marked difference in the treatment of the words in this mode of writing. But then, the other side is also true, *viz.*, many of the foreign words have also been written in the ordinary Arabic way (with an usual *alif*). This may be due, partly, to sheer negligence and oversight, and partly, to the ignorance of the early scribes and of those responsible for the writing, or to carelessness on the part of the later and more modern copyists: for a comparison of the later copies of the Book with the old Mss. of it does certainly offer many more foreign words written in this "defective" mode of expressing the long vowel *Alif*. At any rate, this is an established fact that foreign words have been so treated, and there should be no difficulty in accepting this as a proof of the foreign origin of the word Salát.

In this connection, particular attention should be drawn to:—

(i) the foreign names موسا and يحيا written as موسى and يحيى; and

(ii) the words زكاة and حياة written as زكوة and حيوة.

These are instances of the words of foreign origin. The expression of *alif* in terms of ي in (i) and of و in (ii) shows clearly that the original forms of the words must (and does) contain the letters ى and و in the spelling of these words originally. The three words in (ii) show that صلوة is not a solitary example of such words used in the Koran, and a reference to the Aramaic and Chaldean lexicon brings out the fact that the original Aramaic form of these words was زكوتا and حيوتا. Under the same category falls the word Salát, which was originally Selotá in Aramaic. In fact all the leading lexicographers of the Arabic language have recognised the fact—with the exception, however, that they call it Hebrew

(see above) and not Aramaic. Ibn Manzur, the leading lexicographer of Arabic, says:—

[1]وصلوات اليهود كنائسهم وفي التنزيل لهدمت صوامع وبيع وصلوات ومساجد. قال ابن عباس هي كنائس اليهود، اى مواضع الصلوات، واصلها بالعبرانية صلوثا، وقرءت صلوت.

This suggestion of the second reading of the word as Sulot (صلوت) is also significant. He goes on to say:—

وقيل انها مواضع صلوات الصابئين وقيل معناه لهدمت مواضع الصلوات.....وقيل الصلاة بيت لاهل الكتاب يصلون فيه.

The author of Al-Qamus has:—

[2]والصلوات كنائس اليهود، اصله بالعبرانية صلوثا

The learned Rághib Al-Isfahání writes:—

[3]ويسمي موضع العبادة الصلاة؛ ولذلك سميت الكنائس صلوات، كقوله لهدمت صوامع.....

Likewise Abul-Baqá:—

[4]وصلوات ومساجد: فان المراد الاماكن.

And again, explaining the letter *wáv* in the word:—

[5]واصل الصلاة صلوة بالتحريك، قلبت واوها الفا لتحركها وانفتاح ماقبلها: فصارت صلاة تلفظ بالالف وتكتب بالواو، والاشارة الي الاصل المذكور، واتباعا للرسم العثماني مثل الزكوة والحيوة والربو.

The author of مجمع البحرين observes:—

[6]قوله لهدمت صوامع وبيع وصلوات، قيل هي كنائس اليهود، وسميت الكنيسة صلوة لانها يصلى فيها

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[1] Lisanul-Arab., Cairo, Vol. XIX, p. 198.

[2] Vol. II, p. 952.

[3] Al-Mufradat fi Gharibil-Quran, p. 287.

[4] Al-Kulliyyat, p. 396.

[5] Ibid., p. 403. This also shows that this mode of writing (with *wáv* and not with *alif*) dates from the time of the third Caliph, 'Usmán, and is, therefore, the earliest script.

[6] He is نجم الدين طريح النجفي (C. 1000). The مجمع—Ed. Teheran, p. 52.

This may suffice for the lexicographers. The exegesists also agree on this point while explaining the verses :—

(*a*) لهدمت صوامع وبيع وصلوات ومساجد[1] and

(*b*) لاتقربوا الصلوة وانتم سكارى[2].

Zamakhshárí says on (*b*) :—

معناه لاتقربوا مواضعها، وهي المساجد[3].

and this is amplified by a tradition of the Prophet, immediately following the above statement, thus :—

كقوله عليه السلام "جنبوا مساجدكم صبيانكم ومجانينكم..."
وقال من فسر الصلوة بالمسجد، معناه لاتقربوا المسجد.

and on verse (*a*) :—

وسميت الكنيسة صلوة لانها يصلى فيها، وقيل هي كلمة معربة اصلها بالعبرانية صلوثا[4]

Abu Jafar Túsí, explaining (*a*) says :—

والصلوات وصلوثا كنيسة اليهود. عن ابي مسلم وقال ابن عباس والضحاك وقتادة : الصلوات كنائس اليهود، يسمونها صلوات، فعربت[5]

and quotes the other readings :—

وقرء جعفر بن محمد وصلوات بضم الصاد واللام، وقرء الحجدري والكلبي وصلوات بضم الصاد وفتح اللام[6].

On (*b*) he has :—

لاتقربوا اماكن الصلوة اي المساجد[7].

and then goes on :—

الصلوة وغيره كقوله وصلوات، اي مواضع الصلوات : عن عبد الله وسعيد بن المسيب والضحاك وعكرمة والحسن. ويويد هذا قوله الا عابري سبيل، فان العبور انما يكون في الموضع دون الصلاة.

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[1] Kor., XXII. 41.

[2] Kor., IV, 43.

[3] الكشاف عن حقايق التنزيل—Vol. I., pp. 291-92.

[4] Ibid., Vol. II, p. 909.

[5] مجمع البيان في تفسير القرآن—Ed. Teheran, Vol. II, p. 140.

[6] Ibid., p. 139.

[7] The Majmá—Ed. Teheran. Vol. I., p. 241.

Suyúṭí[1] explains both these verses likewise.

The author of الصافي on (*a*) :—

[2]وصلوات' اي وكنائس اليهود قيل سميت بها لانها تصلي فيها وقيل اصلها ثلوثا بالثاء المثلثة بالعبرانية' بمعني المصلي' فعربت. وفي المجمع عن الصادق انه قرء وصلوات بضم الصاد واللام.

and on (*b*) :—

[3]لاتقربوا الصلوة وانتم سكارى' لاتقوموا اليها وانتم سكارى من نكو ذوم اوخمر. وقد نهى الله عزوجل ان تقوموا الى الصلوة وانتم سكارى... والعياشي عن الباقر والقمي عن الصادق الحائض والجنب لايدخلون المسجد الامجتازين..... قال وفي الاية الكريمة قد استخدم سبحانه لفظ الصلوة بمعنيين : احدهما اقامة الصلوة بقرينة قوله عزوجل حتى تعلموا ماتقولون والاخر موضع الصلوة بقرنية قوله ولاجنبا الاعابري سبيل. اقول هذا الصواب' وهو الموافق لما رويناه من الاخبار في هذا الباب..... بان المراد بالصلوة في صدر هذه الاية مواضعها وهي المساجد.....

The learned المهائمي[4] also agrees with al-Muhassin in both the places. So also the author of مجمع بحار الانوار.[5]

In commenting on (*a*) the great Tabarí quotes the authorities of (*i*) ابوعبيده بن عبد الله (*ii*) الحسن بن يحيي (*iii*) عبد الله بن عباس (*iv*) عبيد الله ابن موسى (*v*) احمد بن حازم (*vi*) ابراهيم and الحسن (*vii*) المثني from سعيد and ابن بشار and الحسن[6] ابن حميد (*viii*) حماد بن ابراهيم and سعيد بن حبير —and all of them agree that the sense of the word Salát in

[1] الجلالين—Ed. Delhi, pp. 74, 93, 281.

[2] He is محمد بن مرتضى known as المحسن (C. 911). In الصافي —Ed. Teheran, p. 330.

[3] Ibid., p. 108.

[4] علي بن احمد بن ابراهيم بن اسماعيل d. 835. In his commentary entitled تبصير الرحمان وتيسير المنان ببعض مايشير الي اعجاز القرآن—Ed. Cairo, Vol. I, pp. 65, 150, and Vol. II, p. 47.

[5] By محمد طاهر الهندي d. 986—Ed. Lucknow, pp. 259—265.

[6] Tabari's great work جامع البيان في تفسير القرآن—Ed. Cairo, Vol. V, p. 59.

this verse is that of a Masjid (mosque). While with reference to (*b*) he admits the original "Hebrew" form to be Salotá. Says he :—

[1] انما يعني مواضع الصلوات ..... انما هي صلوات وهي كنائس اليهود، تدعي بالعبرانية صلوتا. واولى هذه الاقوال في ذلك بالصواب قول من قال ذلك، لهدمت صوامع الرهبان وبيع النصاري، وصلوات اليهود هي كنائسهم.

Even the great philosopher-exegesist, Fakhruddín al-Rází, quotes ابن عباس, ابن مسعود and الحسن to explain Salát as Masjid,[2] and accepts the original form being Salotá.[3] So also do al-Suyútí,[4] al-Bayzáwí,[5] al-Shurbíní,[6] Sayyid Muínuddín,[7] Fayzí,[8] Siddíq Hasan Khán[9] and a host of others.

The Arabic lexicographers and exegists have, however, tried their best to find out an Arabic origin for the word. Failing to find any other derivative form except صلّي they have laboured in vain to prove its connection with صلاء and صلوين. To quote only a few of them: Al-Rághib al-Isfahání derives it from صلاء and justifies it by saying :—

[10] ومعني صلي الرجل اي انه ازال عن نفسه بهذه العبادة لصلاء الذي هو نار الله الموقدة.

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[1] Ibid., Vol. XVII, p. 114.

[2] فخر الدين محمد بن عمر الرازي by مفاتيح الغيب (known as التفسير الكبير) d. 606 —Ed. Cairo, Vol. III, p. 231.

[3] Ibid., Vol. VI, pp. 187-188.

[4] الاكليل في انتخاب التنزيل—Ed. Delhi, pp. 129, 130 ; and al-Jalalayn—Ed. Cairo, p. 74 ; and الدر المنثور في التفسير بالمأثور—Ed. Cairo, Vol. II, pp. 165, 166; Vol. IV, p. 364.

[5] انوار التنزيل—Ed. Bombay, Vol. I, p. 193; Vol. II, p. 45.

[6] السراج المنير by محمد بن محمد الشربيني القاهري—Ed. Lucknow, Vol. I, p. 300 ; Vol. II, p. 553.

[7] جامع البيان by سيد معين الدين بن سيد صفي الدين—Ed. Delhi, pp. 75, 295.

[8] سوانح الالهام—Ed. Lucknow, p. 414.

[9] فتح البيان في مقاصد القرآن—Ed. Bhopal, Vol. I, p. 566 ; Vol. II, p. 173.

[10] The Mufradát, p. 287.

Al-Zamakhsharí explains it as :—

[1] الصلوة فَعَلَة من صلي كالزكوة من زكي وحقيقة صلي حرك الصلوين لان المصي يفعل ذلك في ركوعه وسجوده، وقيل للداعي مصلّ تشبيها في تخشعه بالراكع والساجد.

Abus-Su'úd explains صلوين thus:—

[2] وقيل اصل صلي حرك الصلوين، وهما العظمان الغايتان في اعلي الفخذين لان المصلي يفعله في ركوعه وسجوده.

while Abul-Baqá explains الصلا as:—

[3] الصلاء هو العظم الذي عليه الاليتان. في القاموس الصلا وسط الظهر منا اومن كل ذي اربع، اوما انحدر من الوركين.

All others follow in the same wake. In this connection it will be interesting to hear al-Zabídí, who sums up the whole so nicely in his charming style. Says he:—

[4] والصلاة اختلف في وزنها ومعناها. اما وزنها، فقيل فعلة بالتحريك، وهو الظاهر المشهور. وقيل بالسكون، فتكون حركة العين منقولة من اللام. قاله شيخنا. واما معناها: فقيل الدعاء وهو اصل معانيها.....ومنه قول الاعشي [5] وصلي علي دنها وارتسم—اي دعا لها ان لاتحمض ولاتفسد.....والصلاة عبادة فيها ركوع وسجود..... وفي المزهر انها من الكلمات الاسلامية. وفي الكل نظر.

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[1] The Kashshár—Ed. Calcutta, Vol. I, p. 22.

[2] ابو السعود محمد بن محمد بن مصطفي العمادي by ارشاد العقل السليم الي مزايا الكتاب الكريم d. 982 (on the margin of the Tafsir-i-Kabir)—Ed. Cairo, Vol. I, pp. 95, 66.

[3] The Kulliyyát, p. 403.

[4] تاج العروس من جواهر القاموس by محب الدين ابو الفيض محمد مرتضي الزبيدي—Ed. Cairo, Vol. X., p. 213.

[5] Ibn Sídah in Al-Mukhassas, Vol. XIII, p. 85 ; and Ibn Manzúr in the Lisán, Vol. XIX, p. 198, also quotes this verse.

and then, after quoting some leading lexicographers on the subject, he still doubts if the word can at all be foreign, and remarks:—

وان اراد وان الشرع ارتجل هذه اللفظة فذلك ينافيه قوله تعالى انا انزلناه قرآنا عربيا. وفي الصحاح الصلاة واحدة الصلوات المفروضة، وهو اسم يوضع موضع المصدر، وصلي صلاة ولايقال صلي تصلية.....

But he cannot set himself free from the haunting idea that the word is really of non-Arabian origin. He begins to explain the word صلوات to mean Jewish synagogues and gives the different readings of the word in the forms of صَلَوات - صَلُوت - صَلُوثا and صَلُوبا - صَلُوث - صَلُوب - صَلُوبتا; but agrees that the soundest reading (اقوي القراءات) is صلوات only. But the confusion and perplexity is still patent, when we hear from him further on:—

الصلاة عندنا من الواو لكونها من الصلوين، وكون جمعها صلوات كقناة وقنوات. واما صَلَوات، صَلُوات فجمع صلوة وان كانت غير مستعملة و نظيرها حجرة وحجرات...ومعنى صلوات[1] هنا المساجد[2] وهي على حذف المضاف اي مواضع الصلوات...والصلوات الصوامع الصغار لم يسمع بها بواحد...وقيل هي من الصلى، ومعنى صلى الرجل ازال عن نفسه بهذه العبادة الصلى الذى هو نار الله الموقدة...

