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[*Bhāratīya Purābhilēkha Patrikā*]

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*Papers presented at the First Annual Congress of the Society held at Dharwar in January, 1975.

ISSUED
IN MEMORY
OF
Professor K. A. NILAKANTA SASTRI
(1892—1975)
HONORARY FELLOW
Epigraphical Society of India

FOREWORD

G. S. GAI, Chairman

I AM GLAD THAT the first issue of our Journal *Purābhilēkha-Patrikā* has been well received by the scholars interested in the field of Epigraphy. It is hoped that this second issue of the Journal will also be welcomed by the scholars. In bringing out this issue, M/s Geetha Book House, Mysore, have again shown keen interest as publishers and our thanks are due to them. I hope that more and more members will join the Epigraphical Society of India and evince interest in its activities in the days to come.

EDITORIAL

K. V. Ramesh, Executive Editor

TRUE TO ITS MOTTO *Vṛiddhirastu*, the Epigraphical Society of India has taken encouraging strides of progress even during the short span of less than two years of its existence. The first issue of the Society's Journal 'Studies in Indian Epigraphy' (Bhāratīya Purābhilēkha Patrikā) has been well received by scholars in India and abroad. It is, therefore, with a sense of confidence and fulfilment that we place the second issue of the Journal before Indologists.

We have not yet been able to realise our goal of bringing out more than one issue of this Journal per year. It is hoped that concerned bodies will come forward to help the society financially so that we could frequently bring out publications of high academic value.

It is with a sense of deep sorrow and gratitude that we have dedicated this issue to the memory of late lamented Prof K. A. Nilakanta Sastri, the doyen among Indian Historians and an Honorary Fellow of the Society right from the date of its inception till the date of his demise.

We thank the Chairman, Secretary and Treasurer of the Society for their willing help and cooperation. We also thank Shri H. R. Raghunatha Bhat of Mysore University for preparing the line-drawings for articles 2 and 3 and Shri M. J. Sharma of Chief Epigraphist's Office for helping us with proof correction.

The Editorial Board once again places on record the Society's deep debt of gratitude to M/s Geetha Book House, Mysore and to Shri Satyanarayana Rao in particular for agreeing to publish the second issue of the Journal. Shri Satyanarayana Rao's abiding interest in furthering the cause of epigraphy has been a source of strength to the Society. Our thanks are also due to the partners of M/s Vidyasagar Printing and Publishing House, Mysore for their neat execution of printing work in a short time.

For and on behalf of the Editorial Board

SECRETARY'S REPORT

A. V. Narasimha Murthy

THE FORMATION OF THE SOCIETY was hailed by all scholars interested in Indological studies both in India and abroad, as a major step in furthering the cause of Indian Epigraphy. This was amply demonstrated by the great success of the first Congress of the Society held at Dharwar. But it has to be noted that the Society still has not attracted members in any big way. I hope that the membership of the Society would grow in the years to come. Further, I am also to state that we have not received any grants from any Government so far and hence we have to depend entirely on our members, both individual and institutional.

I am very happy to report that the First Annual Congress of the Society held at Dharwar in January, 1974 was a grand success. A number of scholars, old and young, participated in the deliberations and a number of papers were presented and discussed in the sessions. On behalf of the Society I thank the authorities of the Karnatak University and the Department of Ancient Indian History and Epigraphy for the nice arrangements they had made.

We are grateful to Dr D.C. Sircar, former Govt. Epigraphist for India, for having accepted our invitation to be the General President at this Session at Indore. We are greatly beholden to Mahamahopadhyaya V. V. Mirashi, one of the greatest Indian Epigraphists, for having agreed to receive the Copper Plate as a token of our honour for his great services to the cause of Indian Epigraphy.

We are meeting at Indore for our Second Congress. In this connection we have to be grateful to Dr P. G. Deo, Vice-Chancellor of the University of Indore for kindly inviting the Society to hold its Second Session at Indore. The Department of History of the Indore University has already earned a great name by its contributions in the field of Indian Epigraphy. Principal B. N. Luniya, Dr H.V. Trivedi, Dr S.K. Bhatt, Sri D. L. Johri and others have taken great pains to organise the Congress at Indore. But for the keen interest of Dr S. K. Bhatt, the Local Secretary, the Congress could not have been arranged in such a short time. The Society is also grateful to the members of the reception

Committee, particularly to Sri Bhupendra Kumar Sethi and Sri Rajendra Kumar Sethi, Chairman and Vice-Chairman respectively. We also thank Prof K. D. Bajpai who was instrumental in arranging Indore as the venue of the Congress.

I wish to record here my sincere thanks to the Chairman, Treasurer and Executive Editor of the Society for the unstinting cooperation they had extended to me in discharging my duties.

With the Second Congress, the Society is completing its second year and enters into the third year with greater hopes of serving the cause of Indian Epigraphy.

PRESIDENTIAL ADDRESS :
FIRST EPIGRAPHICAL SOCIETY
CONGRESS, DHARWAR, 1974

B. Ch. CHHABRA

*Brāhmīm Lakshmīm Gaurīm
Vīrām dēvīm prasanna-vadan-ābjām
anusandadhāmi mātaram =
ādara-namr-ōttamāṅgō' = ham*

IT GIVES MY WIFE AND MYSELF great pleasure indeed to be able to be in your midst on this auspicious occasion of the very First Annual Congress of the Epigraphical Society of India. And I am keenly sensible of the honour done to me by its organisers in asking me to preside over it. I am very grateful for the conferment of this distinction on my humble self. I know, and you know, too, there are older and abler persons than myself ; yet the reason for electing me as President seems to be that I happen, officially speaking, to be the senior most of the retired Government Epigraphists alive—my apologies to my colleagues, Shri N. Lakshminarayan Rao, Dr. D. C. Sircar and Shri H. K. Narasimhaswami. I understand that Dr. G. S. Gai, the present Government Epigraphist for India, or the Chief Epigraphist as the designation stands changed now, is also shortly to join the line of retired ones. We shall then be five of us in a row, alive and kicking. It stands to the credit of Dr. Gai, however, that he has chiefly been instrumental in giving rise to the Epigraphical Society of India, of which we are now celebrating the First Annual Congress. It is indeed a dream come true. I shall have occasion to revert to this subject presently.

With your permission, Ladies and Gentlemen, I would first of all emphasize the role and importance of epigraphy. In fact, it is amusing to recall that, in my life as an epigraphist, I have come across many even among the educated who do not know what epigraphy or epigraphist really means. Well, an epigraph means 'old writing' or 'inscription' usually engraved on stone or any other hard substance such as wood, metal, ivory and even bricks. As such, epigraphs are different from manuscripts on birch-bark, palmleaves or paper that come, as a rule, under archives. There are certain exceptions to this general definition. The science of deciphering and study of, as well as research into, epigraphs is thus called epigraphy. It will be news to many to be told that India is specially rich in epigraphs. The total of old inscriptions discovered and copied so far must be running into one hundred thousand and more, and every year quite a few hundred fresh discoveries are made by the office of the Chief Epigraphist. Dr. Gai may be able to enlighten you as to the more exact figures. I am talking of only decipherable inscriptions, the earliest being those of the Maurya period, the third century B. C., a few being earlier still. South India, it may be noted, has contributed the largest share to the old inscriptions so far discovered. These are found engraved on rocks, pillars, temple walls, floors, towers, pedestals of images, etc., as well as on copper plates, bronzes and so forth. Naturally they are couched in different languages and different scripts, which, in the course of succeeding centuries, underwent various changes, making their study as interesting as difficult. At the same time, it may be remembered that it is these self-same inscriptions that form the back-bone or life-blood of the history of India, especially of the early phase there-of, as we know it now. It is no exaggeration to say that of all the different data for re-constructing the ancient history of a nation, such as tradition, literature, foreign notices, monuments and other archaeological remains, it is old inscriptions or epigraphs that are most reliable and trustworthy. This is specially true in the case of India where the literature, however hoary and extensive, is so mixed up with legend and fiction, not to speak of the traditions which do not provide a solid foothold. This would explain the role and importance of our epigraphy. It is further noteworthy that our earliest inscriptions are couched not

in Sanskrit as one would expect, but in Prakrit. In the second stage Sanskrit dominates the field. Still later regional languages as well as Persian and Arabic also make their appearance. As in art and literature, the trend is the same from simplicity to complexity and from complexity to degeneration !

Before I proceed further, I would like you to join me in paying a tribute of praise and admiration to the pioneers in the field of Indian Epigraphy. It is not possible here to count and mention them all by name. The most out-standing is James Prinsep who succeeded in supplying us with the key for 'the unlocking, between 1834 and 1837, of the mystery of the Brāhmī and the Kharōshthī scripts, thus removing the thick crust of oblivion which, for many centuries, had concealed the character and language of the earliest Indian inscriptions'. He started the ball rolling and the game progressed in rapid strides. Charlez Masson, A. C. Burnell, Rudolf Hoernle, George Bühler, Frans Kielhorn, Heinrich Lüders, Bhau Daji, Bhagwanlal Indraji, John Faithfull Fleet, J. Ph. Vogel and R. G. Bhandarkar were some of the other players. It is again noteworthy that Germany predominated the team—E. Hultzsch, the very first Government Epigraphist for India, was, by the way, also a German scholar, equally well-versed in Dravidian and Sanskritic epigraphy. He made Ootacamund his headquarters. It was only recently that the headquarters were shifted to Mysore where they now continue. Hultzsch was followed by Sten Konow and F. W. Thomas. They, however, did not come to India. We need not go into such official details here. By the way, I may, however, suggest here that our Epigraphical Society of India will do well if it compiles a book, giving a comprehensive history of Indian epigraphy, under a suitable title, in which life-sketches, with photographs of all the past savants, both Indian and foreign, official or otherwise, should be given, high-lighting their scholarly achievements. In fact a begining of such a project has already been made in the office of the Chief Epigraphist.

To resume our subject, I was pointing out the nature and importance of our inscriptions as the most trustworthy source of the history of ancient India. The concept of history has in recent years undergone a radical change. It is no longer a mere narration of ruling dynasties, their warfare, victories and defeats. It is much more embracing as it does all the cultural aspects

such as arts, commerce, religion, philosophy, administration and what not. And our rich heritage of epigraphy sheds welcome light on all these various subjects, and the specialists have made and are making proper use thereof weaving out treatises and dissertations on their special subjects. Take, for instance, *Historical Grammar of Old Kannaḍa* by Dr. G. S. Gai, your Chairman. It is, we are told, based entirely on the Kannaḍa inscriptions of the 8th, 9th and 10th centuries A.D. This work was Dr. Gai's Doctoral thesis, approved by the University of Bombay some thirty three years ago. Dr. D. C. Sircar has compiled a dictionary of terms peculiar to Indian epigraphy, concerning in a large measure, the administration. If you listen to the news broadcast in Hindi, you hear many artificial and newly coined terms such as *vidhēyaka*, *vaidhānika*, *adhyādēśa*, etc., some of which baffle even the learned Sanskritists as to their true import. On the contrary, if you turn a few pages of Dr. Sircar's Epigraphical Dictionary, you will find hundreds of ready made terms for which our government is getting newly and specially coined ones. Dr. Moti Chandra, may his soul rest in peace—we lost him only last month—has written quite a few books on art and allied subjects. He has made use of our inscriptions, especially in his book entitled *Sārthavāha* which deals with trade routes in ancient India as well as sea voyages by Indian traders, especially in South-East Asia. Finally, the finest of fine arts, namely poetry, pure and simple, is found in abundance in our inscriptions that are in the nature of *praśastis* and *tāmraśāsanas*. An anthology called *Abhilēkha Saṁgraha* has been brought out by the Sahitya Akademi, New Delhi. This contains some select specimens of ornate poetry found in our *abhilēkhas* or epigraphs. Some of the Sanskrit poems found there rival even those of Kālidāsa and Bhāravi, but most of the Sanskrit scholars do not know even the existence of them. All this shows what a treasure-house of varied useful information our inscriptions are.

I have just alluded to sea-voyages by Indian traders. That points to quite a few thousands of Sanskrit inscriptions found in the lands and islands of South-East Asia, some times referred to, on that account, as Greater India. I would not dilate upon that aspect of Indian epigraphy here. Suffice it to say that quite a number of Dutch and French savants are the pioneers

in that branch, like Henry Kern and George Coedes. To the credit of this last mentioned, among other contributions, is the collection of *Les Inscriptions du Cambodge (The Inscriptions of Cambodia)*, edited and published in seven volumes with seven more volumes, containing their photographic illustrations separately.