This particular view of his is justified by him by comparing it to مَرَض and قَرَد thus:—

وبناء صلى كبناء مرض وقرد لازالة المرض والقراد.

---

[1] That is, in Kor., XXII, 41—(our verse (*a*) above).

[2] It will be still more interesting to note that even the Arabic word *Masjid* has its origin and parallel in the Aramaic *Masjida*, "which meant the place in which the deity was worshipped." (See Encycl. of Rel. and Ethics. Art. Syrians (Aramæans) by J. Macler.) This also explains the *kasra* on the *Jīm* in the Arabic form, which the Arabic grammarians regard as an irregularity—for having sprung from سجد يسجد it must have been *Masjad*.

And again:—

وقيل انهامن الصلوين، وهما مكتنفا ذنب الفرس وغيره.....
واشتقاقه منه ان تحريك الصلوين اول ما يظهر من افعال الصلوة.

This is, in short, how they try to prove the Arabic extraction of the word. *Amabilis insania!*

We have now established the fact that the word comes from Aramaic, where it means "a place of worship"—and that this should be the primary meaning of the word in the Koran also, for, otherwise, whatever the learned Arabists of the old may say, the use of this particular word, borrowed from abroad, seems to be not only unwarranted but also against the laws of perspicuity of style. And I feel sure that no Arabic word—and they certainly had none of it—could have expressed this idea so happily as the Aramaic word Selotá does.

But this, I agree, however, is not the only sense of the word as employed in the Koran. All writers unanimously assign to it the simplest sense of "prayer" (الدعاء) as also the "prayer for forgiveness" (الاستغفار). This is illustrated by the Tradition:

من دعي الى الوليمة فليجب، وان كان صائما فليصل

and is the implication in the Imperative form صَلِّ in the verse وصل عليهم ان سلاتك سكن لهم (See vv. 30 and 31 in the list above) as also in the vv. 29, 58, 59 and 60. Abul-Baqá says:—

[1]صلوةالرب علىالنبي تعظيمالكرمة وصلاةالملائكة اظهار الكرامة وصلاةالامة طلبالشفاعة

and then sums up the different senses of the word in the Koran thus:—

[2]والصلوة فىالتنزيل تاتى علىاوجه. الصلاةالخمس يقيمون الصلوة وصلاةالعصر تحبسونهما منبعد الصلاة وصلاةالجمعة اذا

[1] The Kulliyyat, p. 403.

[2] Ibid.

نودی للصلوة والجنازة ولاتصل على احدمنهم والدين اصلاتك تامرك والقراءة ولاتجهر بصلاتك والدعاء قيل ومنه صل عليهم ان صلاتك سكن لهم ومواضع الصلاة لاتقربوا الصلوة وانتم سكارى.

He even goes to the extent of limiting the sense of "prayer" only "for good" :—

[1] الدعاء يكون بالخير وبالشر، والصلاة لاتكون الا فى الخير

Rághib is still more informative :—

[2] وكل موضع مدح الله تعالى بفعل الصلاة اوحث عليه ذكر بلفظ الاقامة نحو والمقيمين الصلاة واقيموا الصلاة واقاموا الصلوة.

and that the word مصلين is used only for the "hypocrites" (المنافقين) :—

ولم يقل المصلين الا فى المنافقين نحو قوله فويل للمصلين الذين هم عن صلاتهم ساهون ولاياتون الاوهم كسالى.....ولهذا روى ان المصلين كثير والمقيمين لها قليل، وقوله الم نك من المصلين اى من اتباع النبيين

To sum up, then, besides the "place for prayer" Salát also means :—

(*a*) Prayer in general—and "for good" in particular.

(*b*) The established form of prayer.

(*c*) Mercy on and forgiveness and pardon for God's creatures.

(*d*) Magnification and blessings for the Prophet.

Granted. But the question arises quite naturally, how to distinguish between them in all the verses of the Koran. My conviction is that these latter implications (*a* to *d* above) hold good in vv. 9, 25, 27, 29—33, 39, 50, 52, 58, 59, 60, 65—68 and 70 only and in all the other places it does not mean anything but the "place of prayer".....a mosque, a place for congregation.

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[1] Ibid.

[2] The Mufradát, p. 287.

Now taking Salát to mean a mosque, we find that of all the words attached to it the most important is that of اقامة which alone is the text of no less than twenty-four verses (*q.v.* supra). It is generally held that the epithet اقامةالصلوة simply means the "holding of the ritual prayer." But according to my thesis it must mean the "establishment of a mosque." The mosque is thus rendered, which doubtlessly it is, the most important institution for the Muslims. It is in fact a كتاب موقوت for them, *i.e.*, "a strictly prescribed and regulated ordinance."[1] It is of paramount importance to every Muslim, and it is most strictly enjoined on every member of the community that he should present himself in the mosque (الصلوة) which is essentially an Assembly Hall, where the community is required to muster five times daily. This institution is so pre-eminent and important that "the whole of the Earth (except lavatories, grave-yards and slaughter-houses) is a mosque and a pure ground"[2] for the Muslims to assemble at. The essence of Salát, therefore, lies in its being an assembly, a united gathering of the great brotherhood. The Prophet was never tired of emphasising the necessity of a congregation. It must necessarily be a congregation (جماعة)—even though consisting of only two persons—and must be led by a Leader (امام) who presides over the assembly in its deliberations. They must be united as one soul, and this union gives them the strength of a "leaden wall."[3] It hardly needs any reminder that اقام is derived from قام (to stand), and being transitive in sense must necessarily mean "establishment, institution." Not only this; the same root gives it the force of "constancy, and continuity" as well, thus making it binding upon the believers to

[1] See v. 15 in the list above.

[2] The Prophet's tradition.—See the Sahih of al Bukhari. Bábus —Salát; Bab 56; and Muslim, Bab صلوةالمسافرين; also Tirmidhī on مواقيت الصلوة.

[3] Kor., LXI, 4.

keep constantly in touch with the mosque. Zamakhsharí has :—

[1] اقامت-من قامت السوق اذا نفقت واقامها.....انها اذا حوفظ عليها كانت كالشيء النافق الذي تتوجه اليه الرغبات ويتنافس فيه المحصلون، واذا عطلت واضيعت كانت كالشيء الكاسد لا يرغب فيه.

Zabídí explains اقام as ادام :—

[2] واقام الشيء اقامة ادامه، ومنه قوله تعالى ويقيمون الصلوة.

The use of اقامة with صلوة gives it a pre-eminence over the remaining three "pillars of Islam."[3] And this is because all of them naturally flow out of the Salát. We have already seen that the Salát is strictly and essentially a place for the congregation to meet and deliberate on all and sundry matters touching the community.[4] To a Muslim the Salát is at once a national assembly hall, a club, a university and a place for communal worship. It is meant for the community, and all business conducted therein must be communal. Even the ritual and liturgical prayers held are congregational and strictly communal.[5] It was used by the Prophet for all such purposes, and his successors in Islamic state continued to

[1] The Kashshaf—Ed. Cairo, Vol. I, p. 99.

[2] Tajul-Arus, Vol. X, p. 35.

[3] Zakat, Sawm and Hajj.

[4] This includes all the phases of life, religious, social and political. It should not be forgotten that every individual Muslim lives and works for the community. Every moment of his life is dedicated to that sacred cause alone, and hence the truth of the statement that for a Muslim every cause leads to one purpose only—God and religion. This idea is excellently expressed in the Verse :—
ان صلاتي ونسكي ومحياي ومماتي لله رب العالمين (v. 25).

[5] Though, of course, the individual is not barred from its use for his individual prayers, nor is he in any way barred from adopting the communal form of saying the prayers. But I cannot help urging here that the ritual form of prayer is strictly a communal one. In this connection attention of the reader is drawn to the discussion of ذكر later on.

follow his example.[1] Special services were held on certain occasions, the first place among these being occupied by the Friday Congregation.[2] This end was further secured in the institution of the Feast-days (صلوٰة العيدين) twice a year. It is doubtlessly true that "the community centred in and around the Salát in Medina in the Prophet's time, and through it the transformation of the old Arab mind into the Muslim took place. The same phenomenon was afterwards repeated in the provinces of the caliphate. The Salát *was certainly* one of the most effective formative elements in the communities."[3] The ritual (of course, congregational) prayers, in which the congregation, arrayed in military order behind the leader (امام) listens to his recital of the Word of God, all the while closely following his commands and movements, establishes a perfect order among the community and drills it into a sound habit of quiet submission and perseverance. This is how the Muslim is trained to "seek help from Salát and Sabr" (صبر = patience, perseverance).[4] Again, the practice of Zakát and Sawm helps him to the same end.

Of Zakát and Sawm the former is very frequently mentioned along with Salát. Next comes Sawm, and lastly the Hajj, which is a general gathering of the Muslims of the world

[1] Leoni Caetani. Annali dell' Islam, I, 432 ; and Becker, "Zur Gesch. des Isl. Kultur" in "Der Islam," III, 394. Also see Futuhul-Buldan of Baladhuri—Ed. de Goeje, p. 229, and البيان المغرب—Ed. Dozy, p. 55 ; and Al-Fakhri—Ed. Ahlwardt, p. 95. The practice, however, fell into disuse later on. Yet it is a fact of common knowledge that the mosques did, and even now do, serve the purpose of educational institutions all over the Islamic world.

[2] The صلوٰة الجمعة—see v. no. 62 in my list,—though specially meant to be held on Fridays, was called on any day whatever as necessity demanded. Apart from the time of the Prophet, examples of such congregations are found during the times of مغيرة and حجاج in the East and of the Almohades and others in the west.

[3] Encycl. Islam,—Art. Salát, p. 103.

[4] Kor., II, 44,153 (3 in my list).

at a central place designated in the Koran as الصلوٰةالوسطى the Central Mosque.[1] According to my thesis, then, الصلوٰةالوسطي is the central mosque and not the central prayer as is generally believed. The Ka'ba is, therefore, the most sacred of all the mosques of the world, and hence the particular commandment to "guard it," in the verse :—

حافظوا علي الصلوات والصلوٰةالوسطي[2]

whereas its neglect is severely censured.[3] But some latitude is granted to those on a perilous journey and to such as may be taking part in actual active warfare. They are permitted to "cut short" their appearance at the Salát :—

واذا ضربتم في الارض فليس عليكم جناح ان تقصروا من الصلوة ان خفتم ان يفتنكم الذين كفروا.....

[1] Margoliouth admits the military disciplinary force of Salát, and cites Musnad, IV, 228, 271 and Muslim, II, 55.

[2] Kor., II, 236 (6 in my list). I have already shown how all the writers agree in explaining صلوات as mosques. This verse, therefore, enjoins upon the Muslims to guard all their mosques and particularly the Central Mosque. The exegesists find themselves in a strange fix while explaining this verse and in their fond obstinacy to understand صلوات as prayers they have naturally gone to the absurd extent of assigning the term "central" (الوسطي) to each individual prayer with reference to the other four that are grouped around the one in twos on each side. They would have saved themselves all pains if they had explained Salawát as mosques here too. Further, the particular mention of the Salát and its designation as الوسطي immediately after the word Salawát in the same verse seems to be unnecessary, until, as is the case here, a special emphasis is required to be laid on it. Also see Kor., VI, 92 ; XXIII, 9 ; LXX, 32 ; and *cf.* LXX, 22.

[3] Kor., CVII, 5 (71 in my list). This is the reason why المصلين is interpreted as applying to "hypocrites," only, for a true believer dare not entertain سهو for Salát. Also see Kor., IV, 142 (No. 16) and IX, 54. Also *cf.* XIX, 58, where the wicked progeny is mentioned in terms of اضاعوا الصلوٰة

At this juncture I may perhaps be asked how I explain the ritual prayer and its form. As to the form I have already said it is meant only and exclusively for communal gathering in the Salát. But, of course, the individual is not barred from adopting it for his individual purposes. Regarding the "prayer" I will simply point out that the words ذكر and دعاء are used in the Koran for it. And both of these, it is patent, are not, cannot be, bound by any particular form. The fact that صلوة and ذكر are two different things altogether can easily be gathered by a reference to v. 14 in my list, which runs thus:—

فاذا قضيتم الصلوة فاذكروا الله قياما وقعودا وعلي جنوبكم فاذ
اطمانننتم فاقيموا الصلوة ان الصلوة كانت علي المومنين كتابا موقوتا.

And again, in v. 21 (Kor., v. 91) we read:—

ويصدكم عن ذكر الله وعن الصلوة.[1]

This shows that no particular posture is necessary for it, nor need it be couched in a loud tone, for He listens to His creatures' call in whatever tone it be.[2]

This theme need not detain us here, and I will refer the reader to the verses containing mention of ذكر and دعاء in the Koran.

Before I conclude, I will say a word about the script of the word. We have already seen that the word Salát is written in two different ways, *viz.*, the correct way, with full *alif*, and the defective way, with a small *alif* on the letter *wáv*. I repeat, that my belief is that the adoption of the defective script was intentional and was certainly meant to show that it was to be understood in the original sense of the word; whereas the

[1] While referring to this verse I may also point out in passing that this very صدعن ذكر الله وعن الصلوة is the reason for not permitting entrance into a mosque in the v. لا تقربوا الصلوة for intoxication disturbs peace, and as peace is the dearest thing (after Alláh and His Apostle) to a Muslim, no breach of it can be tolerated by him.

[2] Kor., XVII, 110 (No. 38), and Kor., LXVII, 13.

correct Arabic form was meant to express the secondary (the new, Arabian) senses thereof: I mean the meaning of prayer, pardon, etc. We do find this difference of script in carefully written copies of the Book, and the confusion thereof is ascribable to sheer carelessness on the part of the scribes. My contention, therefore, is that the defective script must be adopted in all the places where Salát means a Mosque and the full *alif* should be written where other senses are implied. This will help the reader a great deal in coming to a better and truer understanding of the Koran at least as far as the institution of the Salát is concerned.

INFLUENCE OF TEMPERATURE ON METABOLISM AND THE PROBLEM OF ACCLIMATIZATION

BY

N. R. DHAR.

It is well-known that the temperature of a warm-blooded animal is maintained at the normal even though the temperatures of the outside environments vary from zero and lower to 30° or 35°. In cold-blooded animals on the other hand the temperature of the body is only slightly higher than that of the environment at the time. The metabolism of such animals varies with the temperatures in such a manner that the respiratory exchange almost always rises with the increase in temperature, but generally irregularly but to a very different degree in different animals. The frog in the mud during the winter at a temperature of 4° has quite a different metabolism from that which he enjoys during the summer sunshine as it sits on the river bank and snaps at passing flies.

Röhrig and Zuntz[1] first showed that a curarized warm-blooded animal at ordinary room temperatures lost the power of maintaining its body temperature and the intensity of metabolism decreased accordingly. Curare prevents the transmission of motor impulses to voluntary muscles. Krogh[2] states that the curve of oxygen absorption as influenced by body

[1] Pflüger's Archiv, IV, 57 (1871).
[2] Internat. Zeitsche-f. Physik-chem. Biologie, I, 492 (1914).

temperature is the same in the anesthetized frog and fish as in the curarized dog. In warm-blooded animals the temperature is maintained at a constant level independent of the climatic condition and this level is a favourable one for the activity of nerve and muscle. It would indeed be inconvenient were the active life of a man dependent upon the temperature of the environment. The essential mechanism for the regulation of body temperature is nervous.

In warm-blooded animals a fall in the surrounding temperatures regularly causes not a decrease but an increase in the respiratory exchange, thanks to the mechanism of chemical heat regulation. The most elaborate study of the chemical heat regulation has been made by Rübner[1] who obtained the following results in the case of a guinea-pig:

Temperature of Air °C.	CO_2 per Kg. and Hour Gr.
0°	2·91
11°	2·15
21°	1·77
26°	1·54
30°	1·32
35°	1·27
40°	1·45

At 35° the regulation breaks down and the respiratory exchange rises with increase in temperature of the body as seen in the last experiment of the above series.

In a foregoing paper[2] we have shown that under standard conditions where the effect of nervous influence is excluded increase in temperature causes greater metabolism in both warm and cold-blooded animals.

[1] Die Gesetze des Energieverbrauchs bei der Ernährung (1902), Leipzig und Wein.

[2] Dhar, Proc. K. Akad. Wetensch. Amsterdam, *23*, 44 (1920).

After studying a considerable range of animals, Rübner has found that all animals transform nearly the same total amount of energy per Kilogram of body weight in the whole period from the birth to the natural death. The mean value of the constant Rübner finds to be 1,91,600 calories, the values for different species ranging from 1,41,091 to 2,65,500 calories. Small animals with an intensive metabolism live a relatively short time; large animals with more sluggish metabolism live a longer time. Rübner's view is that a definite sum of living action or energy transformation determines the physiological end of life. It is Rübner's law that the metabolism is proportional to the superficial area of an animal.

Erwin Voit[1] has calculated the following general table showing the heat production in resting animals of various sizes at medium temperatures of the environment:—

	Weight in Kg.	Calories produced	
		per Kilo	per Sq. M. Surface
Horse	441	11·3	948
Pig	128	19·1	1078
Man	68·3	32·1	1042
Dog ...	15·2	51·5	1039
Rabbit	2·3	75·1	776
Goose ..	3·5	66·7	969
Fowl	2·0	71·0	943
Mouse ...	·018	212·0	1188
Rabbit (without ears)	2·3	75·1	917

The above table supports the generalisation of Rübner.

Voit shows that the metabolism of the pigeon may be doubled after removing its feathers. From the experiments of Rübner it appears that the presence of adipose tissue acts in the same way as does a warm fur to extend the range of the

[1] Zeit für Biologie, *41*, 120 (1907).

physical regulation and to delay the onset of chemical regulation of body temperature. That the range of physical regulation of temperature of a small dog was due to his long hair is shown by the change in his metabolism after shaving him. Rübner shows this in the following table:

Temperature	Calories per Kilo.	
	Normal coat of hair	Shaved
20°	55·9	82·3
25°	54·2	61·2
30°	56 2	52·0

It is clearly seen that this dog lost its power of physical regulation between 20° and 30°. As soon as he lost his covering of hair his metabolism became like that of a guinea-pig, increasing with a reduction of temperature from 30° downwards, an illustration of chemical regulation.

To determine the influence of the protective layer of fat Rübner investigated the influence of temperature on the metabolism of a fasting short-haired dog at a time when he was emaciated and compared it with the fasting metabolism after the same dog had been fattened.

Dog (thin)		Same dog (fat)	
Temperature	Cal. per Kilo	Temperature	Cal. per Kilo.
5·1	121·3	7·3	120·5
14 4	100·9	15·5	83·0
23·3	70·7	22·0	67·0
30·6	62·0	31·0	64·5

It appears from the above that the metabolism of the dog was the same at a low temperature in both cases but that

the minimum metabolism was almost reached at a temperature of 22° when the dog had a protective covering of fat which was not the case when he was thin.

The physical regulation may be increased by certain voluntary acts, such as are observed when a dog or man exposed to cold lies down and curls himself up in such a way as to offer as small an exposed surface as possible. The contrast to this is offered when on a hot day the dog lies on his back and extends on his limbs so as to promote loss of heat.

Voit gives the following results on the effect of temperature on the metabolism of a fasting man six-hour periods :

Temperature			CO_2 excreted in G.
4·4°	...	...	210·7
6·5°	...	...	206·0
9·0°	...	...	192·0
14·3°	...	...	155·1
16·2°	...	...	158·3
23·7°	...	...	164·8
24·2°	...	...	166·5
26·7°	...	...	160·0
30·0°	...	...	170·6

Voit believed the increase in metabolism to be a reflex stimulus of cold on the skin which raised the power of muscle cells to metabolise.

Another factor in the heat regulation of man is clothes. Certain savage races living in cool climates do without clothes, as, for example, aborigines of Terra del Fuego who, according to the reports of travellers, substituted a covering of oil. In such races the process of "hardening" or development of physical regulation must be carried to a maximum. In civilized countries man endeavours to remove all the influence of chemical regulation by keeping his skin covered. Only about 20% of his surface is normally exposed to the air. The most important

constituent of clothes is the air, which is a much worse conductor of heat than is fibre. Two experiments cited by Rübner indicate the effect of clothes on metabolism. An individual was kept at a temperature of between 11° and 12° and wore different clothes at different times. His CO_2 and water excretion were as follows :—

Influence of clothes on metabolism in man at a temperature of 11° to 12°:

	CO_2 in gram. per hour.	Remarks.
Summer clothes ...	28·4	Cold, occasional shivering.
Summer clothes and Winter overcoat.	26·9	Chilly part of the time.
Summer clothes and fur coats.	23·6	Comfortably warm.

When a man was comfortable the chemical regulation of temperature was eliminated.

Fat persons have been directly observed to have a smaller respiratory action than lean ones. Benedict and Smith[1] have shown by comparing a number of athletes with normal subjects of similar heights and weights that the metabolism of athletes is on the average distinctly greater than that of non-athletes.

While it had often been observed that smaller animals had per unit weight a greater respiratory exchange than longer ones—a quantitative study of the influence of size upon metabolism was first made by Rübner on grown dogs weighing from 30·4 to 3·4 Kilograms. Rübner found that the metabolism calculated per Kilogram increases regularly with decreasing size. When however the surface of the animal is taken into

[1] Jour. Biol. Chem., *20*, 243 (1915).

account, a practically constant metabolism per square surface was found for all.

Kettner[1] from his experiments on guinea-pigs of different age and weights finds that the metabolism per Kilogram an hour decreases fairly regularly with increasing weight whilst the differences in the results per square meter are independent of size. On the other hand, in a recent discussion Benedict[2] denies that there is any close relationship between size and metabolism and deprecates especially the use of the surface as a basis for comparison. His own figures and charts show, however, that such relationships exist, that the metabolism per Kg. of the body weight decreases fairly regularly with increasing weight.

The surface S of an animal is approximately proportional to the square of a linear dimension, *e.g.*, length of the body, while the weight is proportional to the third power of a linear dimension. We have therefore $S=CW^{\frac{2}{3}}$ the constant C has been worked out for different species. It does not very much vary even in forms of very different shapes. For man and also for a dog we have C = 12·3, for the rabbit 12·9, the horse 9·0, the rat 9·1 and the guinea-pig 8·9.

It is quite possible that the surface as at present defined $CW^{\frac{2}{3}}$ does not give the very best agreement in comparisons of different individuals. The main point is that metabolism in warm-blooded animals is not proportional to the weight W but to W^n where n is certainly not far from 2/3.

On the whole, looking at the problem from a broad point of view, it seems pretty certain that the surface law of Rübner is generally proved as far as the metabolism of warm-blooded animals are concerned.

In the following pages, I shall try to find out a physical significance of Rübner's generalisation and other facts regarding

[1] Arch. für Physiol., 447 (1909).

[2] Journ. Biol. Chem., *20*, 263 (1915).

the influence of temperature on metabolism in both warm and cold-blooded animals. We can look at this problem of metabolism of different warm-blooded animals from the following considerations :—

(1) The body temperature of warm-blooded animals is normally much higher than the surrounding air. In the case of some birds, sparrow, hen, etc., the body temperature is about 42°. In the case of rabbit it is 39°6 and in the case of dog it is 39°2.

(2) Experimental results have shown that radiation is the most important factor in the loss of heat from animal body. Let us assume that a metallic ball of radius r and density of the material ρ, is placed in air at say T_0 and we are supplying heat to the ball so that the temperature of the ball may be kept constant at T where T is greater than T_0. Now in order to maintain this constant temperature a supply of heat has to be given to the ball, otherwise, the body loses heat and cools down to the temperature of the surrounding air (T_0). From the Stefan's law of radiation we know that the loss of energy from the surface is equal to $4\pi r^2\sigma(T^4 - T_0^4)$, where $4\pi r^2$ is the surface of the body in question and σ is Stefan's constant. Therefore the rate of supply of heat to the body per unit mass in order to keep the body temperature constant to T is equal to $\frac{4\pi r^2\sigma(T^4 - T_0^4)}{\frac{4}{3}\pi r^3\rho} = \frac{3\rho\sigma}{r}(T^4 - T_0^4)$.

From the foregoing relation it would be seen that the rate of supply of heat per unit mass varies inversely as the radius of the body in question. In other words, a small ball of the same material requires a much larger quantity of heat per unit mass of the body. Let us apply these considerations to the question of metabolism in animals. Ordinarily warm-blooded animals are surrounded by air of a much lower temperature than the temperature of the animal body. In other words, the animal is constantly giving out heat to the outside surroundings mainly by radiation and in

order that this phenomenon may take place, the metabolism of the system should increase in order to keep the body temperature constant. From the foregoing considerations it will be evident that the amount of heat per unit weight of the body lost by the animal due to this radiation is greater the smaller the size of the animal. This conclusion is actually corroborated by experiments. Consequently from physical principles it follows that the loss of heat per unit weight of the body and the consequent metabolism in the animal body to keep up this loss of heat is greater the smaller the size of the animal.

From the relation obtained it is seen that the rate of supply of heat per unit mass is proportional to the difference in temperature between the body and the surrounding air; in other words, the greater is the difference in temperature the greater is the rate of supply of energy per unit mass of the substance. Consequently when a warm-blooded animal is surrounded by air which is colder than the air with which it is normally surrounded, his rate of supply of energy and consequently his metabolism should also increase and that is the reason why metabolism in the case of warm-blooded animals increases with the fall of surrounding temperature.

We have already shown that the loss of energy from the surface $= 4\pi r^2 \sigma (T^4 - T_0^4)$. Now if we express this loss per unit surface, the expression becomes $\sigma(T^4 - T_0^4)$; in other words, the question of radius or the size of the body does not come into consideration and the loss of energy per unit surface becomes proportional only to the difference between the body temperature and that of the surrounding air. This has been experimentally obtained by Rübner who has obtained the following results with guinea-pig:

Temperature		CO_2
0°	...	2·91
11°	...	2·15
21°	...	1·77

If we calculate the metabolism according to the relation $\sigma(T^4-T_0^4)$, we find that the ratio of the metabolisms at 0° and 11° is about 1·2 whilst the observed ratio of the metabolism is about 1·3; the calculated value between 21° and 26° is 1·38 and the observed value is 1·2, taking the average temperature of guinea-pig to be 38·2.° Hence we get a physical significance of Rübner's law.

From the foregoing pages, it will be evident that Rübner's generalisation would be applicable mainly to warm-blooded animals, because usually they maintain a higher body temperature irrespective of the temperatures of the surroundings, and the laws of radiation would be applicable to such cases.

In the case of cold-blooded animals the body temperature is only slightly higher than the temperature of the surroundings and the foregoing considerations are not applicable in these cases and Rübner's generalisation is not valid for cold-blooded animals.

In the foregoing pages we have observed that usually smaller animals have more metabolism per unit weight of the body than larger animals; in other words weight for weight, the catalyst or the enzyme in smaller animals is more reactive than the catalyst in larger animals. It sounds very queer that the activity of the enzymes present in the system of a dog is much greater than the activity of those present in the case of a man, or we have to assume that the amount of the catalyst per unit weight of the body is much greater in the case of smaller animals than in large animals. It will be seen in the subsequent discussion that the former proposition is more reasonable than the latter. In other words, we are led to the conclusion that the physical activity and the amount of oxidation per unit weight of the body are much greater in the case of a dog than in the case of a man. Even a most casual observation of the domesticated animals has shown that as a rule small animals do not live so long as large ones.