Here I may also refer to other countries outside India where in some form or other, Indian epigraphy is found, such as Ceylon or Śrī-Laṅkā, Burma, Nepal, Tibet and Afghanistan. Pakistan I count in India for the purpose of our subject. And this brings me to the most exciting part of our epigraphy, namely the Harappan Seals—seals and sealings, containing inscriptions or legends on them in what is popularly known as Indus Valley script. Scholars all over the world are busy in trying to decipher this peculiar script.

We are now looking forward to another James Prinsep who would supply us with a key for unlocking the mystery of this Indus Valley script. And who knows he is here in our midst. Harappa and Mohenjodaro, the two original and major sites of the so called Harappan Culture or Indus Valley Civilization are now in Pakistan. It is now over fifty years since they were discovered. Subsequently quite a few similar sites have been discovered in various parts of India, in Uttar Pradesh, Rajasthan and Gujarat, as you know. All these sites have yielded, among other things, steatite seals and sealings with legends and figures similar to those discovered at Harappa and Mohenjodaro. And scholars both in India and outside have been busy in trying to solve their mystery. Various theories are put forward and none has so far been accepted as hitting the nail on the head. I need not go into details thereof, as most of you know them much better than I can explain. When I hinted that a James Prinsep re-incarnated might be present here in our midst, I meant Mr. S. R. Rao, Superintending Archaeologist of the Mid-Southern Circle of the Archaeological Survey of India. As you know, he conducted the excavations at Lothal in Gujarat, now well-known as a typical Harappan site. Mr. Rao has written a book also on it after years of long study and research. He has devoted himself specially to solving the riddle of the Indus Valley script. And, considering the verdicts passed on his work by the specialists such as Diringer, Mr. Rao has succeeded in

solving the riddle at last. If so, he naturally deserves our warmest congratulations. His book *Lothal and the Indus Civilization* has been reviewed also in an American Journal called *Archaeological News*, in its fall 1974 issue, by Prof. W. W. de Grummond of the Florida State University. Prof. de Grummond, in his lengthy review, points out "Rao has now demonstrated, conclusively I believe, that the Indus peoples used a system of writing parallel to, and no doubt historically related to, that in which the *Ṛigvēda* for instance, is known to us". Since Rao himself is to read to us a paper on the subject in this Congress and is also to explain to us the significance of the Harappan characters, I need not say much here. What I understand of his thesis is that he distinguishes two divisions : (1) Harappan Script 2500-1900 B. C. and (2) Late Harappan Script 1900-1600 B.C., and he assigns phonetic values to the Indus scripts which are identical with those of an almost contemporary script, namely the Semitic which is already deciphered. As for the language, Rao makes us believe that the Harappan language was closely affiliated to Vedic Sanskrit. We shall eagerly look forward to listening to Mr. Rao's discourse on the subject for full explanation. After all is said and done, Rao has to convince those scholars, such as, for instance, Mr. B. B. Lal, till recently the Director General of Archaeological Survey of India, who hold different views on the subject. The seminar on the subject is likely to clinch the matter once for all.

I have already taken too much of your precious time. I would, however, very much like to draw your attention to another ticklish problem of a similar nature, namely the petroglyphs or rock-carvings in Hawaii, Tahiti and other numerous islands of the Pacific Ocean. I had occasion to study them on spot in Hawaiian islands once in 1955 and again in 1963. Mrs. Ruth Kundsén Hanner of Honolulu has written a book on these petroglyphs. It contains a chapter on the Hindus, which draws attention to the signs and symbols that are similar to some of our Harappan signs as also to those that are found on certain Punch-marked coins of North India. You may be interested to know that there is a society, called Polynesian Epigraphical Society at Arlington, Massachusetts, U. S. A., devoted to the studies of these petroglyphs and especially of the Maori inscriptions. Dr. Barry Fell, native of New Zealand, now at the

Harvard University in America, has been busy in making a special study of the subject. I have recently received a cyclostyled volume, containing 18 of his papers on the subject, which is being presented to the Epigraphical Society of India.

Epigraphical Society of India—I am happy that my friends in India also conceived the idea of starting an Institution devoted exclusively to epigraphy. I have long thought that a country so vast and so rich in epigraphical wealth should have a separate Epigraphical Survey of India independent of the Archaeological Survey of India, in order to do full justice to the subject. It may be recalled that Anthropology used to be a part of the Zoological Survey of India, but it was found necessary later on to form a separate survey—Anthropological Survey of India with Dr. B. S. Guha as its first Director, if I remember right. Epigraphy in India stands on similar footing. Any way, I am glad that we have atleast formed the Epigraphical society of India, and hope that it will enjoy the patronage of the Union Government as well as of the State Governments in fulfilling its objects and aspirations.

Our Society may already have, on its list, specific works to be published in the near future. I have already recommended to it a directory of past epigraphists. I have with me material ready for a commemoration volume, namely the Vogel Commemoration Volume. The famous Dutch publishers, E. J. Brill of Leiden, Holland, have consented to bring it out. If our Society is agreeable, I shall pass on the material to the Society. Let it be published under its own name. Prof. Vogel, by the way, was my Guru in epigraphy at the State University of Leiden during 1931-1934. I have thus a special attachment to him. The word *Vogel* in Dutch means 'bird'. Hence the projected volume in his honour has been named by me as *Suparṇa*, which, as you know is a synonym of *Garuḍa* as also of the God *Vishṇu* *Suparṇō Vāyuvāhanaḥ* (*Vishṇusahasranāma*).

Let me close my address with this auspicious invocation, inaugurating the First Congress of the Epigraphical Society of India: *Āśramaḥ Śramaṇaḥ Kshāmaḥ Suparṇō Vāyuvāhanaḥ!*

INDUS SCRIPT AND DRAVIDIAN

PENTTI AALTO

IN THE LAST FEW YEARS renewed efforts have been made to decipher the script used in the seals found in the archaeological remains of the Indus civilization. Several of these attempts, among them that of the Finnish team, have resulted in the proposal that Dravidian is related to the "Indus language".

The aim of our studies was from the very beginning to investigate the possibilities of computer techniques in deciphering an unknown script. Previous attempts at decipherment were therefore purposely overlooked. However, after we found out that the results achieved seem to fit in with facts known or deducible from Dravidian, several reviewers of our reports referred to similar results by previous analysts.

It, therefore, seems appropriate to examine at least some of the earlier studies in order to see whether and in which way our methods and results conform to or differ from those of other researchers. It is in our opinion neither possible nor necessary to review *all* of the previous attempts. We, therefore, focus our attention on certain more important studies, especially on ones that have been based on the hypothesis that the language of the Indus script is related to Dravidian.

The publishers of the Mohenjo-daro excavation report already contributed in several ways to the understanding of the nature of the script. In his official account (I, pp. 39 ff.) Marshall himself briefly discusses the possible relationships of the script. He points out that there is certain *prima facie* evidence in favour of the theory that the Brāhmī alphabet originated in a pictographic script, as already postulated by Cunningham, but warns against attaching

too much weight to outer resemblances of the scripts and especially against assuming that the sound values of both these scripts were the same. Marshall thus seems to polemicize the hypothesis advocated by Langdon in the second volume of the report (pp. 423 ff.). Even the latter admits that the Indus script cannot be transliterated from the Brāhmī.

As to the language of the inscriptions Marshall (l. c. p. 42) regards Dravidian as the most likely conjecture. The Dravidians were, according to him, the precursors of the Aryans over most of Northern India, and they are also the only people likely to have been in possession of a culture as advanced as the Indus civilization. There are to this day still the Dravidian Brahuis in the close vicinity of the Indus valley. Marshall admits that all this is so far only a conjecture.

In chapter XXII (vol. II, pp. 406 ff.) Sidney Smith and C. J. Gadd examine the Indus script as an introduction to the sign manual published in vol. III. In addition to a description of the seals, inscriptions and signs, some highly hypothetical suggestions are submitted. Smith comes to the cautious conclusion (p. 422) that "It is disappointing, but wise, to admit that these inscriptions may in fact mean, on the present evidence, almost anything". In the following chapter (pp. 423 ff.) Langdon presents the above theory concerning the relationship between the Indus script and the Brāhmī. In the Postscript (pp. 453 ff.) dated 13th July 1928, Langdon, on the basis of the archaic Sumerian documents excavated at Jemdet Nasr, comes to the conclusion that there seems to be a more definite connection between the most archaic Sumerian script and the Indus script than he had previously been disposed to admit. If both his hypotheses are to be assumed as true the Brāhmī could be derived from the Indus script only through "Aryan Sanskritists who knew the ideographic meanings, translated them into Sanskrit and derived the syllabic values from the Sanskrit words". The complexity of this hypothesis in our opinion speaks hardly in favour of a relationship between these scripts.

In the opinion of F. W. Thomas, who in the *JRAS*, 1932 reviewed the Mohenjo-daro publication, Smith, Gadd and Langdon had been able to demonstrate that the direction of the script was from right to left, to show that some of the signs must be independent parts of phrases, and to furnish authoritative lists of

the signs grouped according to their occurrences. They also indicated resemblances with signs found in other scripts. Since these scholars were specialists of the contemporary Mesopotamian culture they were also thoroughly familiar with the routine in the light of which the Indus texts were to be interpreted. "But the experts are rather pessimistic in regard to the possibility of decipherment, unless the Sumerians, with their highly philological tendencies, have left somewhere a vocabulary or a bilingual" (p. 461). Thomas points further out that so far "no proven case of merely syllabic value" has been detected among the Indus signs. The publishers had in the opinion of Thomas truly recognized the clear pictographs as well as the signs for "cross-road" and for "great", which seemed to be similar to Sumerian signs with these meanings. He suggests further that the signs CCCVII-IX (Key Nos. 1 and 2) are "too similar to a Sumerian sign for city-wall (*dūru*), and at the same time too complex, to be otherwise than identical with it".

Thomas then proposes the comparison of certain Indus signs with Chinese signs revealing, in his opinion, "undoubted similarities". He quotes as such cases the oldest signs for 'darkness', 'mountain', 'cross-roads'. The Indus sign CLVII (Key No. 3), would thus be identical with the old Chinese sign for 'fire' or 'flames', while CCLXIII (Key No. 4) resembles the Chinese sign for 'light'. The 'angle' (Key No. 5) used in the Indus script seems to be the same as that in the Chinese used to denote 'heaven', 'god'. Against the writers' opinion that these common signs had been used in the Indus script with the syllabic values of that language Thomas maintained that at least in the case of Sumerian phonetical values might be tested "in connection with any hypothesis as to the language". The first choice would, according to him, be Dravidian: "The sign for 'great', which has the pronunciation *gal*, might prove decisive, if it could be shown to be used... as a mark of plurality since in Tamil *gal* has that value". A look at the Indus texts should have been enough to show Thomas that there the sign (Key No. 6) cannot be a plural suffix: it could much better be the sign for 'great'. It is, on the other hand, hardly to be believed that a sign and its significance could be borrowed while its phonetic reading must be something quite different. The problem therefore seems to be: what is the object depicted as the Sumerian sign for 'great' = '*gal*'?

Smith, Gadd and Langdon interpreted the signs themselves to be syllabic. The short strokes 'I I I I' etc., however, were unknown from elsewhere, and they were therefore compared with the vowel signs of the later Indian writings. Since they seem to occur mostly after the syllabic signs of certain positions, in Thomas' opinion the most likely supposition is that they represent grammatical elements, e.g. flexional particles like those in Tibetan, the two commonest probably being those for 'of' and 'in'. Thomas' reasoning here holds good up to a point. He does not, however, seem to have studied the contemporary routine in seals nor tried to answer the fundamental question, viz. what kind of contents we may expect to find in the Indus seals, since he says (p. 464) "if such expressions as "street", "wall", "house" etc. occur in the texts, we shall have to contemplate, along with names and titles, addresses also as possible items of the information which the texts conceal".

The routine contained in the Old Accadian roll seals has recently been presented in the *Archiv für Orientforschung*, vol. XXII, pp. 12-20 by D. O. Edzard. It shows that the seals are almost exclusively either proprietor seals (198 items) or dedicatory seals (56 items). Only 3 are invocation seals and on a couple only a god or a place is mentioned while 13 are uncertain as to their contents. It seems to us most of the crypt-analysts attacking the Indus script have not given any thought to the contents of the seals in the cultural setting of the Indus civilization.