As a general rule, it may be said that a large animal takes more time than a small one to reach maturity, and it has been inferred from this that the length of the period of growth is in proportion to longevity. Hence small animals with intensive metabolism live a relatively short time. Large animals with more sluggish metabolism live a longer time. We have already mentioned that Rübner's view is that a definite sum of living action or energy transformation determines the physiological end of life.

There are chemical analogies to these biological facts. Sabatier and his colleagues have shown that when metallic Ni, which is used as a catalyst in the hydrogenation processes, is prepared under suitable conditions at as low a temperature as possible, the activity of the catalyst is extremely great, but it loses its activity very readily. From our experiences with other catalysts, we know that an extremely active catalytic surface deteriorates also very readily. In other words, an extremely active catalytic surface is more liable to be poisoned or to undergo other changes which would affect its activity as a catalyst than the surface of moderately active catalysts.

Consequently it seems probable that in the biological processes of metabolism extremely active catalysts are likely to lose their activity more readily than moderately active catalysts. In other words, the catalysts which accelerate the metabolism for oxidation in the case of dogs induce in an unit time more oxidation than the moderately active catalysts present in human system, but the more active catalyst present in smaller animals is more liable to lose their activities by poisoning or other alterations than the moderately active catalysts present in the human body and that is why death is more rapid in the case of animals having more active catalysts than in animals having moderately active ones. In this

connection the following experiments of Slonaker[1] on rats will be of interest :

Slonaker kept 4 albino rats in cages like the old-fashioned revolving squirrel-cages, with a properly calibrated odometer attached to the axle, so that the total amount of running which they did in their whole lives could be recorded.

It was observed that the amount of exercise taken by these rats was astonishingly large. For a rat to run 5,447 miles in the course of its life is indeed a remarkable performance. Now these 4 rats attained an average age at death of 29·5 months. But three control rats confined in stationary cages so that they could only move about to a limited degree, but otherwise under conditions, including temperature, identical with those in the revolving cages, attained an average age at death of 40·3 months. All were stated to have died of "old age." From this experiment it clearly appears that the greater the total work done, or total energy output, the shorter the duration of life, and *vice versa*.

We shall now try to explain the possibility of acclimatization of warm-blooded animals from this point of view. As we have already mentioned, when there is a fall in the surrounding temperature the metabolism of warm-blooded animals is increased; in other words, when a warm-blooded animal is brought from a warmer climate to a cooler climate, its metabolism and the catalytic activity of the body enzymes is increased. In other words, there is a strain in the system. In the case of human beings this relation should also be valid. We have already mentioned that usually 20% of the body surface is exposed to air in the case of human beings, the remaining 80% is covered by clothes; so we have to consider only the exposed portion. Now even for this comparatively small exposed portion the metabolism of the body should increase on lowering the temperature

[1] Journ. Animal Behaviour, 2, 20 (1912).

of the surroundings. Consequently the catalyst in the body would be activated; but as Rübner has shown, the standard metabolism cannot undergo rapid changes as the oxidative energy of the cells is adapted to the usual conditions regarding the loss of heat and is altered very gradually with those conditions; hence the system of a human being or an animal brought from a warmer climate to a cooler climate will be in a state of strain.

In the case of cold-blooded animals it is evident the metabolism is much slower than in the case of warm-blooded animals. Hence the catalytic activity of the enzymes present in cold-blooded animals is not as great as those in the warm-blooded animals of the same size. Consequently the duration of life of a cold-blooded animal is usually greater than that of a warm-blooded animal of the same size and this is corroborated by evidence from biology, because experiments show that cold-blooded animals live much longer than warm-blooded animals of the same size.

In the case of warm-blooded animals when they are transported from a warmer climate to a cooler climate, metabolism is increased. The effect of this is that the catalytic activity of the enzymes has to increase in order to produce greater combustion in a unit of time.

I have already emphasised that when the catalyst is made to work at a greater speed than the normal one, the life period of the catalyst is decreased. Consequently one effect of the transportation of a warm-blooded animal from a warmer climate to a cooler climate will be to activate the enzymes in the body and it will lead to its shortening of the life period.

The temperature of a warm-blooded animal remains constant whatever may be the temperature of the surroundings. Consequently the catalyst has to work at the same temperature irrespective of the temperature of the outside surroundings. Thus in the case of warm-blooded animals, the question of ageing of the catalyst at a greater rate due to the increase in

temperature does not rise because the catalyst works at a constant temperature which is the body temperature of the animal in question provided the external temperature is less than the body temperature. So the main effect of transporting a warm-blooded animal from a warmer country to a colder country is to increase the activity of the body enzymes and to increase the metabolism and to shorten the life period of the animal in question. Now if the enzymes which were used to generate smaller quantity of heat in a warmer climate are asked to produce greater quantity of heat in a cooler climate, they will by and by be tired out. In course of time the individual or the animal in question would feel the strain, and it seems possible that as years go he will feel the strain more and more. It seems probable thus that a human being transported from a warmer climate to a cooler climate will feel the cold more and more as years go by.

On the other hand, if a warm-blooded animal is transported from a cooler climate to a warmer climate, let us see what will be the result on his system by this transportation. As soon as he is surrounded by a warmer atmosphere, the amount of metabolism which he was used to produce in a colder surrounding has to become less because now he is surrounded by a warmer atmosphere. Consequently the catalyst inside the body has to work less in a warmer climate than in a colder climate. Hence the life period of the individual in question is likely to be increased when he is transported from a cooler to a warmer climate provided that the exterior temperature is not greater than his body temperature.

I am of the opinion, therefore, that it is more advantageous for a man living in a colder climate to come to a warmer climate than the reverse. When a warm-blooded animal has to live in a country where the outside temperature is usually greater than the body temperature, then the animal will age and grow old and die more readily than an animal living in a cold country; because at the higher temperature, the body

catalysts will age more quickly. Thus this case of a warm-blooded animal will be allied to that of a cold-blooded animal.

In this discussion, I have all along neglected the consideration of humidity and its influence on human beings and animals.

There is another factor—that of the colour of the skin surface; animals with deeper colour are likely to radiate heat more readily than animals with fair complexion.

I have emphasised that the metabolism of cold-blooded animals is much less than in the case of warm-blooded animals under the same conditions; in other words, the enzymes present in cold-blooded animals are not as active as those present in warm-blooded animals. We have also observed that the body temperature of a cold-blooded animal is usually slightly higher than the temperature of the surrounding air and that the metabolism in the case of a cold-blooded animal goes on increasing as the surrounding temperature is increased.

Let us see what takes place on a cold-blooded animal living in a warmer country being taken to a cooler country:—

The metabolism in the system will decrease and the animal has to live a life of less intensity and possibly with a less sense and feeling of well-being. The enzymes have to generate lesser quantities of heat in the cool atmosphere and consequently their period of life will be increased and the animal is expected to live a longer life in a cooler surrounding. Moreover, the body catalysts will not age as rapidly in the cooler surroundings as would have been the case in a warmer country. Consequently the two factors will both lead to a greater longevity of the cold-blooded animal in question when transported from a warmer to a cooler country.

On the other hand, when a cold-blooded animal habituated to a cooler locality, is transported to a warmer country, his metabolism in an unit of time will be increased and the catalysts in the body have to perform more work. Consequently

the period of activity of the catalyst will be decreased and the life of the animal is likely to be shortened, though the animal has a more intense and active life in a warm surrounding. Moreover, in a warmer country the body catalyst is likely to age more rapidly than in a cool country. Consequently the effect of both these factors is that old age and death would follow more rapidly in a cold-blooded animal transported from a cooler atmosphere to a warmer place.

RECENT WORK ON ZEEMAN EFFECT*

BY

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1. INTRODUCTION.

In 1845, Faraday first demonstrated the fundamental relation between light and magnetism. This wonderful discovery, known after him as the Faraday Effect, refers to the rotation of the plane of polarisation by isotropic substances of high refractive index when placed in a strong magnetic field, the plane polarised beam being transmitted parallel to the lines of force of the magnetic field. This discovery was followed by Kerr who in 1877 succeeded in demonstrating that a delicate change takes place in the state of polarisation of a beam of polarised light reflected from the poles of an electro-magnet. Both these facts, however, relate to light which is being propagated in space, but in 1896 Zeeman discovered the influence of a strong magnetic field on the source of light itself. He demonstrated that in the simplest cases, a spectral line splits up in two lines, when the beam is viewed along the lines of force, and three lines when viewed perpendicularly to the lines of force of the magnetic field in which the source is placed; of the latter one occupies the original position, and the other two are symmetrically displaced from the normal position by an amount $\Delta\nu = \pm \frac{e}{m} \frac{H}{4\pi c} = 4{\cdot}70 \times 10^{-5}$ H, where $\Delta\nu$ is expressed on the scale of wave-numbers, and H in Gauss, the other notations having their

* Read before the Joint Sitting of the Chemistry and the Physics Sections of the Indian Science Congress at Bombay, January, 1926, as one of the Papers in the discussion on "Atomic Structure and Quantum Theory."

usual significance. He also proved that the lines are polarised; in the longitudinal mode of observation they are circularly polarised in opposite sense, and in the transverse mode they are plane polarised as shown in Fig. 1. The symbols π and σ refer to the directions of the electrical vibrations in the ray at the point of observation.

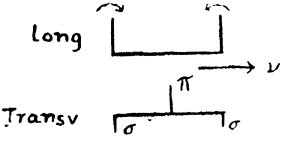


Fig. 1

This startling discovery at once attracted a large number of workers in the field, and it was soon discovered by Preston, Cornu, Michelson simultaneously with Zeeman himself, that the simplest type of resolution, known as the normal type, is not obtained with many spectral lines. They found that often quartets and sextets are obtained and this is known as the Anomalous Zeeman Effect. The Zeeman components of the well-known D lines of sodium in the transverse effect are shown in Fig. 2 which depicts clearly the number of components, and their state of polarisation.

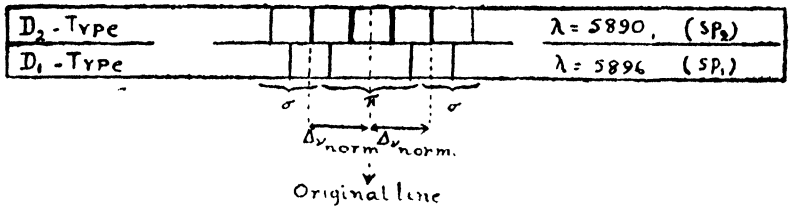


Fig. 2

This type is characteristic of all the members of the principal series of sodium as well as those of the second subsidiary series; it again recurs in the same two series of all the alkali metals, and copper and silver.

Fig. 3 again shows the Zeeman type of the $2p_1$—1s, $2p_2$—1s, $2p_3$—1s lines of mercury, belonging to the second subsidiary series. The wave-lengths are shown on the right-hand side of the figure. This type repeats itself with the lines arising from similar combinations in the spectra of cadmium, zinc, and the alkaline earths. From these observations Preston[1] was able to draw the significant conclusion that lines arising from the combinations of similar terms show the same Zeeman type, and this type is the same for corresponding lines in homologous spectra of different substances.

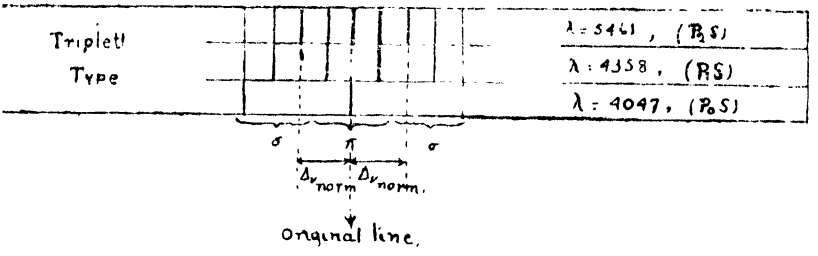


Fig. 3

Another important rule was given by Runge[2] based on the particularly abundant types of Neon. It states that the separations of the components of a line, when measured in wave-numbers are rational multiples of the normal separation. In the Figs. 2 and 3, the distances of the components from the original line are $\frac{1}{3}$ and $\frac{1}{2}$ respectively of the normal resolution, and hence the Runge denominators are 3 and 2 respectively in the two cases.

Starting from Runge's law, Sommerfeld[3] has deduced the Law of Mangeto-optic Resolution for the Anomalous Zeeman types of doublet and triplet systems of spectral lines. Now the Combination Principle of Spectroscopy is also applicable to the case of lines emitted under the influence of a magnetic field.

[1] Preston, *cf.* Kayser's Handbuch der Spectroscopie, 2. 619.
[2] Runge Physikal Zeitschr, 8. 232 (1907).
[3] Sommerfeld, Ann. d. Phys., 63, 121 (1920).

According to Bohr's theory a line is emitted by a valence electron of an atom in passing from an initial orbit to a final orbit round the nucleus. The magnetic field influences the energy in each of these configurations, and thus separately the two terms, which give the series representation of a line. If this is given by $\nu = \nu_1 - \nu_2$, then for the magnetic resolution we have

$$\Delta\nu = \Delta\nu_1 - \Delta\nu_2 \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots(1)$$

In accordance with Runge's rule, Sommerfeld puts

$$\Delta\nu = \frac{q}{r} \Delta\nu \text{ rmal} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots(2),$$

where r is the Runge denominator and q the Runge numerator, which varies in each type of resolution, and its different values fix the various components as shown in Figs. 2 and 3. Now as each term is affected by the magnetic field, we can put

$$\Delta\nu_1 = \frac{q_1}{r_1} \Delta\nu\text{norm and } \Delta\nu_2 = \frac{q_2}{r_2} \Delta\nu\text{norm}$$

and hence from (1) and (2) we have

$$\frac{q}{r} = \frac{q_1}{r_1} - \frac{q_2}{r_2}$$

or $\frac{q}{r} = \frac{q_1 r_2 - q_2 r_1}{\nu_1 r_2}$ and hence $r = r_1 r_2$ .....(3)

Hence the Law of Magnetic Resolution states that the observable Runge denominator r of the term combination resolves into the denominators r_1 and r_2 of the terms and is composed of their product.