G. R. Hunter personally investigated all the known Indus seals and submitted his studies in a doctoral dissertation to the University of Oxford in 1929. In addition to F. W. Thomas' presentation of the Mohenjo-daro publication by Marshall and other scholars Hunter reviews the contributions by Mackay, Gadd, Smith and Langdon. Since he knew the material autoptically he was able to propose important corrections to many details of the excavation reports. He points out that the objects in question are obviously seals and must have been used for the purpose of stamping e. g. offerings. Important is his observation (p. 471): "To take the seals as amulets is impossible. For if they were, how do we account for the fact that in about 99 per cent of these objects the writing is reversed as compared with the writing on all embossed, stamped, and moulded objects and with that on the copper tablets? This reversed writing can only be explained as

intended for reproduction by sealing.” Hunter’s dissertation was printed in London in 1934: *The Script of Harappa and Mohenjodaro and its Connection with other Scripts. Studies in the History of Culture*, No. 1. He prepared for it very laborious tables about the occurrences of the single signs, which he also submits to detailed discussion. Attention is also paid (p. 23 etc.) to the routine in this type of text: “It is probable that the seals were intended to serve much the same purpose as the Mesopotamian cylinder seals and that their legends are, therefore, similar in meaning”. His “comparative morphographic tables” are, however, based only on outer resemblances of the signs. This might perhaps sometimes help us to identify the object depicted in an Indus sign, but it cannot be used as a basis for a decipherment in other respects. The phonetic reading of the similar signs of two pictographic scripts can namely be quite independent of each other. We do not know of any pictographic script which had been borrowed. What was borrowed was obviously the very idea of writing, viz. expressing spoken words by visible signs. The clumsiness of the Minoan Linear B can hardly be explained otherwise than as depending on its being borrowed from another people to the language of which it fitted in, which it does not do with Greek.

There are also many other points on which we must disagree; Thus we cannot share Hunter’s opinion (pp. 73, 75, 77) that the various FISH signs are only varieties of one and the same sign rendering dialectally varying pronunciations. The same objection must be made to his explanation of the Key No. 7 as a dialectal variant of the Key No. 8 (p. 110). Hunter deduces from this “variation” as well as from the additional strokes used with the Key No. 9 (called “accents” by Langdon) “that the law of vowel harmony was rigorously observed in Proto-Indian speech”. Hunter also advocates (pp. 90 ff.) the hypothesis that the Indus script is connected with the Brāhmī, and is thus in reality alphabetic. On p. 96, while discussing the supposed numeral signs of the script, he mentions the possibility that a numeral sign may be read as a word or syllable that happens to be a homophone of that numeral, and mentions (p. 108 fn. 1 ff.) in passing that the words for ‘slave’ and for ‘vessel’ may well have been homophonous. On the other hand it is somewhat surprising that (p. 124) the picture of a beetle is interpreted as an ideogram. In what kind of texts would a ‘beetle’ be mentioned?

Of interest is Hunter's explanation (pp. 117 and 125) that the doubled signs like Key No. 10 were originally ideographic representations of the dual number of a word, and were later used for any word that was a homophone thereof. On the basis of the cases where two (different) FISH signs occur side by side he maintains that the language did not permit sequences of two similar syllables. The doubled signs are to be explained as duals (the trebled as plurals, respectively): "Of course it does not follow that a plural or dual meaning is necessarily implied. In many cases the word or syllable for which the doubled or trebled sign stands may be merely a homophone of the dual or plural of the sign". The deduction from the pairs of the FISH signs can hardly convince anybody, nor does the English parallel 'baby' etc. The doubling of Key No. 11 which Hunter explains as being the marker of the Ablative does, however, remain inexplicable. Assuming there are both ideographic and phonetic signs, the doubling in both groups must reflect quite different principles.

Hunter's conclusions seem to establish the script in fact as alphabetic and to postulate an identity of the Indus script and the Brāhmī. A comparison with the Egyptian and Hittite hieroglyphics would probably have suggested that other conclusions may also be possible. Even a syllabic script with only open syllables, like the Cretan Linear B, was probably based on a pictographic script: the signs render the initial open syllables of the names of the objects depicted.

Hunter's presentation of Key No. 9 and Key No. 10 (p. 116) shows that he did not identify them as case markers but considers them as nouns used as last members of compounds. On p. 27 he does, however, state that one is tempted to regard Key No. 9 as the suffix of the genitive case. The supposed relation with the Brāhmī vowel marking makes Hunter explain Key No. 13 and Key No. 14 not as ligatures but as expressing different articulations of the vowels involved.

Hunter's work is impressive and useful because of his thorough knowledge of the material. However, his too narrow knowledge of the other pictographic scripts of the time and his preconceived ideas, especially that concerning the relationship with Brāhmī, strongly reduce the value of his conclusions (cf. the review by E. Burrows in *JRAS*, 1936, pp. 331-2).

Before Hunter's dissertation was published in print P. Meriggi in *ZDMG* 81, 1934, pp. 198-241 published a "decipherment" based on an ideographic interpretation of the texts. He considered a phonetical reading of them totally impossible, although Marshall's proposal concerning the possibility of a connection with Brahui is, according to Meriggi, the only reasonable possibility. He believes that the texts can be understood, at least to a certain extent, without being phonetically read, and that the variations in the "legends" might permit an insight into the "graphical flexion" of the language. If a related living language can still be identified, the phonetical decipherment may be possible. Meriggi does not make any suggestions as to the method with which this identification and the decipherment would be carried out. He states that the "postfixes" are written phonetically, but does not say anything as to how he could read them ("...nachdem die Wörter für "Getreide, Korn, Mahlen" usw. Z. T. in phonetisch ausgeschriebenen verschiedenen Kasusformen bestimmt sind").

Meriggi does not in any connection refer to the routine of the contemporary Mesopotamian seals or of the later Indian seals. It is his belief that the script is pictographic-ideographic, i. e. that every picture means the object depicted, and he (p. 218) defines the texts as being administrative stamps (and thus as containing no personal names) like (Key No. 15) "STAMP FOR HOE CORN ONE QUADRUPLE LOAD". Hunter, however, pointed out (*JRAS* 1932, p. 471) that the very find-spots of the seals suggest that every family in Mohenjodaro possessed a seal: "Only religion can account for this universality". Furthermore, according to Meriggi's hypothesis every kind of agricultural product and every amount of every product would have had its own stamp! F.W. Thomas (l.c.p. 460) already remarked about the Indus seals that "despite the numerals abundant on them they were not labels denoting particular substances and amounts as is proved by the fact that they were for the most part elaborately carved in stone". On the other hand, if the script is not ideographic but phonetic (i.e. logographic), Meriggi's attempt can hardly have brought the solution of the problem any nearer.

Probably the best known of all the researchers who have proposed a decipherment based on Dravidian as the language of the civilization is Rev. H. Heras, S.J. Of his many writings

on the topic we have had an opportunity to use only the *Studies in Proto-Indo-Mediterranean Culture I (Studies of the Indian Historical Research Institute, St. Xavier's College, Bombay, 1, No. 19) Bombay 1953*. Father Heras and his aids obviously had a good command of Dravidian, and they have done much work with the inscriptional material. The method is rather straightforward (p. 61): the remains of Mohenjo-daro and Harappa are certainly non-Aryan. They are most likely Dravidian, but the present Brahuis cannot be descendants of the then inhabitants of Mohenjo-daro. The language spoken by the latter was perhaps the parent of the present Dravidian languages (p. 64). "The grammar of this Proto-Dravidian language must have been in a state of infancy and totally undeveloped" (p. 65). While this sequence of assertions is methodologically built more on possibilities than on probabilities, his statement concerning the nature of the script looks probable: "The script is a pictophonographic script. The signs.....do not stand for syllables and much less for consonant sounds only, but express full words". The last sentence should probably be modified by the addition of a word like "mostly", since the additional strokes (the "accents" of Langdon) may very well be conventional signs rendering syllables.

Heras starts his decipherment with the sign (Key No. 9) which on the basis of its frequency as well as on the routine met on the later Indian seals he interprets as the marker of the genitive (pp. 66 f.). Without any explanation of the sign itself he decides to read it as *adu*, which according to him is the most ancient form of the Dravidian suffix of possession. The silence concerning this important sign is the more peculiar, as Heras considers the script ideographic. On p. 68 he namely describes his method, according to which the meaning of a sign, representing the object to which it refers, was at first settled, and then all the words referring to that concept in all modern Dravidian languages were investigated. The most ancient, sometimes the root only, was selected and "deprived of all suffixes and initial consonants, to obtain the probable word used by the Mohenjo-Darians". The arbitrariness of this method is obvious, to say nothing of the linguistic reconstructions. If, on the other hand, the script were ideographic, it should be understandable in any language. In his paper, referred to above, Meriggi used only German to render the meanings of the picto-

grams. There is, however, no agreement whatsoever between Meriggi's and Heras' interpretations. Despite the above statement regarding the reconstruction of the proto-Dravidian sound values of the pictograms the values given by Heras (pp. 68 ff.) seem in general to be in Tamil form. In addition to the ideographic interpretations Heras sometimes uses the principle of homophony, too, e.g. (p. 71) (Key No. 16) *kō* 'mountain, excellence, domination', (p. 73) "the ordinary sign for 'eight' is (Key No. 17) *eḥ*, that has sometimes the phonetic meaning of 'reaching', also, *eḥ*" etc. Having accomplished his decipherment Heras (pp. 99 f.) points out that there are in the script certain signs whose values can only be explained in Dravidian languages. Among his instances the pictographs with a FISH can be regarded as really relevant. He does, however, distinguish only three variants of the sign, ascribing them various meanings: "(Key No. 18) *min* 'fish, the Fish' (Key No. 19) *min* 'shining, glittering, glorious', (Key No. 20) *min* 'star', and proper name or title of a king".

Also very intricate is Heras' method of interpreting the "phonetic signs" (pp. 75 ff.), viz. "signs that do not represent any object in a pictographic way: Of this kind are many signs to which abstract ideas correspond, for such ideas cannot be shown pictographically". He therefore compared the signs he believed to be of that kind with similar signs of the Sumerian, Egyptian, Hittite and Proto-Chinese scripts "in the hope that similar signs of those scripts might have the same meaning". It is rather difficult to follow the author in his reasoning that since e.g. in the Sumerian script Key No. 21 is *du* 'to make', in Proto-Indian Key No. 22 is *kei* 'to make' and Key No. 23 is "the shortened form" of *key* and reads *ei* (pp. 76 and 101). The Proto-Chinese and Proto-Indian signs for 'rain' and 'arrow' are again in our opinion as purely pictographic as any sign can be: the problem is how they were read (p. 77). There is no doubt a striking outer similarity between Sumerian (Key No. 24) *gal* 'great' and Indus Key No. 25 read by Heras *per* 'great'. While it is possible that both signs render a similar object, it is rather difficult to believe that the textual meaning represented could be the same.

Heras is, in our opinion, right in his criticism of Hrozny (p. 60): It is again another a priori assumption to suppose that

these seals have always a sign corresponding to the word seal, a word which, though perhaps found in inscriptions of seals of other lands, is not found in Indian seals at all. One seal reads *Guttasia* "of Gupta"; in the same way the inscriptions of the ancient coins *Basileos Basileon megalou Azilizou*, which in Kharōshṭī reads *Mahārājasa rājātirājasa mahātasa Ayilishasa*. They are always in the genitive. Again Harshavardhana signs a document with his own hand and writes *Śrī Harshasya* "of Śrī Harsha". Though Heras here emphasizes the routine in the seal texts, his own readings are rather lacking of it, cf. e.g. (p. 127) (Key No. 26) *ēḍu koḍi ēḍu mūn uḍa adu* 'the beginning of the year of the Ram (is) of three garments': viz. in the beginning of the year when the Sun is in the Ram, three garments are required.

In his paper entitled "South Asia's Earliest Writing still Undeciphered" (*Expedition*, Vol. 9 Nr. 4, Summer 1967, pp. 34ff.) George F. Dales points out the impossibility of translations by Heras (not mentioned by name) like (Marshall No. 419) "This is the eight (formed) God one of whose sides (forms) (is) the sprinkled great Fish", and (Marshall No. 23) "The great god, who has the two sides (forms) of the high sun of the eight (parts) of Orūr, (which is) outside the land of the rain clouds of the (constellation or month of the scale, which approaches with peals of thunder of the united land of Mīnāḍ (the country of the Fish), (is) the rain of the year of a house of bushes" (see Heras pp. 96-99). Dales is no doubt right in emphasizing that similar signs in various scripts are by no means to be pronounced the same or have the same meanings in the different languages.

Father Heras started his decipherment from the genitive suffix identified on the basis of the routine on later Indian seals. After its completion he does, however, state (pp. 99): "It may be asked what the purpose of such seals was. This is a question which I do not intend to answer in this chapter". The question looks more than justified!

Heras' observation of the homophonous character of the FISH signs is the only internal evidence speaking in favour of the language being Dravidian, since in no other language does FISH seem to have meanings that would be fitting in a seal inscription. Our own computer studies showed that there were no signs behaving like prefixes and infixes but only such which behaved

like suffixes. Taking into account the hieroglyphical and logographic character of the script it may be said that infixes would hardly even be recognizable, but on the other hand such a script would be rather troublesome in a language operating with infixes. Contrariwise a series of signs behaving like suffixes was very clearly disclosed. While it seemed unclear whether the script was in itself ideographical or phonetical, it looked probable that grammatical elements could hardly be expressed ideographically. The only possibility of rendering them in a pictographic script seemed to be the homophony. If an object depicted in some of those signs, which according to the computer analysis behaved like a suffix, could thus be identified, one could look for a language in which the name of the object in question and a fitting grammatical element were homophonous. This principle seemed to work in Dravidian, and the word signs were thus also compared with Dravidian words. Even there the underlying principle turned out to be the homophony.

The homophony is here, of course, to be understood in the grammatological sense of the word (cf. e.g. Gelb, *A Study in Writing* pp. 67 ff. and pp. 108 ff.). On the other hand we have taken it in a much narrower sense than it is used e.g. in Egyptology: the hieroglyph HOUSE is in Egyptian read as *par*, *per*, *apr*, *epr*, *epra*, etc. Among the possible homophones available only such words can be chosen that have a meaning fitting in with the routine of the seal texts known from other parts of the contemporary civilized world, especially from Mesopotamia. Although the history of the Indian seals is not yet known, it seems possible that they continue the tradition originating in the Indus civilization.

A. H. Dani, (*Indian Palaeography*, Oxford 1963, pp. 13 ff.) gives a short account of the attempts at decipherment of the Indus script. In principle he joins with the statement by Friedrich (*The Extinct Languages*, New York 1957, p. 170) who regards the task as hopeless. Dani himself investigates the signs, dividing them into categories on the basis of the objects depicted. He points out that the compound symbols suggest the same principle as underlies the conjuncts in the later Indian scripts and supposes that just this feature led Langdon and Hunter to connect the Indus script with the Brāhmī alphabet. Dani remarks that "This can hardly be dogmatically asserted when

the recognizable objects easily suggest pictographic or ideographic meanings". In other words, if the script is logographic we must assume that the compound symbols represent compound words and not initial consonantal clusters. Dani's observation that the strokes added to the pictographic symbols—which he considers to be one of the chief characteristics of the Indus script—seem to speak in favour of the "picto-phonographic" nature of the script, seems to be well weighed up.

After our *First Announcement* had been released in February, 1969, we received in March a copy of the Soviet Indus team's publication *Proto Indica: 1968* kindly sent by Prof. Yu. Knorozov. This "Brief report on the Investigation of the Proto-Indian Texts" was originally published for the VIII International Congress of Anthropological and Ethnographical Sciences held in Tokyo in September, 1968. It resumes the *Predvaritelnoe Soobshchenie ob Issledovanii Protoindiiskikh Tekstov* (Moscow 1965) by G.V. Alekseev, Yu. V. Knorozov, A.M. Kondratov and B. Ya. Volchok. This publication was issued in 1968 in an English translation entitled *Soviet Studies on Harappan Script as Occasional Paper* No. 6 by Field Research Projects (Coconut Grove, Florida). The papers contained in it summarize the results of the Soviet team which also processed the material by computer. A parallel study of the Egyptian hieroglyphics and of the Indus script has fully proved the hieroglyphic character of the latter. The same analogy shows further "with a fair measure of certainty" that in the Indus texts too the signs of great absolute frequency must be grammatical "indexes" and those of little frequency must be "root morphemes" (i.e. words). The computer processing shows that 75 per cent of all the polygrams in the Egyptian text have a linguistic reader while the rest are accidental. These results also hold good in other texts having a similar statistical structure. On the basis of the investigations the "recurring blocks" can be identified. Further, the variant and semi-variant signs of the blocks can be found out, and with the aid of these again the blocks can be divided into various classes. The variants and semi-variants together correspond to about 30 per cent of the total size of the texts. This fits in very well with the facts known from Egyptian.

The positional-statistical analysis revealed the morphological and syntactical structure of the Indus language, which the Soviet scholars then compared with those of the neighbouring

languages, viz. Sumerian, Hurrite, Elamite, Indo-European, Dravidian and Munda. As a result of this investigation Knorozov states (p. 21) that there are grounds for considering that the Proto-Indian language is close to Dravidian in grammatical structure.

In its main lines the computer research of the Soviet team was obviously carried out along similar lines to our own, and their results agree well with ours. It may be regarded as an important corroboration of the Dravidian hypothesis that two teams working quite independently arrived at conclusions that conform so well.

In the *Proto-Indica*: 1968 (pp. 28 ff.) N. V. Gurov develops these results further towards the linguistic interpretation of the texts on the basis of the Dravidian languages. He points out that Dravidian would easily be written with a hieroglyphic script of the Indus type, since morpho-phonemic changes at junctures occur only in very restricted cases and the root morpheme is distinctly separated from the morphemes "agglutinated" as suffixes: suffixes beginning with a vowel are joined to the roots ending in a consonant and vice versa. The principle of homophony seems not to be expressly mentioned but it is in any case applied by Gurov when proposing readings of certain signs, e.g. (p. 35) Key No. 27 is explained as 'four' = *nāl* (DED 3024) = *nāl* 'good, correct, kind, nice, best' (DED 2986). Even Key No. 28 and its ligatures are joined with *kā* 'carrying pole' although the further interpretations differ from ours.

After our *First Announcement* had been released, Dr. Dieter Schrapel in Marburg published *Die Entzifferung des Yatischen*. Obviously with a view to Euclidean exactness the author omitted all discussion and argumentation stating axiomatically: 1. The language of the Indus Valley seals is a Dravidian one. 2. The "seals" are amulets. 3. They are closely connected with the Vedic *Yātu*-magic. 4. Their language is that of the *Yātus*, called henceforth Yatic, etc. Schrapel not only reads the texts of the seals on the basis of the rebus principle but even the pictures of the animals, of the mangers, etc. on the seals. The author must be appreciated for his ability to operate with Dravidian homophones. His arguments are, perhaps, now and then somewhat puzzling. Though he possesses a very thorough knowledge of Indology he explains e.g. the concept of "amulet" (p. 2) through German amulets of Christian wording, and the sign (Key No. 29)

(p. 36 f.) as 'hand' through certain playing card symbols. Like the interpretations of Heras those of Schrapel also often diverge from the contemporary routine of seals and amulets, e.g. (Marshall No. 350) (Key No. 30) with a tiger and "a dish" as the emblem is read *veḷḷiyārai mīn iḷukkunaccuvāḷ uḷuvaḷoḷu* "all honest people love passionately to take a bath" (p. 47), and (Marshall No. 351) (Key No. 31) *maruḷaṅṅu vāḷ* "through the Diable to wealth" (p. 57). However, the argument presented by Hunter against the interpretation of the seals as amulets referred to above looks so heavy that it would have needed some refutation before Schrapel put forward his own interpretation.

The writer of these lines seems to be the only fellow-cryptanalyst mentioned by Schrapel. One cannot avoid getting throughout the impression that the author published his study in order to parodize the homophony method of our Finnish team. We admit with pleasure that he did it with intelligence and humour.

It has been pointed out by some critics of the Dravidian hypothesis that there is a large chronological gap between the Indus civilization and the oldest monuments of the Dravidian languages. The use of the latter in interpreting the Indus script is therefore not possible. An objection of this kind is no doubt in principle valid. At the beginning of the sixties Z. Mayani published an interpretation of Etruscan on the basis of Albanian. Since, however, our oldest Albanian text dates only from A.D. 1462, and this language has obviously greatly suffered from phonetical attrition, it seems methodologically impossible to interpret an Etruscan word (some 2500 years old) with the aid of its outer similarity with some present-day Albanian word.

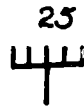
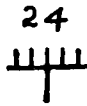
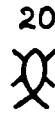
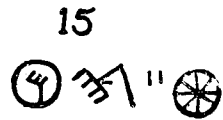
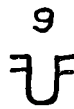
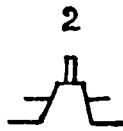
Because of the special circumstances in India there seems to be no real gap between the Indus civilization and the beginning of the Dravidian tradition, which could be compared to that between Etruscan and Albanian. Our knowledge of the Indian chronology in this respect can be summarized in the form of a table like the following :

2500-1800 B.C.	: The Indus Civilization
1800-1500 B.C.	: Various sub-Indus Cultures
1700-1500 B.C.	: The Invasion of the Aryans
1500-1000 B.C.	: Dravidian Loan Words in the Vēda
1000-400 B.C.	: Dravidian Loan Words in Classical Sanskrit

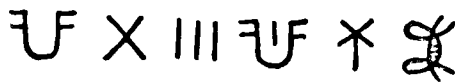
500-	1 B.C.	:	„	„	„	in Pali
400 B.C. to	400 A.D.	:	„	„	„	in Epic Sanskrit
300 B.C.	:	The Tamil Brāhmī Inscriptions				
100 A.D.	:	Classical Tamil Literature				

As to the phonological changes undergone by Dravidian, it seems that certain conclusions can be drawn from a comparison of the various stages of the tradition available to us. It is striking how closely the Dravidian loan words even in the oldest Aryan source, the *Ṛig Vēda*, remind us of the form of the same words in the present Dravidian languages, in many cases expressly in Tamil.

Irrespective of the identity of the underlying language the Indus script can hardly be built on any other principle than homophony, like e.g. the Egyptian and Hittite hieroglyphs. The homophony hypothesis presumes that the phonetical development of “homophonic” words has taken place uniformly so that their correlation would still reflect that in the times of the Indus script.



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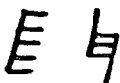
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Indus Pictograms: Key to Article No. 3

SUGGESTED SEMANTIC AND PHONETIC VALUES OF SELECTED INDUS PICTOGRAMS

ASKO PARPOLA

IN THIS PAPER I RESTRICT myself to the barest minimum regarding the methodology. The starting point of the investigations, should be a structural analysis of the Indus inscriptions, and to facilitate this my colleagues and I have brought out a concordance to the Indus inscriptions as a first volume of a series in which we hope to publish soon also a critical edition of the texts and various kinds of statistics [Seppo Koskenniemi, Asko Parpola and Simo Parpola: *Materials for the Study of the Indus Script*, I, Helsinki 1973 (Annales Academiae Scientiarum Fennicae B 185.)]

There are several important tasks in this work, but I mention here only some of the most crucial ones: the division of the inscriptions into independent words, the isolation of inflectional elements, and the mapping of the syntactic patterns and vocabularies appropriate to certain positions or categories of inscriptions. The probable use of the objects on which the inscriptions have been engraved, above all the seals, and the inscriptions of similar objects in the readable scripts of other civilisations can give us a starting point for hypotheses about the possible intended meaning of the phrases and individual signs (e.g., see plate, fig. Nos. 36 and 35 which end most of the inscriptions and look like suffixes); they divide the seal inscriptions roughly into two categories; the Sumerian seal inscriptions consist mainly of owner's seals and dedicatory seals; hence these two signs might represent the genitive and dative case suffixes or something similar. The syntactic and inflectional patterns, again, give us clues about the typological type of the language underlying the script, and the evidence is strongly in favour of Dravidian, as there seem to be only suffixes, and the word order seems to place the attribute before the mani

word, etc. The hypothesis has to be checked against the historical evidence, and for this reason I have tried to integrate the results of the archaeological and linguistic research concerning India's protohistory. The results strongly support the Dravidian identification, which in fact seems the only possibility [Parpola, "On the protohistory of the Indian languages", in *South Asian Archaeology—1973*, ed. J.E. van Lohuizen-de Leeuw, Leiden (in press)]. The age of the script—its earliest fully developed specimens dating about 2500 B.C.—and the number of different signs—about 400 including all ligatures as well as its pictographic outlook suggest that it is a logo-syllabic writing system like all the other writing systems of the third millennium. This means that the pictograms, which depict concrete objects stand not only for the names of those objects or the concepts symbolized by them, but also for the words that are homophonous with them but may have an entirely different meaning. This phonetization, which meant the birth of real writing, was necessary to make the script capable of conveying also abstract concepts, grammatical elements, etc. which are difficult to express unambiguously pictorially. Unfortunately the Indus pictograms are very stylized and it is difficult to recognize the objects that they depict. A related problem is that of graphic variants, deciding whether two similar-looking but not quite identical signs are just allographs of one and the same sign, or different graphemes; the similarity or difference of their contexts in the various occurrences will be the most important criterion. The ligatures, again, may represent compounds formed by combining the two words which the basic signs that have been put together stand for, or (especially in ligatures involving three signs) phonetic or semantic indicators known from the other early pictographic scripts may be involved. Once a beginning is made, there are a number of clues, but it often takes very many wrong guesses before one hits upon the (probably) right solution: clearly various kinds of checks are needed, and some of the most important ones are the contexts. The proposed solution must without difficulty fit all places of the sign's occurrence, and especially make sense when some neighbouring or ligatured signs can also be read. Also, the meanings in general should be in accordance with the archaeological and historical context. The right solution is likely to lead to an accumulation of evidence. To summarize, the "formula of the decipherment" in simplified

form (and in my opinion) is this: 1) determination of the probable meaning of a given sign on the basis of a structural-comparative analysis of the inscriptions, their parallels elsewhere, contexts, etc. 2) determination of the pictorial meaning of the pictogram with which it is depicted on the basis of graphic variants, parallels in art, etc. 3) determination of the language on the basis of the structural analysis of the inscriptions, the historical evidence, and through an actual decipherment which is possible in the cases where the intended meaning (above 1) is not expressed directly through the pictorial meaning (above 2), but through a rebus: by means of identifying pairs of homophonous words with a similar phonetic appearance but different semantic meanings corresponding to the predetermined values 1 and 2. It must be emphasized that especially in the beginning the above order is crucial, though afterwards, when the language has been identified with certainty, one can try to take recognizable pictures or the language structure as the starting point and to find a suitable intended meaning through the semantics and homophonies of the language.