The practical use of this law has been discussed by Sommerfeld[1] as follows. As the Zeeman separation is normal for simple lines, $r = 1$ for them, and hence $r_1 = r_2 = 1$. Now as the s terms of doublet and triplet systems are always simple, Sommerfeld starts with the generalisation that the Runge denominator is always equal to 1 for s terms.

[1] Sommerfeld, Atomic Structure and Spectral Lines.—English Translation, 3rd Edition, Ch. VI, pp. 391-392.

In Fig. 2 has been shown the Zeeman type for (sp) doublets. The Runge denominator for them is equal to 3, and as $r_1 = 1$ for s term, we get $r_2 = 3$ as the Runge denominator for p terms.

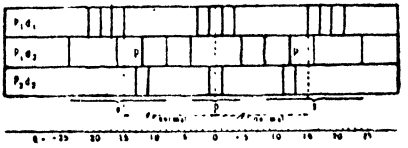


Fig. 4

In Fig. 4 is shown the Zeeman pattern for (pd) terms of doublets. For these r=15. As $r_1 = 3$ for p terms, $r_2 = 5$ for d terms; but this is ambiguous, for $r_2 = 3.5$ would also be compatible with $r_2 = 15$ and $r_1 = 3$. If we make the simpler assumption that $r_2 = 5$, we arrive at the following scheme for the Runge denominators for the doublet terms :—

s	p	d	b	x	y
1	3	5	(7)	(9)	(11)

The numbers within the brackets have been extrapolated.

If we now turn our attention to the Zeeman resolution of the triplet system $2p_i - ms$ (i=1, 2, 3) as shown in Fig. 3, we find that r = 2. As $r_1 = 1$ for s terms, we get $r_2 = 2$ for p terms. Starting with the value $r_2 = 2$ for p terms, if we now take up the Zeeman resolution for (pd) combinations as shown in Fig. 5, we find $r_2 = 3$ for d terms, as r=6 for such types.

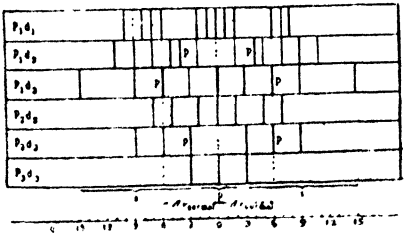


Fig. 5

Thus Sommerfeld arrived at the following scheme for the Runge denominators of the triplet systems :—

s	p	d	b	x	y
1	2	3	(4)	(5)	(6)

The numbers within the brackets have been obtained by extrapolation.

But this scheme is erroneous as will be shown later on. From $r=6$, we have concluded that the Runge denominators for p and d terms are 2 and 3 respectively, but this is not the only possible deduction from it. From $r=6$, we may put $r_1=1.2$ for p term and $r_2=2.3$ for d term ; for from equation (3) it follows that r is not equal to the product $r_1 r_2$, but is equal to the least common multiple of r_1 and r_2, when r_1 and r_2 have common factors. To remove this ambiguity we have to consider the (Pd) combinations between the single and triplet terms of the alkaline earths. Since here $r_1=1$ for P terms, the Runge denominator becomes identical with the denominator r_2 of the d term. From experimental data, we obtain $r=6$, and thus $r_2=6=2.3$ for d terms. Thus we arrive at the following scheme for the Runge denominators of the triplet terms :—

s	p	d	b	x	
1	1.2	2.3	(3.4)	(4.5)	and so on.

At this stage, we may introduce Lande's[1] scheme for the Anomalous Zeeman type of doublet terms. According to Sommerfeld and Debye's[2] quantum theory of the normal Zeeman-effect, which we propose to discuss more fully later on, the original energy of an electron in a Kepler orbit round the nucleus of the atom is changed under the influence of the magnetic field from W_0 to $W=W_0+mh\frac{O}{2\pi}$, where O is the Larmor precession of the orbit about the direction of the lines of force of the magnetic

[1] Sommerfeld, Physikal Zeitsch 17,491, (1916).

[2] Debye, Gottinger Nachr, 3 Juni 1916.

field and is equal to $\frac{1}{2}\frac{e}{m}\frac{H}{c}$ with the usual notations; m is the magnetic quantum number, and is equivalent to the equatorial quantum number n_1 of Sommerfeld. Lande generalises this statement to $W = W_o(n_j) + mh\frac{n_j}{r}\Delta\nu_{normal}$ .....(4), where j is the inner quantum number. Here the argument n of W_o denotes that the original energy is different according as we consider the upper doublet level $n_j = n$, or the lower doublet level $n_j = n-1$.

The magnetic quantum number can assume the values

$\pm(1, 3, \ldots\ldots 2n_j - 1)$ .....(5),

and the selection principle for the magnetic levels is as follows:—

Change of m by ± 2 leads to circular, in the transverse effect, to linear polarisation perpendicular to the field.

Change of m by 0 leads to linear polarisation parallel to the field.

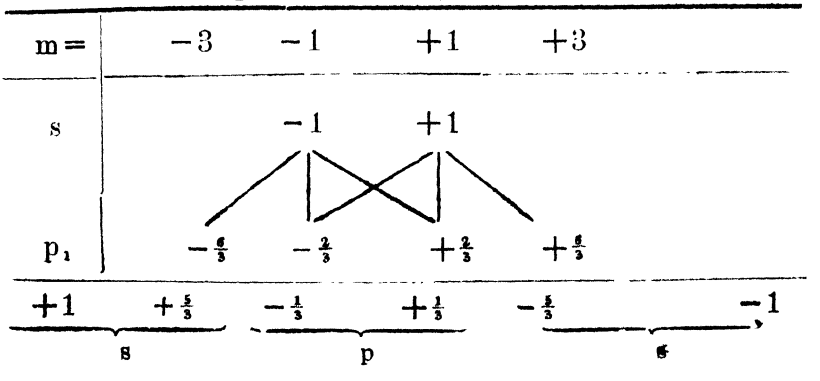
The magnetic levels in the case of each term being equidistant, their distances from each other, calculated in parts of $\Delta\nu$ normal are

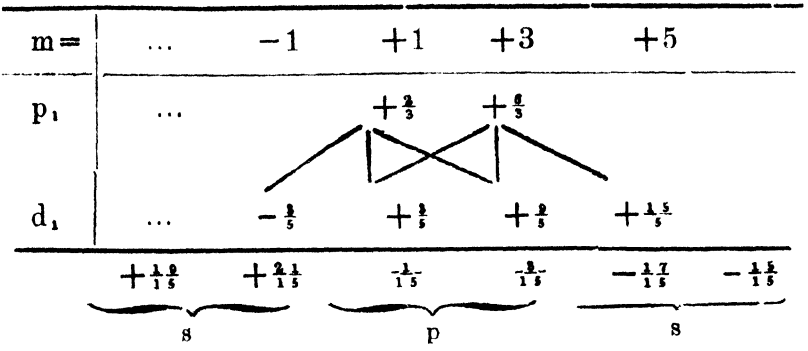
$2\ \frac{4}{3}\ \frac{2}{3}\quad \frac{6}{5}\ \frac{4}{5}\quad \frac{8}{7}\ \frac{6}{7}$

for the terms

s, p_1, p_2, d_1, d_2, b_1, b_2, respectively.

This hypothesis has been verified in the following schemes according to Lande for sp_1 and p_1d_1 combinations:—





For each value of m in the first row of the two schemes, stand the corresponding values of the magnetic levels of s, p, and p_1, d_1 Subtracting vertically we get the p-components on account of $\Delta m=0$, and subtracting in an oblique direction as shown by the slanting lines we get the s-components on account of $\Delta m = \pm 2$. In the scheme for $p_1 d_1$ the same process has been repeated, with the difference that only positive values of m and those negative values, which give rise to new components and not such as only differ in sign, have been written. This prevents the scheme being unduly extended on both sides.

Similarly Lande has generalised a scheme for the triplet systems, but as this has been further extended by him to terms involving higher multiplicities, we now turn our attention to the theoretical discussion of the subject from which Lande's generalisation will follow as an immediate sequence.

2. THEORY OF THE ZEEMAN EFFECT.

As is well-known, Lorentz has fully explained the normal Zeeman-effect on the basis of the classical electron theory. The introduction of the quantum theory to account for these facts is due to Sommerfeld[1] and Debye[1]. To follow the empirical rules given by Lande for the explanation of the anomalous Zeeman-effect, it is necessary to give a brief outline

[1] Sommerfeld and Debye, loc cit.

of the theory. It is based on the Combination Principle of Spectroscopy $\nu = \nu_a - \nu_e$ or $h\nu = Wa - We$, Wa and We being the energy of the electron-system in the initial and final configurations. Due to the impressed magnetic field, the energy in each of the states changes, and this change of energy is calculated by assuming that the field H leaves the form of the orbits, and their inclination to the magnetic lines of force, as also the motion in the orbit, unaltered, but adds a uniform precession of the orbit round H, the precessional velocity being given by

$$O = \tfrac{1}{2}\frac{e}{m}\frac{H}{c} \qquad \ldots\ldots(6)$$

Thus due to the implied magnetic field H, the magnitude of the resultant angular moment J of the atom does not change, but the direction of its axis changes, as it describes a precessional cone about the direction of the magnetic field. Thus from mechanical laws it follows that the total change in the kinetic energy of the electron-system is given by

$$\triangle W = \frac{m}{2\pi} O.h \qquad \ldots\ldots(7)$$

where O is given by (6), and m is termed the magnetic quantum number. The meaning of m is made clear by considering the component $M = J \cos (J\ H)$ of J along H. Just as J is connected with the inner quantum number j by the relation $j = \frac{2\pi J}{h}$, so m is also given by $m = \frac{2\pi M}{h}$. From (7), we obtain for the difference of the total energy in the initial and final orbit of the electron-system as

$$\triangle Wa - \triangle We = \frac{m_a - m_e}{2\pi} \cdot O.h \qquad \ldots\ldots (8)$$

Whence $\triangle \nu = \frac{m_a - m_e}{2\pi} \cdot \frac{1}{2}\frac{e}{m}\frac{H}{c}$

$$= (m_a - m_e) \cdot \frac{e}{m}\frac{H}{4\pi c} \qquad \ldots\ldots(9)$$

To account for the normal Zeeman-effect Sommerfeld assumes that $m_a - m_e = \pm 1$ or 0. This is known as the selection principle for the magnetic quantum number m; a change of m by ± 1 leads to circular polarisation in the longitudinal effect or to linear polarisation perpendicular to the field in the transverse effect, and a change of m by o leads to linear polarisation parallel to the field. These results agree completely with those of Lorentz, obtained from the classical electron-theory.

Now we proceed to explain anomalous Zeeman-effect. As the inner quantum number j* has integral values or values equal to multiples of $\frac{1}{2}$, accordingly as it stands for odd or even multiplets, m simultaneously with j, on account of the spatial quantisation of the orbits will also assume values, which are either integers or multiples of $\frac{1}{2}$. The possible values of m are given by

$$m = j, j-1, j-2 \ldots\ldots -(j-2), -(j-1), -j \ldots\ldots\ldots\ldots (10)$$

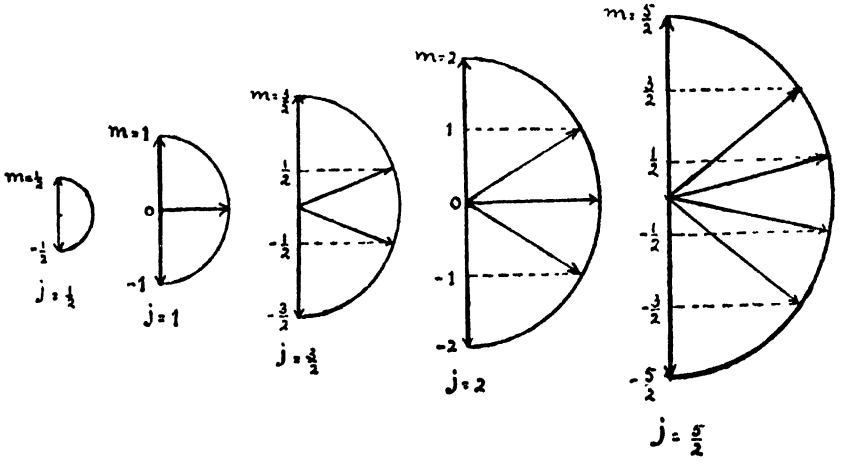


Fig. 6

* Recently Sommerfeld has introduced for j values equal to multiples of $\frac{1}{2}$ for even multiplets; *vide* Sommerfeld, Atombau und Spektrallimen, 4th Edition, Chap. VIII, p. 591.

Some of the possible orientations of j are shown in Fig. 6, H being taken upwards from O in the plane of the paper. The total number of possible values of $m = 2j+1$, and the difference between any two values of m is always a whole number, though m may either be an integer or a multiple of $\frac{1}{2}$. The value $m = o$ corresponds to a position perpendicular to H, and $m = \pm j$ to a position parallel or antiparallel to the magnetic lines of force.

The selection principle and polarisation rule for m is given by

$$m_a - m_e = \begin{cases} \pm 1 \ldots\ldots \sigma \text{ components} \\ 0 \quad \ldots\ldots \pi \quad \text{,,} \end{cases} \qquad \ldots\ldots\ldots (11)$$

The transition $m_a = o$ to $m_e = o$ is forbidden.