I append a list of selected pictograms, and stable sign combinations the decipherment of which seems most certain to me. The point to be underlined is that through various converging combinations and ties to later Indian civilization these interpretations seem to support each other and to provide a methodically and historically acceptable solution. With regard to the "fish" signs, in which we can read various star names actually occurring in Dravidian languages (especially Old Tamil), some further explanation is still needed. These signs occur in the "dedicatory" inscriptions at the place of the god's name, and "owner seals" as parts of the probable proper names, being then apparently theophoric elements. I have elsewhere in a preliminary way tried to prove a theory according to which the planets, and the five colours according to which they are called in Dravidian, seem to represent in the Indus script gods that have survived, of course partly transformed, in later Vedic and especially Epic and Tamil texts, and that this astralization of the earlier neolithic religion is connected with the creation of the *nakshatra* calendar and a systematical cosmological/cosmogonical world view by the Harappan priests.

Key to the Indus pictogram or combination, with graphic variants:

I = the pictorial meaning

II= the Dravidian phonetic value

III= the intended meaning (if the phonetic value of the respective homophone differs from that of the rebus word, it has been added within parentheses in column II)

	I	II	III
1.	man	ā	man, servant (priest)
2.	comb	peṇ	woman; feminine suffix- <i>i</i>
3.	comb & comb	Peṇṭ-i	woman
4.	man & comb	āṭṭ-i	woman (priestly title)
5.	hand	kai	younger sister (priestly title of a <i>dēvadāsī</i>)
6.	hand&comb	ka (i) chch-i	younger sister
7.	fish	mīn	star
8.	7 & fish	e u-mīn	7-star, Ursa major
9.	6 & fish	charu & mīn	6-star, Pleiades (Kṛittikā)
10.	3 & fish	mu-m-mīn	3-star, Mṛigaśirsha
11.	fish & fish	mīn-mīn	shining
12.	hole & fish	pon-mīn	golden star, Jupiter (Bṛihaspati, Brahma)
13.	hair & fish	vāl-mīn	white star, Venus (Baladēva, Śēsha)
14.	division & fish	pai/pachchai-mīn	green star, Mercury ("child"; Kṛishṇa/Gaṇēśa)
15.	thatched roof & fish	mey (may)-mīn	black star, Saturn (Kāla, Yama)
16.	ixora flower (?) & fish	chem-mīn	red star, Mars (Rudra)
17.	ear-rings	muruku	youth, Murukan (Rudra/Skanda)
18.	ear-rings & ?	muruku-vē	youthful hero/god, Skanda
19.	? & fish	ve (i)-mīn	white star, morning star, Venus,
20.	banyan (rope-tree)	vaṭa	north
21.	banyan & fish	vaṭa-mīn	northern star, Arundhatī
22.	crab's pincers	kō	planet(Sanskrit <i>graha</i> is a calque),
23.	banyan (fig) & crab's pincers (phonetic indicator)	kō i/ko i	grasping fig, Hara (Rudra) (god of) firebrand, etc.
24.	"turn around": potter's wheel & hand	tiri (tīru)	holy (epithet of "revolving" planetary gods &c)

25.	plough	var(a)i	writer, scribe
26.	(solar) wheel (sudar- śana-chakra)	āḷi (āḷi)	ruler, ruling (cf. chakravartti),
27.	conch	piri (per-)	great
28.	hair & conch	valam-piri (valam)	(Vishṇu's conch;) strength, power
29.	churn	kaṭai (kaṭa)	transcend(ing), pervading
30.	the 3 worlds	uḷ	existence, soul
31.	churn & 3 worlds	kaṭa-v-uḷ	God (Vishṇu), god
32.	the lowest of the 3 worlds = the nethe- rworld	potāla or pātāla	the Harappan name of Chanhu- daro (later of Bahmanabad)
33.	one	ōr/u	plural/honorific and person noun marker
34.	two	īr/u	—Do.—
35.	point, tip	koṭi	past relative participle of <i>koṭu</i> “to give” (cf. Tamil—Brāhmī inscr.)
36.	pipal, or (tree of) “creation”	atti (-attu,-atu) or ā (ātaṅ, -ā/tu)	oblique or genitive marker, or person name marker

STUDIES IN THE
EPIGRAPHY OF THE
AŚOKAN INSCRIPTIONS

K. R. NORMAN

IT IS A WELL-KNOWN FACT, recognised by Aśoka himself, that when inscribing his edicts some of the scribes made mistakes.¹ In this paper I wish to examine one variety of mistake, that based upon the fact that some of the Brāhmī *aksharas* closely resemble others, and can be confused with them.

These confusions can be classified under three heads :—

A) where an incompletely written *akshara* is identical with another, i. e. incomplete *aksharas*.

B) the converse of this, where an *akshara* with an addition made to it is identical with another, i. e. extended *aksharas*.

C) where an *akshara*, if written badly or carelessly, can be confused with another because of the similarity of shape, i. e. similar *aksharas*.

A) *Incomplete aksharas* : 1. *pa* [Up. 27 (1)]² is an incomplete *ha* [Up. 39(1)], i. e. the scribe³ has omitted the short horizontal stroke on the right : *pāti* (Gir. ⁴ XIII,6) where the Mān. and Err. versions have *hoti*. [The scribe has also written -ā- in error for -o-.]

2. *ga* [Up. 9(1)] is an incomplete *śa* [Up. 36(1)], i. e. the scribe has omitted the central vertical stroke : *tagi taśi* (Kāl. XII,32).

3. the 'straight-line' form of *ra* [Up. 33(4)], is an incomplete 'straight-line' form of *ta* [Up. 22(2) and (3)], i. e. the scribe has omitted the left- or right-hand leg : *savara* (Rūp. 5) for *savata*.

4. the form of *va* with the vertical line to one side [Up. 35(3) and (8)] is an incomplete *ma* [Up. 31(1)], i. e.

the scribe has omitted one of the vertical strokes : *pakarāva* (Rūp. 3) for *parākama*. [The scribe has also written *ka* and *rā* in reverse order (metathesis).] Such a change was helped by the existence of a form of *va* not listed by Upasak, in which, as Sircar has noted, "the upper vertical is sometimes a curve opening towards the right, and the letter resembles *ma* without its right upper member."⁵

B) *Extended aksharas* : 1. *va* [Up.35(1)] can be turned into *chha* [Up. 12(1)] by extending the vertical stroke down into the circle : *achhimana* (Ar. IV, 6) where the other versions have *avimanā*.

2. *-ṁ* [.] can be turned into initial *i-* [Up. 3(1)] by adding two more dots : *puiṅṁ* (Gir. XI, 4) whereas *pumṅṁ* occurs in Gir. X, 3.

3. *na* [Up. 26 (1)] can be turned into *ka* [Up. 7(1)] by extending the vertical stroke below the horizontal line : *bambhanāki* (Rāj. 11) where the version at Err. has *bambhanāni*.

4. the 'straight-line' form of *ra* [Up. 33(4)] can be turned into the 'straight-line' form of *ta* [Up. 22(3)] by adding a leg to the right : *ketala-* (Gir. II,2) where the version at Mān. has *kerala-*. This is the converse of A(3) above.

C) *Similar aksharas* : 1. *ya* [Up. 32(7)] can be confused with *na* [Up. 26(1)] if the two sloping strokes are made so close to the horizontal that they form a straight line : *upadane* (Shāh. IX, 18), *upadāne* (Kāl. IX, 24) where the versions at Dhau., Jau., and Err. have *upadāye* ; *inaṁ* (Kāl. XII, 31) where the other versions have *iyam* ; *devānampinaṁya* (Kāl. XIII, 11) and *devenampine* (Kāl. XIII, 14) in place of the usual *devānaṁpiya-*.

2. *cha* [Up. 11 (1)] can be confused with *va* [Up. 35 (1)] if the semi-circle is written carelessly as a circle : *vu* (Kāl. XII, 33, XIII, 4, 14) where the other versions have *chu*; *voḍā* * (Kāl. II, 4) where the other versions have *choḍā*.

3. initial *i-* [Up. 3(1)] can be confused with initial *e-* [Up. 5(1)] if the dots are written carelessly as dashes, which are then joined up to form the triangle of the *e-akshara* : *eyam* (Kāl. V,15) where the versions at Dhau. and Mān. have *iyam*.

4. initial-*e* [Up. 5(1)] can be confused with *dha* [Up. 25 (1)] if the right-hand apex of the triangle is rounded

instead of being pointed : *dhatakāye* (Kāl. X, 27) where the other versions have *etakāye*.

5. *tī* [Up. 22(5) with the *i-mātrā* added] can be confused with initial *a-* [Up. 1(8)] : *anuvīdhiyāma* (Kāl. XII, 12) and *anuvīdhiyisāma* (Kāl. XII, 12) for *anuvīdhiyamti* and *anuvīdhiyisamti*.

6. *na* [Up. 26(1)] can be confused with *ta* [Up. 22 (10)] if the horizontal line is written with its ends drooping down instead of straight : *jate* (Err. XIV, 5) where the versions at Kāl., Mān., and Jau. have *jane* ; *tirati* (Shāh. XIII, 12) where the versions at Err. and Kāl. have *nilati*, and that at Mān. *nirati*.

7. *sa* [Up. 38 (1)] can be confused with *chha* [Up. 12 (1), or more particularly Up. 12 (4)] if the loops to the left and right of the vertical stroke of the *sa-akshara* are continued around until they join the vertical: *chhavachhare* (Rūp. 1) where the other versions have *saṃvachhare*. [The scribe has also omitted the *anusvāra*]

8. *ya* [Up. 32 (1)] can be confused with *la* [Up. 34 (1)] if only half of the *akshara* is written and a short horizontal stroke is added to the left : *lekhapetavāla* (Rūp. 4) for *lekhapetariye*. [The scribe has also written *-ā-* in error for *-i-* and has omitted the final *-e-*].

9. *sa* [Up. 38 (1)] can be confused with *ya* [Up. 32 (1)] if the left-hand loop of the *sa-akshara* is curved around to join the vertical stroke, cf. the confusion of *sa* and *chha* in C(7) above : *devānaṃpinaṃya* (Kāl. XIII, 11) for *devānaṃpiyasa*. [The scribe has also written *na* for *ya* (see C(1) above) and added an *anusvāra* ; *yāva* (Err. XIII, 35) where the versions at Shāh. and Mān. have *sava*.

This analysis of *aksharas* which are liable to confusion enables us to suggest solutions to some of the problems which arise in the Aśokan inscriptions. In the Bah. version of Minor Rock Edict I Sir-car reads *e*. (Bah. 9) and states "The damaged word appears to be *eta*." The possible confusion of initial *i-* and initial *e-* (see C (3) above) and the fact that the other versions have *iyam* enable us to state conclusively that the correct reading is *e(yam)*. The confusion of *va* and *cha* (see C (2) above) enables us to see that the correct reading in the sah. version of Minor Rock Edict I is *ya(di) vā* [Sah. 7] not *cha*.

If we consider the possibility of the confusion of other *aksharas* because of their similarity, we can see that although no confusion of *dha* [Up. 25 (9)] and *cha* [Up. 11 (1)] has yet been noticed, *dha* can easily be confused with *cha* if the vertical line is extended upwards. This opens up the possibility that *ya.* Sah. 7) and *hadha* (Rūp. 4) can be reconciled by assuming that the correct readings are *ya(di)* and *ha[m] ch[e]* "if" [cf. *hamche* Kāl. IX, 26, Err. IX, 9 but *yadi* Shāh. IX, 20].

Some of these errors are undoubtedly due to the carelessness of the scribes who actually carved the inscriptions at the sites. The fact, however, that some of the errors at Shāh. arise from confusions in the Brāhmī, not the Kharoshthī, script, e.g. *na* written for *ya* [see C [1] above], and *tu* written for *na* [see C [6] above], proves that the errors arose at some early stage of the transmission of the edicts from Pāṭaliputra, while they were still written in the Brāhmī script.⁸ The fact that some errors are found in more than one site e.g. the writing of *na* for *ya* is found at both Shah and Kāl., proves that the error was in more than one exemplar⁹, which also confirms that the error was introduced early in the train of transmission, and not at the actual site.

This discovery that errors could occur early in the train of transmission, and would therefore be made in all subsequent exemplars based upon the erroneous one, enables us to make suggestions about some of the problems which arise in the Pillar Edicts. In these edicts discrepancies e. g. the writing of *achhimana* for *avimana* [see B [1] above], are rare, and the fact that all the versions agree very closely has been taken as proving that the readings must be correct. We can now see that this need not be so, and we may therefore take as correct Senart's suggestion¹⁰ that in PE V [B]¹¹ *Palasate* "rhinoceros" is a mistake for *palapate* (= Sanskrit *pārāvata*, Pāli *pārāpata* "turtle-dove"), since *pa* [Up. 27 [1]] is an incomplete *sa* [Up. 38 [1]] and can easily be confused with it. The converse of this mistake, with *sa* written for *pa*, may occur in the same edict, if the suggestion¹² that *pamnasase* is a mistake for *pamnasape* is accepted.

Although in PE IV [K] *va kāni* occurs in all versions, we may now suggest that, because *va* and *cha* can be confused [see C [2] above], this is an error for *cha kāni*. This suggestion obviates the difficulty of seeing the so-called indefinite *kani* here, rather than the common phrase *cha kāni*. Because *va* and *ma* can be confused

[see A [4] above], it is possible that in PE I [E] the phrase *ukasā chā gevayā chā majhimā chā* is to be compared with the Pāli phrase *ukkaṭṭha majjhima omaka*. If this suggestion is correct, then *gevayā* shows not only *va* written in error for *ma*, but also *ge* written in error for *o*-. Since *ge* [Up. 9 [3] with the *e*-mātrā added] and initial *o*- [Up. 6 [1]] have two of their three strokes in common, it seems very likely that they could have been confused.

I have also suggested¹³ that in PE V (B) *jātūkā ambākipilikā* (to quote the version at CII.) should rather be divided as *jātu kāambā, kipilikā*, and that *kāambā* is to be seen as an error for *kādambā*, with initial *a*- [Up. 1 (8)] written in error for *da* [Up. 24(7)]. Although this suggestion has been criticised¹⁴ on the grounds that all the versions agree in their readings, it is clear from what has already been said that this is not necessarily decisive.

The nature of some of the errors which have been discussed here enables us to deduce something of the cause of the errors. A scribe was not likely to write the three dots of initial *i*- instead of the one dot of *-m* [·] [see B[2] above] without reason. It seems clear that he wrote *i*- because he thought he saw three dots, although the scribe whose exemplar he was copying had in fact written only one dot [= *-m*]. It would seem likely that the surface of the material upon which the exemplar had been written [whether leaf, bark, leather, wood, clay, stone, or metal] was not absolutely smooth, but had defects upon it, which could be mistaken for dots or lines. Just as it is now difficult, when examining weathered stone, to be certain whether the dots and dashes which appear upon the surface were intended to be *anusvāras* and vowel *mātrās*, so it must have been in the case of the exemplars.

We may therefore deduce that scribes were sometimes uncertain about the precise value of some of the *aksharas* in their exemplars, since a natural defect on the surface could have turned a *ra* into *ta* or a stroke which happened to coincide with a natural defect could have led to a scribe disregarding it, so that he read *ra* where *ta* was intended, or *pa* where *ha* was actually written. Where the surface of the material was rough, or for some other reason difficult to write upon, a scribe might have had difficulty in writing the normal shape of the *akshara* so that another scribe had difficulty in reading it. A scribe faced with a mal-formed *ti* [see C [5] above] might have thought that what was written in his exemplar was actually initial *ā*-. He therefore wrote a clear unam-

biguous *a-*, showing incidentally that scribes did not always pay attention to the meaning of what they were copying.

Notes :

1. In Rock Edict XIV he states that some imperfections occur *lipikā-rāparādheṇa*.
2. Up. = C. S. Upasak, *The history and palaeography of Mauryan Brahmī script*, Nalanda, 1960. The numerals refer to Upasak's appendices and their sub-divisions.
3. I use the word "scribe" in the very widest sense, to include all those who were responsible for the transmission of the edicts.
4. The abbreviations of site-names are as in E. Hultzsch, *Inscriptions of Aśoka*, Oxford, 1925 (= Hultzsch), p. 231, with the addition of Rāj. (= Rājula-Maṇḍagiri), Err. (= Eṛṛaguḍi), and Bah. (= Bahapur).
5. D.C. Sircar, "Rājula-Maṇḍagiri inscription of Aśoka", *Ep. Ind.* Vol. XXXI, p. 212.
6. Following the reading of K. L. Janert, *Absta'nde und Schlussvokalverze-ichnungen in Aśoka-Inschriften*, Wiesbaden, 1972, p. 106.
7. D. C. Sircar, "New Delhi inscription of Aśoka", *Ep. Ind.* Vol. XXXVIII, p. 3 n. 10.
8. L. Alsdorf, "Der Schluss von Aśokas dreizehntem Felsedikt", *Melanges d' Indianisme (a la memoire de Louis Renou)*, Paris, 1968, p. 28.
9. I use the word "exemplar", to mean any document which was copied or translated anywhere in the transmission.
10. E. Senart, *Les Inscriptions de Piyadasi*, Vol. II, Paris, 1886, p. 51.
11. I follow Hultzsch's division into paragraphs.
12. K. R. Norman, "Notes on Aśoka's Fifth Pillar Edict", *JRAS*, 1967, p. 30.
13. Norman, *op. cit.*, p. 28.
14. Janert, *op. cit.*, p. 70 n. 1.

ARE THE GRANTS OF MAHĀRĀJA BHULUṆḌA DATED IN THE GUPTA ERA?

V. V. MIRASHI

IN THE *Corpus Inscriptionum Indicarum*, Vol. IV, I have edited three grants of the *Mahārājas* Svāmīdāsa, Bhuluṇḍa and Rudradāsa, dated respectively in the years 67, 107 and 117. I referred these dates to the Ābhīra era (known later as the Kalachuri era), and took them as corresponding to A.D. 317, 357 and 367 respectively. These three kings probably belong to the same royal family as there is a close similarity in the characters, phraseology and dating of their grants. The first two of these grants were found in Indore, and the third at Sīrpur in Khandesh. The place of issue in the case of the first two grants is Valkha; that of the third grant is lost owing to the breaking away of a portion the copper plate. I identified Valkha with Vāghlī, about 6 miles north by east of Chalisgaon in East Khandesh. I conjectured that this family was ruling in Khandesh with its capital at Valkha.

In his Presidential address to the Epigraphy Section of the last session (1974) of the Indian History Congress held at Calcutta, Dr. G.S. Gai has given information about another grant of *Mahārāja* Bhuluṇḍa found at Indore¹. It contains two dates, viz. 38 and 77². Like the previous grants of this family, this grant also was issued from Valkha, and records the royal gift of a house-site in Dāsīlaka-palli-rāshṭra on the opposite bank of the Narmadā to a number of Brāhmaṇas in the year 38. For some reasons the grant seems to have remained unrecorded on a copper plate for some years. It was issued by Bhuluṇḍa in the year 77.

I have stated that Valkha from which these grants were issued is modern Vāghlī, and so conjectured that this family was ruling in Khandesh. Dr. Gai, on the other hand, supposes that as three of these grants were found in Indore, and as the place Dāsi-

laka-palli, which is mentioned also in the Bagh Cave plate of Subandhu, is evidently identical with Deswalia, about 14 miles south of the Bagh Caves, the royal family was ruling in Central India, north of the Narmadā, their capital Valkha being identical with Bāgh. He also thinks that the dates of these kings should be referred to the Gupta era of A.D. 319-20, not to the Ābhīra era of the epoch A. D. 248-49. It is proposed to examine these views in the present article.

In the absence of the mention of the territorial division and the boundary places of Valkha, the location of this capital is bound to be conjectural ; but I would invite attention to one statement in the newly discovered grant which provides a clue to it. The new grant was, like the previous ones, also issued from Valkha. It states that the territorial division Dāsīlaka-palli-rāshṭra in which the house-site was situated "on the opposite bank of the Narmadā." Now, Dāsīlakapalli is probably identical with Deswalia, north of the Narmadā as shown above. If this place was situated "on the opposite bank of the Narmadā" as stated in the new grant, the charter recording the donation of the house-site must have been drafted at some place south of that river. In other words, Valkha, the place of issue, must have been situated south of the Narmadā. Its identification with Vāghlī in Khandesh is, therefore, more likely. Since as many as three grants of this royal family have been found at Indore, it seems that the rule of this family, which had its capital in Khandesh, extended to some territory north of the Narmadā also.

The next question is about the identification of the era in which the dates of the grants of this royal family are recorded. We have now as many as five dates from these grants, viz. the years 38, 67, 77, 107 and 117. Evidently they are recorded in the same reckoning. I identify it with the Ābhīra era of A.D. 248-49. Dr. R. C. Majumdar, who edited the previous grants of Svāmīdāsa and Bhulūṅḍa and Dr. Gai, who has edited the present grant of Bhulūṅḍa, identify it with the Gupta era of A.D. 319-20. As the grants do not specify any week-day, *nakshatra*, solar or lunar eclipse or the cyclic year necessary for the verification of their dates, we must rely on other circumstances for the solution of this question.

The earliest of these dates is the year 38, which, if referred to the Gupta era, becomes equivalent to A. D. 357-58. This date falls in the reign of Samudragupta. Was the power of that Gupta

king extended to such a place as Bāgh (or even Indore) at such an early date? Dr. R. C. Majumdar has thus described the extent of the Gupta kingdom at the *end* of Samudragupta's reign³: "It (the empire of Samudragupta) comprised nearly the whole of Northern India, with the exclusion of Kashmir, Western Panjab, Western Rajaputana, Sindh and Gujarat, and included the highlands of Chhattisgadh and Orissa with a long stretch of the territory along the eastern coast extending as far south as Chingleput and probably even further." To this it may be added that Malwa, Western and Eastern, with its capital at Ujjayinī also was not included in the empire of Samudragupta. It was ruled by the Saka Satraps, who may have accepted his suzerainty, but were, otherwise, independent for all practical purposes. They continued to issue their coins down to A.D. 388 or beyond.⁴ Samudragupta's own inscription has not been found west of Ēraṇ in the Saugar district. His successor Rāmagupta's inscriptions have recently come to notice at Vidiśā. So there is no doubt that Daśārṇa, with its capital at Vidiśā, was included in Samudragupta's empire⁵, but his direct rule did not extend much farther west. In fact, Chandragupta II had to undertake a campaign of *digvijaya* for conquering Malwa as we learn from his inscription in one of the Udayagiri Caves near Vidiśā⁶. Only after the extermination of the Western Kshatrapas in *circa* A.D. 390, did Gupta rule extend to Eastern and Western Malwa (Pūrva and Aparā Ākarāvantī).

Now, if Ujjayinī was not included in the Gupta Empire till as late a date as A. D. 390, is it likely that Indore, which lies some miles south by west from Ujjayinī, and Bāgh, which lies much farther south, were comprised in that Empire in the year 38 of the Gupta era (A. D. 357-58)? And if it was not included in the Gupta Empire, it is extremely unlikely that the grants of house-sites and villages in those territories were recorded in the Gupta era; for, as I have shown elsewhere⁷, an era spreads with the spread of political power. If the grant of the year 38 is not dated in the Gupta era, the other grants also, which are evidently dated in the same reckoning, could not have belonged to the Gupta era. The only other era which is possible in the circumstances is the Ābhīra era of A. D. 248-49.