Now from the classical conception of a magnetic moment being equivalent to an electric current, and from the quantum theory we have the relations

$$\mu = j\,\mu_1 \text{ and } \mu_1 = \frac{e}{m}\,\frac{h}{4\pi} \qquad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (12)$$

μ_1 being the Bohr magneton. The mechanical moment $\frac{jh}{2\pi}$ of the atom corresponds to the magnetic moment μ of the atom, and if we suppose the axis of j to be coincident with that of μ, the magnetic energy of a stationary orbit of the atom is

$$\Delta W = O.\ m\,\frac{h}{2\pi}$$

$$= \frac{\mu}{j}\ m.\ H. \qquad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (13)$$

Equation (13) is obtained by substituting the value of O from (6) and by choosing the proper units. Hence from (13)

$$\Delta\nu = \frac{\mu}{j}\ m\,\frac{H}{h} \qquad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (14)$$

Equation (14) can be put in the form

$$\Delta\nu = \frac{\mu}{j} m \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (15),$$

when $\Delta\nu$ as a fraction of the normal Zeeman factor $\Delta\nu_{norm}$, and μ in terms of μ_1 are measured. Hence from the magnitude of $\Delta\nu_{norm}$ and from equation (12)

$$\text{we get} \quad \frac{\mu_1}{\Delta\nu_{norm}} \frac{H}{h} = 1 \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (16)$$

Following Lande we now write

$$g = \frac{\mu}{j} \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (17)$$

g – being the 'aufspaltungfaktor.' According to the rules of Preston and Runge, g or $\frac{\mu}{j}$ must be a rational expression in r, k and j, being independent of the total quantum number (Haupt quantum number) n, and the atomic number Z; here r stands for the term-multiplicity of the system, and k, j denote the azimuthal quantum number and inner quantum number respectively. Now with Sommerfeld we write, j_s being the inner quantum numbers of the s term, $j = j_{max} = j_s + j_a$, $j_a = k - 1$ and $r = 2j_s + 1$. Lande's[1] expression for g in terms of these quantities is given by

$$g = 1 + \frac{j(j+1) + j_s(j_s+1) - j_a(j_a+1)}{2j(j+1)} \ldots (18)$$

$$\text{or} \quad g = \tfrac{3}{2} + \tfrac{1}{2} \frac{(j_s - j_a)(j_s + j_a + 1)}{j(j+1)} \quad \ldots\ldots\ldots (19)$$

Both are equivalent expressions. A complete list of the values of g for different values of r and j has

[1] Lande Zs. f. Physik, 15, 189 (1923).

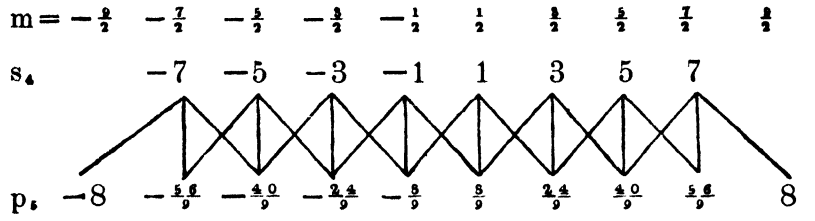
been given by Lande,[1] and is shown in the following table:—

j =		0	1	2	3	4	5	6	7	$\frac{1}{2}$	$\frac{3}{2}$	$\frac{5}{2}$	$\frac{7}{2}$	$\frac{9}{2}$	$\frac{11}{2}$	$\frac{13}{2}$	$\frac{15}{2}$ = f		
s=0	s	0							Singlet	2							Doublet	s	0=j_a
1	p		1						j_s=0	2/3	4/3						j_s=1/2	p	1
2	d			1							4/5	6/5						d	2
3	f				1							6/7	8/7					f	3
4	g					1							8/9	10/9				g	4
0	s		2						Triplet		2						Quartet	s	0
1	p	0	3/2	3/2					j_s=1	8/3	26/15	8/5					j_s=3/2	p	1
2	d		1/2	7/6	4/3					0	6/5	48/35	10/7					d	2
3	f			2/3	13/12	5/4					2/5	36/35	78/63	4/3				f	3
4	g				3/4	21/20	6/5					4/7	62/63	116/99	14/11			g	4
0	s			2					Quintet			2					Sextet	s	0
1	p		5/2	11/6	5/3				j_s=2		12/6	66/35	12/7				j_s=5/2	p	1
2	d	0	3/2	3/2	3/2	3/2				10/3	28/15	56/35	100/63	14/9				d	2
3	f		0	1	5/4	27/20	7/5			2/3	16/15	46/35	88/63	142/99	16/11			f	3
4	g			1/3	11/12	28/20	19/15	4/3			0	6/7	8/7	14/11	192/143	18/13		g	4
0	s				2				Septet				2				Octet	s	0
1	p			7/3	23/12	7/4			j_s=3			16/7	122/63	16/9			j_s=7/2	p	1
2	d		3	2	7/4	33/20	8/5				14/5	72/35	88/21	56/33	16/11			d	2
3	f	0	3/2	3/2	3/2	3/2	3/2	3/2		4	2	12/7	34/21	52/33	222/143	20/13		f	3
4	g		-1/2	5/6	7/6	13/10	41/30	59/42	10/7	-4/3	14/15	44/35	86/63	140/99	206/143	284/195	22/15	g	4

We illustrate the use of the table by calculating the Zeeman components of a line (s_4 p_5) belonging to the octet-system, j being equal $\frac{7}{2}$ for s term and j = $\frac{9}{2}$ for p term. From the table we see g=2 always for the s term, and in the vertical column below $\frac{9}{2}$ is g = $\frac{16}{9}$ for the p-term in question,

[1] Lande Zs. f. Physik 15, 189 (1923).

of the octet-system. Now as m can have values j, (j − 1),(j − 2) ..... −(j − 1), −j, so we write the following table thus :



$$= \frac{(1), (3), (5), (7), 9, 11, 13, 15, 17, 19, 21, 23,}{9}$$

In the first horizontal row of the table the possible values of m for both s_4 and p_5 are noted. Against s_4 and p_5 the values of mg are put, m always lying between j and −j. Subtracting vertically we get the p-components, and subtracting in the direction of slanting lines we get the σ-components. The Runge denominator is 9, and the numbers express the separation in terms of $\Delta\nu_{\text{norm.}}$

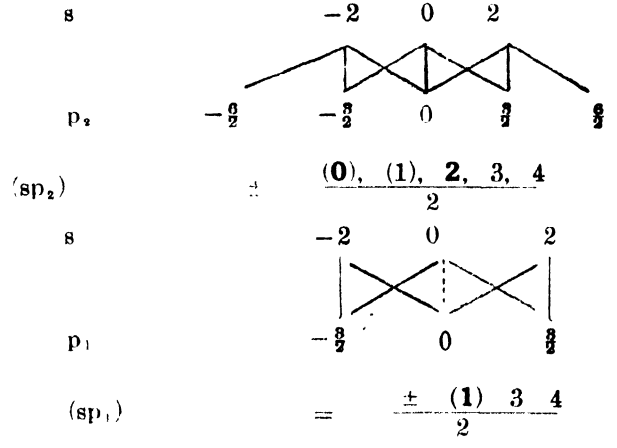
It is evident from Lande's table of 'g-factor,' that the Zeeman components, corresponding to the various term-combinations of the different systems, such as triplets, etc., can be calculated, and some of these results have been experimentally verified by Back[1] by his extensive measurements of the Zeeman components of the spectral lines of Manganese and a few other elements. Thus Lande's table provides us with a powerful means for identifying the terms, the combination of which gives rise to a spectrum line, the series designation of which is not known ; but at the same time it is essential that the data on Zeeman-effect of the line should be available to the degree of precision as is to be expected from the table.

Lande[2] has also formulated the following empirical qualitative rules for the intensity of the Zeeman components :—In

[1] Back, Zs. f. Physik, 15, 206 (1923).

[2] Lande, *cf.* Zeeman-effekt und Multiplett-struktur der Spektrallinien by Lande and Back, S. 25.

the combination of two terms, which consist of unequal numbers of magnetic levels m, those p-components are the strongest which through the vertical combinations come in the middle of the scheme, and those σ-components are the strongest, which by the oblique combinations occur at the end of the scheme. But by the combination of two terms, which contain the same number of magnetic levels m, the word 'strong' is to be replaced by 'weak,' the intensity of the central p-component $m_a = 0 \longrightarrow m_e = 0$ being zero. These rules are illustrated by the two following examples taken from the Zeeman-types of the triplet system :—



In these tables, against s, p_2 and p_1 are noted the values of mg as obtained from Lande's table, and the strongest components are denoted by thick figures. These intensity rules have also been verified by the above-quoted experiments of Back.

In this connection it is worth stating that the conception of the magnetic moment of an atom has received a brilliant comfirmation by the experiments of Stern[1] and Gerlach.[2] From the relation $g = \frac{\mu}{j}$ we can obtain the magnetic moment of an

[1] Stern, Zs. f. Physik, 7, 249 (1921).
[2] Gerlach and Stern, Zs. f. Physik, 8, 110 (1921) and 9, 349 (1922).

atom in terms of the Bohr magneton by knowing 'g' from Lande's table for the fundamental term of the atom obtained from spectroscopic data, j being the inner quantum number of the same term. The experiments of Stern and Gerlach are in exact agreement with the spectroscopic data of copper, silver and gold, but do not agree with those of iron and nickel. According to Laporte's[1] series-classification of iron lines, the fundamental term is a d-term, but it is not in agreement with the experiments of Stern and Gerlach. The lines of iron so far classified do not include some strong lines in the region about $\lambda = 2100A^{\circ}$, which are reversed in the under-water spark of iron, and only further classification can settle the points in question.

3. PASCHEN-BACK EFFECT.

In 1912, Paschen and Back[1] discovered that the Zeeman type of a line depends upon the strength of the external magnetic field relative to the original separations $\triangle\nu_0$ of the system of lines which belong together in a series as multiplicities. A magnetic field is considered to be weak, when the displacements $\triangle\nu$ produced by it are small compared with the original separations $\triangle\nu_0$ between the lines when the magnetic field is absent, and strong when it produces displacements large compared with $\triangle\nu_0$. Thus if we take the lines close to one another and subjected to a magnetic field, weak in comparison with the internal magnetic field of the atom, the Zeeman type of each line is developed without being influenced by the Zeeman components of the neighbouring lines, but when a magnetic field strong enough to overcome the internal magnetic field is applied, the anomalous types disappear, and every line configuration develops the normal Zeeman type. Under the influence of such strong fields, an asymptotic condition is finally attained, as if the original multiplicities did not exist at all. Prior to

[1] Paschen and Back, Ann. d. Phys., 39, 897 (1912) and 40, 960 (1913).

the discovery of Paschen-Back effect, it was known that lithium did not exhibit the same type of anomalous Zeeman-effect as the other alkali metals, *e.g.*, sodium ; but this apparent contradiction to Preston's rule is removed by considering the cases of the well-known D lines of sodium, and the line $\lambda = 6708$ A°U of lithium. The D lines are at a distance of 6 A° from each other, but the line $\lambda = 6708$ A° has components separated by 0·13A° only. Thus a very strong field of the magnitude of 180,000 Gauss will be necessary to produce the complete Paschen-Back effect in the case of the D lines, but a comparatively weaker field will be required to produce the same effect for the lithium line. Thus the magnetic fields usually produced in the laboratory exhibit the normal Zeeman-effect for the lithium line, and the anomalous types for the D lines.

There is also another type of Paschen-Back effect known as the Partial Paschen-Back effect. This can be explained by considering the case of lines belonging to (pd) combination. The applied magnetic field will be strong for the d-terms (*e.g.*, d_1 d_2 d_3), if the Zeeman separations which it produces are large compared with original separations $\Delta\nu_0$ of the same terms; it will be considered as weak for the p-terms, if the Zeeman separations $\Delta\nu$ are small compared with $\Delta\nu_0$ of the p-terms. In this case neither the normal type nor the anomalous type is observed, but a distorted Zeeman type is produced. This is termed the Partial Paschen-Back effect.

We now turn our attention to a quantitative explanation of the transformation of the D type of lines from the anomalous to the normal Zeeman pattern under the influence of a gradually increasing magnetic field. Sommerfeld[1] starts with Voigt's[2] theory of this transformation, which is based, as in

[1] Sommerfeld, Gottinger Nach, Marz, 1914.
Ann d Phy., 63, 221 (1920).

[2] Voigt, Ann d Physik, 41, 403 (1913) and 42, 2 (1913).

Lorentz's theory, on the idea of quasi-elastic electrons capable of vibration in an atom. As the intensity of $D_2 : D_1 = 2 : 1$, Voigt supposes the existence of two electrons of the frequency of D_2 and one of the frequency of D_1. Starting with the equations of vibration of these electrons in the magnetic field, Voigt arrived at certain results, which have been put in the language of the quantum theory by Sommerfeld, and the result is derived in the form $\Delta\nu = m \pm \frac{1}{2}\sqrt{1+\frac{2mv}{k-\frac{1}{2}}+v^2}$ .....(20)

where $\Delta\nu$, the separation between the components, is measured in terms of $\Delta\nu_{norm}$ from the *middle* of the original doublets, not under the influence of the magnetic field; k is the azimuthal quantum number and m the magnetic quantum number. The upper sign of the quantity under root corresponds to $j = k-\frac{1}{2}$, and the lower sign to $j = k-\frac{3}{2}$, where j is the inner quantum number ; v is given by the relation

$$v = \frac{\Delta\nu_o}{\Delta\nu_{norm}} = \frac{H_i}{H} \text{ .....(21)}$$

where $\Delta\nu_o$ is the original separation of the doublets, without the magnetic field, and H_i is the internal magnetic field of the atom. Equation (21) can be put in the form $v = \Delta\nu_o$ ...(22), if $\Delta\nu_o$ and $\Delta\nu$ are both measured in terms of $\Delta\nu$ normal.