But, it may be asked, how can the grants of Bhuluṇḍa dated in the years 77 and 107 be referred to the Ābhīra era? If they

are supposed to be dated in that era, these dates become equivalent to A.D. 326-27 and A.D. 356-57 respectively. In these years the Western Kshatrapas were ruling over Malwa with their capital at Ujjayinī. Is it likely that the Ābhīra era was current at Indore so near that Kshatrapa capital in the first and the second half of the fourth century A.D. ? I have to point out in this connection that the grants of these kings, though discovered at Indore, probably belong to the country on the bank of the Narmadā called Anūpa. This is shown by the identification of Dāsīlakapalli mentioned in the Indore grant of Bhuluṅḍa dated in the year 77 with Deswalia, about 14 miles north of Bāgh. The country of Anūpa was no doubt included in the empire of Rudradāman I as stated in the Gīrnār inscription of A. D. 150 ; but later, it seems to have been occupied by the Ābhīras, who then introduced their era therein. These kings of Valkha seem to have been feudatories of the Ābhīras and used their era in dating their grants. That the Ābhīra era was current in Anūpa is shown by the grants of the Early Kalachuris who rose to power there⁸ about the middle of the sixth century A.D. All their grants are dated in the Ābhīra era. They would not have used that era if the Śaka or the Gupta era had been current there before their rise.

The date 167 of the Barwani plate of Subandhu⁹ is also recorded in the Ābhīra era as I have shown elsewhere. If referred to that era, it becomes equivalent to A.D. 417. How is it, it may be asked, that Subandhu does not acknowledge the supremacy of the Guptas ruling not far from his capital Māhishmatī in that age ? I have already answered this question in *C.I.I.*, vol. 14, p. xl. - "The Anūpa country where Subandhu was ruling comprised the territory along both the banks of the Narmadā, now included in the Nemāḍ districts. Just about this time there was rising the powerful state of the Traikūṭakas across the Narmadā. According to the Purāṇas, the Ābhīra rule lasted for 167 years"¹⁰. The Ābhīras were succeeded by the Traikūṭakas who soon extended their rule to Northern Maharashtra, Konkan and Gujarat. The kingdom of Māhishmatī may, therefore, have been allowed to continue as a buffer State between the dominions of the Guptas and the Traikūṭaks.

The foregoing discussion has shown that the years of the grants of the *Mahārājas* Svāmīdāsa, Bhuluṅḍa and Rudradāsa found at Indore and Śīrpur, like that of the Barwani plate of

Subandu, are recorded in the Ābhīra, not the Gupta, era.

Notes :

1. See his Presidential Address, p. 10.
2. As Bhuluṇḍa was ruling in the years 77 and 107, the first of these dates (viz. 38) is not likely to be of his regin. The grant was probably made by an earlier king and remained unrecorded for several years, though this is not specifically stated in that grant.
3. *H.C.I.P.*, Vol. III, p. 12.
4. *BMC. Coins of the Andhras etc.*, p. cli.
5. Rapson's view that Vidiśā was the capital of the Eastern Malwa (*BMC. Coins of the Andhras etc.*, I, Introd., cl) is incorrect. It was the capital of Daśārṇa. See *Mēghadūta*, ed. by S.K. De), vv. 23-24.
6. *C.I.I.*, Vol. III, p.35.
7. *Studies in Indology*, Vol. II, pp. 104 f.
8. Their capital was Māhishmatī, which is probably identical with Maheshver in the Nemad District of Madhya Pradesh. *C.I.I.*, Vol. IV, pp. xlv f.
9. *Ibid.*, pp. 17 f.
10. *Ibid.*, Introd., p.xxvi.

THE KĒKAYAS OR KAIKĒYAS OF ANCIENT KARNĀṬAKA

G. S. GAI

ACCORDING TO RAMAYANA , Kēkaya was the kingdom of the father of Kaikēyī , one of the three queens of Daśaratha , king of Ayō-dhyā.¹ The country of Kēkaya is supposed to lie between Beas and Sutlej rivers.² The Purāṇas mention the Kēkayas along with the Madras and Uśīnaras as a branch of the family of Anu, son of Yayāti. In the *Chhāndōgya Upanishad*³, Aśvapati, king of Kēkaya, is reported to have stated that in his kingdom there was no thief, no villain, no drunkard, no illiterate person, no Brāhmaṇa, who did not maintain the sacred fire, no adulterer and hence no adulteress. In the account of the fifty-six countries⁴, Kaikaya is placed between the Brahmaputrā and Kāmarūpa i.e., North-Eastern Bengal or Assam region and may indicate modern Kukis in Assam and Manipur. But there is no mention of Kēkayas or Kaikēyas in the inscriptions of north India and, for that matter, the epigraphical literature of India is silent about this dynasty except a few epigraphs from Karnāṭaka in the south. These inscriptions throw some light on this little known dynasty which may be called the Kēkayas or Kaikēyas of Karnāṭaka.

A stone inscription⁵ from Aṇaji in the Davanagere Taluk of Chitradurga District, which can be assigned to about the 5th century A.D. on grounds of palaeography, refers to the Kēkaya prince Śivanandavarman who claims matrimonial connection for his family with the kings of Ikshvāku line. Cf. *Parama-māhēśvaraḥ mātā-pitṛi-pāda-bhaktāḥ Ātrēya-gōtraḥ Sōma-vamś-ōdbhavaḥ Ikshvākubhir-āpi rājarshibhiḥ kṛit-āvāha-vivāhānām Kēkayānām kulē jātaḥ Śivanandavarmā.*

There is an inscription⁶ on the left jamb of the door-way of the Praṇavēśvara temple at Tāḷagunda in Shimoga District

which states that Prabhāvati, the queen of the Kadamba king Mṛigēśavarman and the mother of Ravivarman [c.484-519 A.D.] was born in the Kaikēya family. Cf. *Svasti uditōdita Kaykēya-mahā-kula-prasūtā ēshā Prabhāvati rājñi vikhyāta-Kadamba-kul-ōdbhūtasya śrī-Mṛigēśavarmma-dharmma-mahārāja-priya-bhāryyā yā śrī-Ravivarmanma-dharmma-mahārāja-mātā.*

In the recently discovered Guḍṇāpur⁷ inscription of the Kadamba ruler Ravivarman, the king is described as the son of the daughter of the Kaikēya family. Cf. *Sam-abhavan-Mṛigēśa-śābanibhō jagatī-patēs-tasya dhīmataḥ Ravir-iti sva-nāma-tulya-vapuḥ Kaikēya-putryām sutō-'naghaḥ.*

According to the Bannahaḷi plates⁸ of the Kadamba king Kṛishṇavarman II (6th century A.D.) his great-grand-father Kṛishṇavarman I married a daughter of the Kaikēya family and Vishṇuvarman was her son. Cf. *Kaikēya-sutāyām=utpannēna śrī-Vishṇuvarmanma-dharmma-mahārājēna.....*

The Halmiḍi (Belur Taluk, Hasan District) inscription⁹, assignable to about the 6th century A.D. on palaeographical grounds, refers to the Kēkayas, along with the Pallavas. Cf. *Sēndraka-Ba(Bā)ṇ-ōbhaya-deśadā vīrā-purusha-samakshade Kekaya-Pallavarām kād = eṇidu...*

The Honavar plates¹⁰ belonging to the time of the Kadamba king Ravivarman refer to the rule of a certain Chitrasēna of the Kaikēya family. Cf. *Kaikēya-kula-sambhūtas = tad-vad-budhajan-ālayaḥ jayatāt = suchiram Kellas = Chitrasēnaḥ prajā-hitaḥ || Vijayāmbu-dvīpē parama-guṇa-gaṇ-ālamkṛita-kalya-dēhaḥ śrī-Chitrasēna-mahā-Kellaḥ śrī-Ravi-mahārājē rājyam praśāsati ātmanaḥ pravarddhamāna samvatsarē prathamē.....*

The Hiregutti plates¹¹ of Bhōja king Aśaṅkitarāja (5th-6th century A.D.) refer to a certain Kottipeggili as belonging to the Kaikēya lineage of Nandipalli. Cf. *śrī-Bhōjānām=anvayāmbarēndunā Aśamkitarājēna Nandipalli-Kaikēya-ānvaya-prasūtēna Kottipeggilin-ābhyarthyamānēna.....*

This Nandipalli is suggested to be the area round about modern Hangal in Dharwar District.

The Kapoli plates¹² of another Bhōja king Aśaṅkitavarman also refer to a chief Ēlakella of Kaikēya family. Cf. *Bhōjānam...śrī-mahārāja-Aśaṅkitavarmanṇō vachanēna...vaktavyā yathā Kaikeya-vamśa-sambhūtēna Ēlakellena...*

The Haldipur (North Kanara District) plates¹³ belonging to

the Pallava chief Gōpāladēva (8th century A.D.) show that this Pallava chief was connected with the Kaikēyas, probably on his mother's side. Cf. *śrī-prīthivīvallabha-Pallavarāja-Gōpāladevasya Kaikēya-vamśōdbhav-ōddhata-pradhāna-purushasya...*

Lastly, a stone inscription ¹⁴ from Kēkkār (North Kanara District), assignable to about the 8th century A.D., mentions a certain Aṅṅeyarasa as belonging to the Kaikēya family. Cf. *svasti...sinha-dhvaja-virājamāna Simha-lañchhana Kaikēya-vamś-ōdbhava Paiyvegunda-pura-varēśvara śrīmad-Aṅṅeyarasarum.....*

Thus we get, in the records mentioned above, the names of the male persons of the Kaikēya or Kēkaya family such as Nandi-varman, Cbitrasēna Mahākella, Ēlakella, Kottipeggili and Aṅṅeyarasa and of only one female viz. Prabhāvati, the mother of the Kadamba king Ravivarman. The mutual relationship of these members is not known. These Kaikēyas or Kēkayas are known to have contacted matrimonial alliances with the Pallavas of North Kanara and the Kadambas of Banavāsi. These records range in date from the 5th to about the 8th century A.D.

Notes :

1. *Ramayaṇa* (Baroda ed.), Ayōdhyā, Ch. 68.
2. N. L. Dey, *Geographical Dictionary*, p. 98; D. C. Sircar, *Suc. Sar.*, p. 312.
3. *Chhāndogya Upanishad*, V, II, 5.
4. *Shaḍpañchāśad-dēśavibhaga* (16th century).
5. *Ep. Carn.*, Vol. XI, Dg. 161.
6. *Mysore Arch. Rep.* 1911, p. 33.
7. *Śrīkaṅṅhika* (Srikantha Sastri Felicitation Volume), pp. 61 ff.
8. *Ep. Ind.*, Vol. VI, p. 18.
9. *Mys. Arch. Rep.*, 1936, pp. 72 ff.
10. *Ep. Ind.*, Vol. XXXVII, pp. 33-34.
11. *Ibid.*, Vol. XXVII, p. 75.
12. Vol. XXXI, p. 236. This Aśānkitavarman is considered to be different from his namesake of Hiregutti plates mentioned above.
13. *Ibid.*, Vol. XXI, p. 173 ff.
14. *Progress of Kan. Res. in Bombay Province*, 1941-56, p. 5.

SOME OBSERVATIONS
ON THE SIRPŪR PLATES
OF SUDĒVARĀJA, REGNAL YEAR 7

AJAY MITRA SHASTRI

ISSUED BY THE SARABHAPURIYA chief Sudēvarāja from Śrīpura i.e., modern Sirpūr in the Raipur District of Madhya Pradesh, in the 7th year of his reign, this charter was first noticed by Hiralal¹ and its text published by Pandit Lochan Prasad Pandeya.² Thereafter it was edited by S.L.Katara in *Epigraphia Indica*, xxxi, pp.103-108. The various problems arising from this record were fully discussed by Katara while some of the points were elucidated by D.C. Sircar in his editorial notes. There are, however, a few points which have escaped their notice and on which it may be possible to shed some light.

14778

The inscription records that the grant of a village formerly made by Nanna in favour of *Karaṇika* Brāhmaṇa Kansippasvāmin of the Taittirīya-śākhā and Parāśara-gōtra was confirmed by Sudēvarāja by issuing a copper-plate charter (*tāmra-śāsanikṛita*) in the seventh year of his increasingly victorious reign. The record was incised by Drōṇasimha.