The deductions from the formula (20) have been verified by the observations of Kent.* Putting $v > 1$ and expanding the quantity under root, we get

$$\sqrt{1+\frac{2mv}{k-\frac{1}{2}}+v^2} = v+\frac{m}{k-\frac{1}{2}} \text{ .....(23)}$$

Applying the relations (22) and (23), (20) transforms to

$$\Delta\nu \mp \tfrac{1}{2}\,\Delta\nu_o = m\left(1 \pm \frac{1}{2k-1}\right) \text{ .....(24)}$$

The expressions $1+\frac{1}{2k-1}$ and $1-\frac{1}{2k-1}$ give the same value for g, for $j = k-\frac{1}{2}$ and $j = k-\frac{3}{2}$ respectively as is shown in Lande's table for the 'g-factor.'

* Kent, Astro. Journ., 40, 343 (1914).

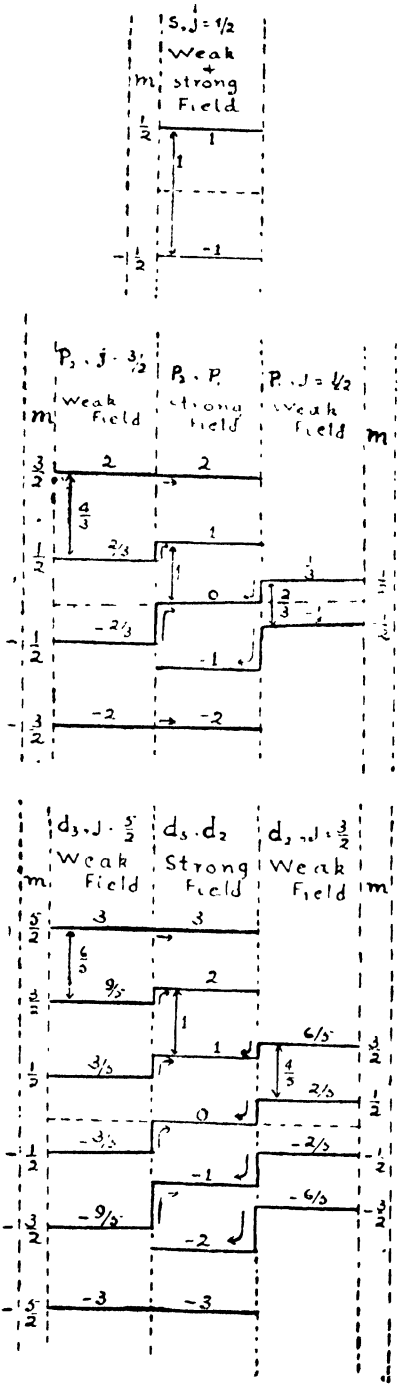

S, J = 1/2
Weak + strong Field
m
1/2
1
1
-1
-1/2
P, J = 3/2
Weak Field
P, P
strong field
P, J = 1/2
Weak Field
m
3/2
2
2
4/3
1
1/2
2/3
1
1/3
0
2/3
-2/3
1/2
-1
-2
-2
-3/2
d, J = 5/2
Weak Field
d, d2
Strong Field
d, J = 3/2
Weak Field
m
5/2
3
3
6/5
9/5
2
3/2
1
1
6/5
3/5
4/3
2/5
1/2
0
-3/5
-2/5
-1/2
-1
-6/5
-9/5
-3/2
-2
-3
-3
-5/2

Fig. 7

For a strong magnetic field, $v=0$, and from (20) we obtain

$$\Delta\nu = m \pm \tfrac{1}{2} \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (25)$$

Because m is half an integer for the doublet terms, $\Delta\nu$ or $m \pm \frac{1}{2}$ is an integer, and as $\Delta\nu$ has been expressed in terms of $\Delta\nu_{norm}$, the magnetic levels follow each other at a distance of $\Delta\nu_{norm}$ apart. On account of the principle of selection for the s and p components, as given previously, the combination of the separations $\Delta\nu$ of the two terms as given in (25), gives rise to a normal Lorentz triplet.

In Fig. 7 is shown the transformation of the magnetic energy levels of the anomalous Zeeman type of doublet system, when subjected to gradually increasing magnetic field till the Paschen-Back effect is completed. The two outer columns correspond to weak magnetic fields, and the middle column to strong field. The values of $\Delta\nu$ are measured from the positions of the original energy-levels without any magnetic field, but those in the strong field are measured either from their mid-point or from their centre of gravity as explained below. The arrows denote the direction in which the changes take place. In the figure is also shown that the levels which are originally in the normal position, undergo no transformation as for s, and for the two outermost levels of p_2 and d_3.

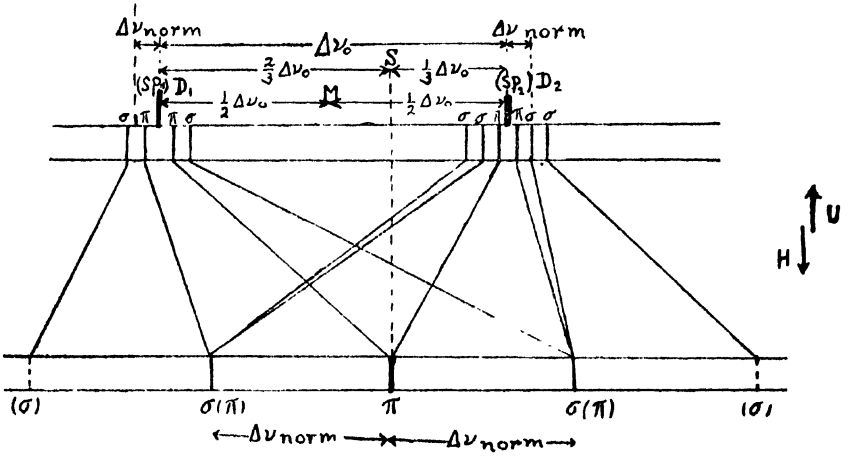


Fig. 8

Fig. 8 depicts the changes in the positions of the individual components of the Zeeman pattern of (sp) combination of the doublet system, *i.e.*, of the well-known D_1 and D_2 type. In the upper part of the figure, the original positions of D_1 and D_2 with their Zeeman components in the transverse effect as well as their state of polarisation are shown. M and S denote the mid-point and the centre of gravity of D_2 and D_1, D_2 being twice as intense as that of D_1. The final positions of the individual components, when Paschen-Back effect sets in are connected with their initial positions by oblique straight lines, with the difference that the scale of $\Delta\nu_{\text{norm}}$ in the final position is on a arbitrary bigger scale than in the first position. The components within brackets as (π) and (σ) denote that their intensities asymptotically approach to zero values in the final stage of the transformation. On both the sides of the central π component there are two (σ) components, which have zero intensity and are therefore not at all visible. The same remark applies to the case of the two (π) components coinciding in position with the two (σ) components.

We can now explain why the two π components of both the p terms coincide with the centre of gravity S of D_2 and D_1. Starting from equation (20), we obtain by approximation in the limit $v = 0$.

$$\Delta\nu = m \pm \tfrac{1}{2}\left(1 + \frac{mv}{k - \frac{1}{2}}\right) \ldots\ldots\ldots (26)$$

In accordance with our original assumption about $\Delta\nu$ we put

$$\Delta\nu = \frac{\Delta\nu'}{\Delta\nu \text{ norm}} \ldots\ldots\ldots\ldots\ldots (27)$$

Where $\Delta\nu'$ is measured in cm^{-1}, remembering $v = \dfrac{\Delta\nu_0}{\Delta\nu_{\text{norm}}}$, we obtain from (26)

$$\Delta\nu' \mp \frac{m}{2k-1}\Delta\nu_0 = (m \pm \tfrac{1}{2})\Delta\nu_{\text{norm}}.$$

For the π components of the Paschen-Back triplet we have to set $m \pm \frac{1}{2} = 0$. Thus for the p term we obtain $\Delta\nu' + \frac{\Delta\nu_0}{6} = 0$, as $k=2$. The position $-\frac{\Delta\nu_0}{6}$ from M coincides exactly with the centre of gravity S, and hence the position of the π components is explained.

Similarly we can account for the position of the σ components by applying the selection principle $m \pm \frac{1}{2} = 1$.

Voigt's theory also furnishes us with a means of calculating the ratio of the intensities of the components in the Paschen-Back effect, as has been done by Sommerfeld. Lande has extended the results of Voigt's theory to the term-combinations of higher multiplet systems, but Sommerfeld considers this to be without any experimental basis, as the measurements in the Paschen-Back effect have not been pushed to that degree of precision, which the extension of the theory by Lande demands. Hence Sommerfeld mentions of an empirical generalisation by Pauli,[1] which explains some of the observed results in the case of triplets and multiplets of higher system.

4. CONCLUSION

We have thus reviewed the progress in the interpretation of the complicated Zeeman types of spectral lines. The excellent quantitative measurements by Back[2] of the Zeeman types of Manganese confirms the spectral classification of the element by Catalan,[3] and places Lande's theory on a pretty secure basis. The recent work of Zeeman[4] and his pupils on the Zeeman patterns of neutral scandium and ionised scandium (Sc+) has settled some doubtful points in the classification of the spectrum-lines of this element by Catalan;

[1] Pauli Zs. f. Phys., 16, 155 (1923).
[2] Back, loc. cit.
[3] Catalan, Phil. Trans., London, 223, 127 (1922).
[4] Goudsmit, Mark, and Zeeman, Proceedings of the Royal Academy of Amsterdam, 28, 127 (1925).

thus the work of Lande in this direction has been a source of powerful aid in the classification into series of the many-lined spectra of some elements, in so far as the data on Zeeman-effect is available. The rapid progress which is being made in the measurements of complex Zeeman types like those of Neon, will enable us in the near future to understand the nature of the complicated spectra of Bismuth, Tin, Lead and Antimony, and thus throw much light on the structure of the atom.

ON A NEW PROTEOCEPHALID CESTODE FROM AN INDIAN FRESH-WATER FISH

BY

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(With Plates 1 and 2.)

Very little work has so far been done on the cestode parasites of Indian fresh-water fishes. Apart from the brief descriptions of Southwell (1913—a, b ; 1915—a, b) there exists a paper by Woodland (1924) describing a new Bothriocephalus, and two new Proteocephalids. One of the latter he regarded identical with Southwell's Ophryocotyle bengalensis, but still preferred to name it Gangesia wallago in this paper. Subsequently, however, in another paper (1925—b) he agrees to call his Gangesia wallago as P. bengalensis. The species of Proteocephalus described here is interesting not only because of some remarkable features in its anatomy but also because it is one of the very few species of the genus known from Indian fishes.

Proteocephalus ritaii, n. sp.

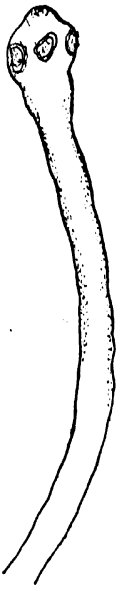
The cestode occurs in the duodenum and small intestine of the local Siluroid fish, Rita rita (=Rita buchanani, Day), obtained from the rivers Ganges and Jumna. The species is not very common, for out of about 100 fishes examined during the course of a whole year only ten per cent carried the worm. It is interesting to note that younger fishes not exceeding ten or twelve inches in length were without exception found free from the parasite. The writer had an opportunity of examining most of the local fishes, and has so far failed to detect

this species from any other fish; hence it may be reasonably concluded that the infection is probably of a specific nature. Only four perfect scolices have yet been obtained, one of which was accidentally lost. The worms were kept alive in normal salt solution for two to three days, and were fixed in Mann's and Bouin's fluids with and without pressure. Permanent preparations were made from pieces pressed between two glass slides before fixation, and horizontal and transverse serial sections were cut from specimens not so treated. Fairly large portions of the strobila were preserved in 5% formalin.

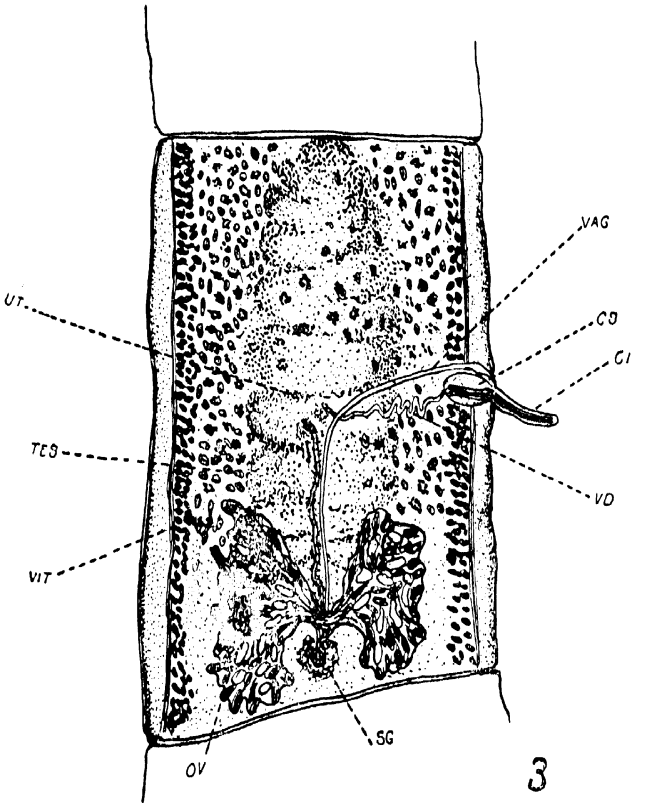
External Anatomy

Proteocephalus ritaii is a long, white, fairly transparent worm. The length of the cestode varies greatly; living specimens in salt solution measured about 75mm. to 125mm. A single specimen obtained from one fish was well over 100mm. long. The greatest breadth attained when alive is about 3mm., but well-preserved unpressed formalin specimens in their widest part are about 2.18 mm. broad. Therefore this tapeworm is considerably longer than P. tigrinus (30—40 mm.), P. beddardi (40—80 mm.), P. synodontis (30 mm.), P. bengalensis (35 mm.), Gangesia macrones (28—56 mm.) and Icthyotaenia fillicolis (24—33 mm.)—the allied fish cestodes. The number of proglottids is very large ranging from about 600 to 1,000 and probably more. In the single specimen of about 100 mm. length, mentioned above, about 750 segments could be easily counted, and a mounted preparation consisting of 10 mm. in length of the anterior portion of the strobila, just posterior to the neck, contains more than 300 segments.

The head or scolex is small but distinctly set off from the neck. It is not very conspicuous when fully elongated, and is knob-like or pear-shaped in outline in preserved specimens, measuring 0.224 mm. in breadth and 0.144 mm. in length. The four suckers with their cavities facing outwards and anteriorly appear to be borne on protrusible lobes separated



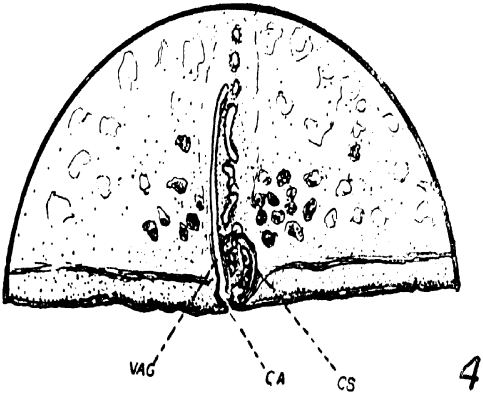
1



3



2



4

from one another by four longitudinal grooves. Each sucker has a muscular portion and a distinct thin-walled free edge surrounding a circular opening. The suckers are rather minute structures, being only about 0·045 mm. in diameter, and like all other parts of the scolex, are unarmed possessing neither spines nor spine-lets. The apex of the scolex is slightly prominent and bears in its centre a rosette of short muscular papillæ, apparently devoid of lumen. It may be, as suggested by Woodland (1925—b), neither a functional apical sucker nor a mere "muscle plug" remnant of a muscular rostellum. In this respect and also in its size this scolex resembles that of P. tigrinus. The unsegmented neck is peculiarly long. It measures 5 to 10 mm. or even more according to the nature of contraction of the anterior region, and in the specimen whose scolex dimensions are noted above its narrowest part does not exceed 0·112 mm. in width. The neck gradually broadens out posteriorly and passes imperceptibly into the anterior proglottids. The latter are very narrow being about three times as broad as long, but posteriorly they increase in length proportionately. The anterior mature proglottids (from 250—350) are nearly twice as broad as long, but the posterior mature proglottids, above 400, are just as broad as long; later on the length preponderates over the breadth and gravid segments are a bit longer than broad.

The sides of the proglottids are more or less salient, but neither do the corners project nor do the hind borders overlap succeeding proglottids. The genital openings alternate irregularly and do not present any regular sequence, but at indefinite intervals there is a marked tendency towards an unilateral arrangement for the ducts of 5 to 8 consecutive segments repeatedly open on the same margin as indicated by the two following series :—

(1) RLLLLLRRRLLRRLLRLLLLLLRLR.

(2) RLLLLLLLLRLLRLRRLLLRLLLLR.....13 segments.....LLLL.....17 segments.....LLLLLLRR.

The openings are always situated somewhat in advance of the middle of the proglottis margin, and the vaginal aperture is invariably anterior to that of the male duct. In unpressed specimens they are situated at the base of a notch in the proglottis margin forming a sort of genital atrium or cloaca, but in well-flattened preparations a genital atrium becomes indistinct. The cirri are often seen projecting out of the pores and when fully everted (as is usually the case in portions of the strobila flattened between slides before fixation) measure 0·26 mm. to 0·35 mm. in length and 0·032 to 0·048 mm. in breadth.

Internal Anatomy

The neck as well as the entire strobila is covered by a well-developed cuticle consisting of a dark staining outer layer, and a more homogeneous feebler staining inner layer. Following the cuticle is a layer of circular muscle fibres, and then one of longitudinal muscle fibres (sub-cuticular). Another more powerful layer of longitudinal muscle fibres is situated deeper in the parenchyma dividing it into a cortical and a medullary portion.

The excretory system consists of two main longitudinal vessels situated ventrally to the inner side of the deeper layer of longitudinal muscle fibres at a distance of about one-fifth the breadth of the proglottid from the margin.

The nervous system is apparently of the usual type. Two longitudinal nerve-trunks run down the lateral margins of the body just internally to the inner layer of longitudinal muscle fibres.

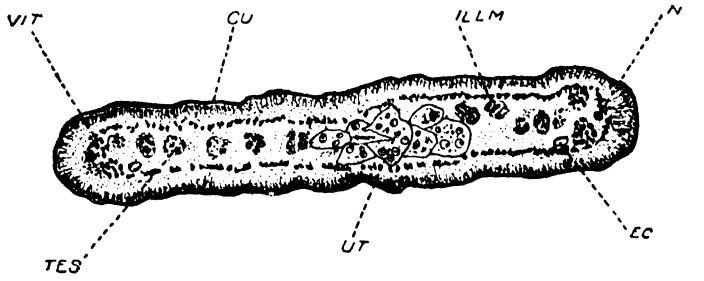
Male Reproductive Organs—The first rudiments of the testes appear in segments 40 to 60, but in whole mounts are detected about the 100th segment, and become fairly established after another twenty to thirty segments. They reach maturity about the 150th segment, and appear as small roundish sacs in subsequent proglottids situated in a continuous dorsal field in the medullary region. In mature segments their

number varies from 150 to 200: seen in surface view, 100 to 125 lie in that longitudinal half of the proglottid which does not contain the genital ducts and their openings; 30 to 50 in the quadrant anterior to the transverse reproductive ducts, and 20 to 30 in the quadrant behind them. The testes are usually situated entirely anterior to the ovaries, and dorsal to the uterus. They measure in transverse sections 30 to 40 microns, and in flattened toto-preparations 40 to 60 microns, and are sparsely situated in the region of the uterus, the male and female ducts. The vas deferens is the first part of the genitalia to be clearly differentiated. Its inner portion is easily visible in segments 50 to 60, but it is not before the 160th segment is reached that it is seen right up to the proglottis margin. The breadth of the strobila in this region is only 0·75 mm. The cirrus sac makes its appearance in segments 125 to 130, but becomes clearly established in segments 140 to 150. The vas deferens in a mature proglottid commences as a coiled delicate tube from about its middle and running a more or less sinuous course towards the outer margin becomes continuous into the cirrus. The cirrus sac extends roughly over one-sixth of the breadth of the proglottid. It is oval in shape and uniform in size and thickness and measures in horizontal sections of mature proglottids 0·128 mm. by 0·192 mm. When unpressed or contracted it contains coils of the ductus ejaculatorius. The cirrus is protrusible as mentioned above and has muscular walls with a narrow lumen.

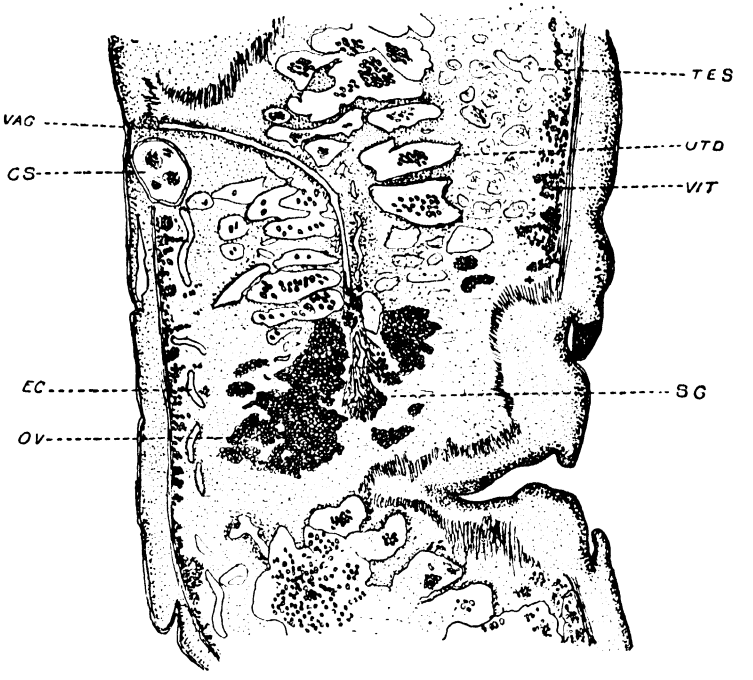
Female Reproductive Organs—These do not appear much earlier than the male organs. The first rudiments of the ovaries make their appearance in the same segments as the testes or in some cases a few segments anteriorly. They begin to assume their mature form in about the 100th segment, and after traversing another 50 segments become clearly established. The ovary is, as usual, bilobed and granular when viewed from the surface: each lobe is made up of many elongated follicles and is transversely broadened in the anteriorly placed mature

segments, but it gradually assumes an approximately circular or pear-shaped outline in the hinder segments. It is confined to the posterior one-third of the segment and the two lobes are connected medially by a prominent isthmus, to the dorsal side of which lie the vagina, the uterine duct and the oviduct. The shell-gland is situated close behind the ovarian isthmus. The oviduct runs from the isthmus towards the shell-gland, and after meeting the vagina passes through the shell-gland and enters the uterine duct. The vagina is slightly dilated in the vicinity of the marginal opening and runs inwards parallel and anterior to the vas deferens. Before it approaches the middle line of the proglottid it turns backwards, passes posterior to the vas deferens and takes a straight course towards the shell-gland. The vitellaria are of the multivitellate type consisting of bands of numerous small acini running along each lateral margin of the segment on the inner side of the longitudinal layer of muscle fibres.

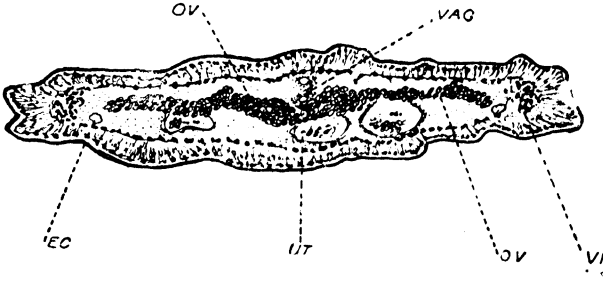
The uterine rudiments become visible after the first 100 or 125 segments as short narrow granular pillars running in the antero-posterior axis about the middle of the segments. In segments 130 to 140 the uterus becomes a distinct elongated sac-like structure, but the eggs appear clearly after another hundred segments or more. The lateral diverticula develop about the 265th segment and by the 275th segment cover the middle third part of the width of the proglottid showing eight to ten branches on each side. In the fully mature segments the posterior one or two pairs of the uterine diverticula overlap the anterior one-third or even half of the ovary, but do not extend further back. In ripe segments the condition of the uterus is very much like that of P. beddardi (Woodland, 1925—b). It shows two distinct parts, a narrow uterine canal which runs dorsal to the ovarian isthmus and an egg-storing uterus proper with its median chamber and paired lateral diverticula. The uterine duct runs anteriorly to the ovary alongside the vagina to a comparatively greater


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distance than it does in P. beddardi, and opens into the wide median uterine chamber a little distance behind the line of the vas deferens. The ova measure 0.01 mm. in diameter, and the eggs in the uterus of mature proglottids 0.016 mm.

The above-mentioned characters thus bring the species within the genus Proteocephalus (as defined by La Rue 1914, and Woodland 1925), and subgenus Teleostaenia (Woodland).

The new species P. ritaii is distinguished as follows :— Length of strobila 75 to 125 mm. with a maximum breadth of about 3 mm. Proglottids numerous 600 to 1,000 in number in mature worms; very narrow in front, square about the middle of the strobila, and elongated in hinder segments. Segmentation distinct, corners do not project out, nor do the posterior borders of segments overlap the succeeding ones. Scolex small 0.224 mm. long, and 0.144 mm. broad, with four longitudinal grooves but without spines. Suckers minute, unarmed with projecting free edges. Neck fairly long gradually increasing in diameter up to the first traces of segmentation. The genital organs like those of Proteocephalus, uterine diverticula 8—12 in number. Testes in medulla in a continuous field, number 150 to 200 in fully mature segments. Genital apertures a little in front of the middle transverse line of the proglottid; vaginal opening invariably anterior to the cirrus sac opening. Uncontracted cirrus sac extends over one-sixth to one-fifth of the breadth of the proglottis.

Habitat—Duodenum and small intestine of Rita rita from rivers of Northern India.

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DESCRIPTION OF PLATES 1 AND 2

Figures 1 and 2 were drawn with the camera lucida, the others were all drawn with the aid of Spencer's Electric Drawing Apparatus.

LETTERING

CS, Cirrus Sac ; Cu, Cuticle ; EC, Excretory Canal ; GA, Genital Atrium ; ILLM, Internal Layer of Longitudinal Muscles ; N, Lateral Nerve ; OV, Ovary ; SG, Shell-gland ; TES, Testes ; UT, Uterus ; UTD, Uterine Diverticula ; VAG, Vagina ; VIT, Vitellaria.

PLATE 1

Fig. 1—Anterior end of P. ritaii in outline, showing Scolex with Suckers and Neck. X 30.

Fig. 2—Scolex mounted entire, showing the Four Suckers with marginal flaps round the Apertures ; the Apical Organ, and the Grooves between the Suckers. X 45.

Fig. 3—A Mature Proglottid. X 25.

Fig. 4—Part of Horizontal Section showing Genital Atrium, and the Cirrus Sac and Vagina Openings. X 40.

PLATE 2

Fig. 5—Horizontal Section (slightly oblique) of a Mature Proglottid. X 40.

Fig. 6—Transverse Section of a Mature Proglottid anterior to the Genital Openings. X 50.

Fig. 7—Transverse Section of a Mature Proglottid in the region of the Ovarian Isthmus. X 50.