Unfortunately, however, a portion of the first plate on its proper left is broken away as a result of which some letters at the end of all the lines engraved on this plate are lost. But, as the formula of the Śarabhapurīya copper-plate inscriptions is a stereotyped one, the lost portion can be made good with the help of other records of Sudēvarāja with the sole exception of line 4 wherein the names of the donated village and the district in which it was situated were given. Only the first letter of the name of the district is preserved at the end of the intact portion of line 4 whereas two concluding *aksharas* of the name of the gifted village are found at the beginning of the following line. The last letter of the extant portion of line 4 which formed the opening *akshara* of

the name of the district has been read by Katare as *vu* and the first two letters of line 4 which form the closing letters of the name of the donated village have been deciphered by him as *vakē*. While there is no doubt about the correctness of the latter reading, the same cannot be said as regards the former reading. If we take a close look at the occurrence of the *akshara v* in the various lines of this record³, it would appear that the lower portion of *v* is almost invariably a more or less perfect square while in the present case it is a rectangle which is a characteristic of the letter *ch*⁴ and distinguishes it from *v* which are otherwise similar to each other. We are therefore inclined to read it as *chu* as against *vu* suggested by Katare. The name of the district, thus, opened with *chu* and not with *vu*. Once this fact is recognised, it may be possible to ascertain the names of the donated village and the district to which it belonged with the help of another Śarabhapurīya charter, viz., Kurud plates of Narēndra, son of Śarabha⁵. This charter informs us that Narēndra's overlord (*paramabhaṭṭārapāda*) had given away the village Kēśavaka situated in the district (*bhōga*) of Chullāḍa-sīmā to one Bhāśrutasvāmin belonging to the Dhāraṇi-gōtra after bathing in the river Gaṅgā and that when it was ascertained that the palm leaf charter (*tāla-patra-śāsana*) was burnt in a conflagration and that the donated village continued to be enjoyed uninterruptedly, evidently by the donee or his son, Narēndra confirmed it for the religious merit of his overlord by issuing a copperplate charter in favour of Bhāśrutasvāmin's son Śaṅkhasvāmin. It is now pertinent to note that, as in the Sīrpūr plates of Sudēvarāja, the compound giving the names of the district and the donated village began with *chu* and ended with *vakē* in the Kurud plates also. It is further instructive to point out that judging from a comparative analysis of the number of *aksharas* lost in other lines on the first plate of the Sīrpūr charter of Sudēvarāja the lost portion of line 4 may be said to have contained about nine letters which have to be restored between *chu*, the last preserved *akshara* in line 4 and *vakē*, the closing letters of the compound at the beginning of line 5. And precisely nine *aksharas* would be required if we were to assume, in view of the sameness of the opening and concluding *aksharas* of the compound containing the names of the district and the gifted village in the two records in question, that the compound under consideration in the Sīrpūr plates also was *Chullāḍa-sīmā-bhōgiya-Kēśavaka* as in the Kurud plates. Such samenesses being

rare⁶, we are inclined to regard this assumption as very likely, nay, certain. It would thus follow that the Sirpūr copper-plate charter of Sudēvarāja purported to confirm the grant of the village Kēśa-vaka belonging to the district known as Chullāḍa-sīmā-bhōga.

If the above suggestion is accepted, we would be led to the inevitable conclusion that the same village which was given away by Narēndra's overlord to Bhāśrutasvāmin and later confirmed by Narēndra in favour of Bhāśrutasvāmin's son Śaṅkhasvāmin was granted subsequently by Nanna to Kansippasvāmin and later confirmed by Sudēvarāja by issuing the charter under consideration. Although the name of the Brāhmaṇa to whom Nanna gave away the village which was confirmed by Sudēvarāja also ended in *svāmin* like those of the original donee and his son mentioned in the Kurud plates, the former cannot be regarded as a lineal descendent of the latter; for they belonged to different *gōtras*, viz. the original donee to the Dhāraṇi-gōtra and the subsequent donee (Kānsippasvāmin) to the Parāśara-gōtra. It appears, therefore, that for some reason⁷ the original grant fell into disuse resulting in the reversion to the state of the donated village which was subsequently granted and confirmed through the Sirpūr charter.

As stated above, the grant confirmed by Sudēvarāja through the Sirpūr plates was actually made by one Nanna. Who was this Nanna? Katare thinks that he may have been a predecessor of Sudēvarāja or an officer. In support of the latter suggestion he refers to the Piparḍūlā plates Narēndra⁸ and the Arang plates of Sudēvarāja⁹ which also speak of certain officers making grants which were later confirmed by their masters. But the analogy does not hold good; for in these two charters the donors are referred to in an ordinary manner without exhibiting any feeling of reverence for them¹⁰, whereas to the name of Nanna the word *pāda* is suffixed and the expression is used in the plural indicating the profound esteem in which Nanna was held by Sudēvarāja. A king would hardly show such a high degree of respect to an officer howsoever highly placed or senior he may happen to be. We are, therefore, inclined to take him as a predecessor of Sudēvarāja.

Unfortunately, the Śarabhapurīya charters do not mention any chief named Nanna. But some Śarabhapurīya chiefs are known to have been known by more than one name. Thus, Mānamātra, son of Prasannamātra and father of Sudevarāja and Pravararāja II, was also known as Durgarāja.¹¹ We have no inscri-

ption of Prasannamātra who is known only from his own gold and silver coins of the repoussé type and from his mention in the seal-inscriptions of his successors. It is likely that like his son he, too, had another name in addition to Prasanna or Prasannamātra which may come to our knowledge if and when his epigraphic records are discovered. Till then we have to wait. It is not impossible that this other name was Nanna, and just as Mānamātra was also known as Durgarāja so also he might have been known as Nannarāja.¹² In that case he could have well been referred to as Nanna-pāda by his grandson Sudēvarāja. If so, it would appear that the grant originally made by Narēndra's overlord and confirmed by Narēndra fell into disuse shortly after the latter and the village was granted afresh to a new donee.

If the above reasoning is found to be acceptable, the Sirpūr plates of Sudēvarāja would appear to shed welcome light on the history of the Kings of Śarabhapura. It must be admitted, however, that in the present state of insufficient information the suggestions offered in these pages may at best be regarded as plausible postulations which await future discoveries for confirmation.

Notes :

1. *Inscriptions in the Central Provinces and Berar* (2nd edition, Nagpur), p. 106 A, No. 177 (b). *Vide* also *AREp.*, 1945-46, p. 12, No. 52.
2. *Mahakosala Historical Society's Papers*, II (1937), pp. 42-43.
3. *Vide* text lines 2, 3, 4, 5, 7, 8, 9, 11, 12, 13, etc.
4. *Vide* text lines 8, 12, 13, 14, 17, 18, 19, 20, 23.
5. *Ep. Ind.*, vol. xxxi, pp. 263-66, 267-268.
6. Although we have as many as eleven charters (excluding the Kurud plates of Narēndra and the Sirpūr plates of Sudēvarāja), such sameness is conspicuously absent.
7. It could have been either the death of a descendent of the donee without leaving a successor or confiscation of the grant because of violation on the part of the donee of the conditions accompanying the grant.
8. *IHQ*, xix (1943), pp. 139-146.
9. *Ep. Ind.*, vol. xxiii, pp. 18-22.
10. In the Pipardūlā plates the donor Rāhudēva is mentioned without any honorific or official designation and hence we cannot be sure about his exact position except that he seems to have been an important personage. The Arang plates of Sudēvarāja mention the donor Bhogilla simply with his official designation *Pratihāra*.

11. In the Kāvatal plates Sudēvarāja is described as son of Durgarāja
Vide Ep. Ind., Vol. xxxi, p. 315, text line 3.

12. Nanna, grandson of Udayana and father of the Pāṇḍuvamśī king
Tīvaradēva, would be too late for this purpose.

COMPUTER TECHNIQUES OF
IMAGE ENHANCEMENT IN THE STUDY OF
A PALLAVA GRANTHA INSCRIPTION

GIFT SIROMONEY

THERE HAVE BEEN REMARKABLE developments during the last fifteen years in many areas of picture processing by computers¹. Of special interest to epigraphists are the areas of image enhancement and line detection². We present here the results of some experiments conducted on a fragment of a Sanskrit inscription³ written in the Grantha script of the nail-headed variety. The inscription is from the Kailāsanātha temple complex at Kāñchīpuram erected by Rājasimha Pallava in the eighth century A.D. and is known as the Raṅgapatākā inscription⁴ since it refers to a queen called Raṅgapatākā.

Estampages of Raṅgapatākā inscriptions were chosen for study. A fragment which reads : *rjjitya garvvam = īva Pushkara-dēvatāyāḥ* was divided into two equal horizontal strips. Another strip representing a different estampage of the latter half of the fragment was placed on top and the three lines were photographed. The three lines read as follows :

ra dēvatāyā
rjjitya garvvam = īva Pushka-
ra dēvatāyā

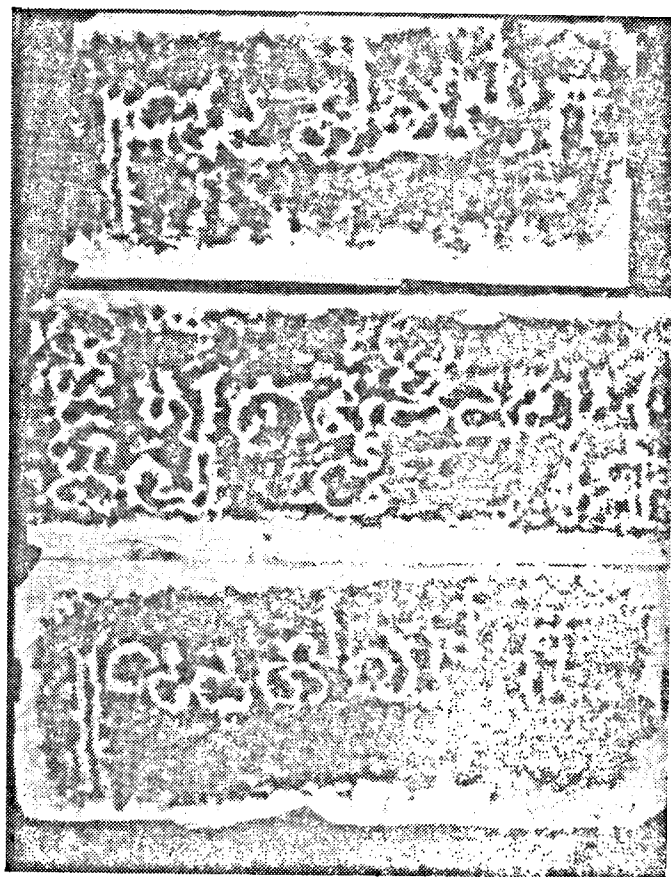
The first and the last lines exhibit the variation between two estampages of the same fragment. The photograph is "read in" by the scanner unit of the computer and stored in a tape. One can call back the picture from the tape to be displayed on a television-like screen of the computer. The picture on the screen can be photographed by a Polaroid camera fitted to the unit. Figure 1 gives a Polaroid picture of the three lines used in our experiments and the eye-copy of the fragments is given in figure 2. We shall treat the inscriptions in figure 1 as "original" pictures.

The technique used for storing a picture in a computer tape can be described as follows. A picture is subdivided by the computer into tiny points arranged in rows and columns. Each point in a photograph is either black, or white or has a certain intermediate level of grey. If a part of a picture is absolutely white then the grey level at that point is reckoned as zero. If a point is taken from the darkest patch, the grey level will have a high value, depending upon the number of levels of grey we wish to recognize in the picture. The larger the number of grey levels the finer the details. Each grey level is measured by the scanner and recorded as a number in the tape.

One of the interesting techniques of image enhancement is *thresholding*. Imagine a black and white picture having thirtytwo grey levels. Let us suppose that eight is fixed as the threshold value. (There are techniques for choosing the most efficient threshold). If any point has a grey level above eight it will be changed to black by the computer. Any point with a grey level up to eight will be changed to white. When the method of thresholding is used a "black and white" picture with different intermediate shades of grey will be converted to a high contrast picture which has only white and black without any intermediate shades of grey. This picture is also called a binary picture since it has only two levels. One may try different levels of thresholding and choose that level which is most useful for the particular estampage. By setting the threshold high in our picture we will be ignoring finer details which might be of value.

Another simple technique used by computer scientists is *complementation*. By this method the negative of a given picture is produced by the computer. When a grey level picture of an estampage has been transformed into a two level black and white picture, complementation produces a high contrast picture with black writing on a white background. We have given here a number of examples of such pictures where the writing is shown in black. In the original the writing is in white on a black background produced by inking. Even if a photograph of an inscription is used instead of the photograph of an estampage the methods of thresholding and complementation may prove quite useful. When a computer is used the results can be displayed on the screen within a very short time.

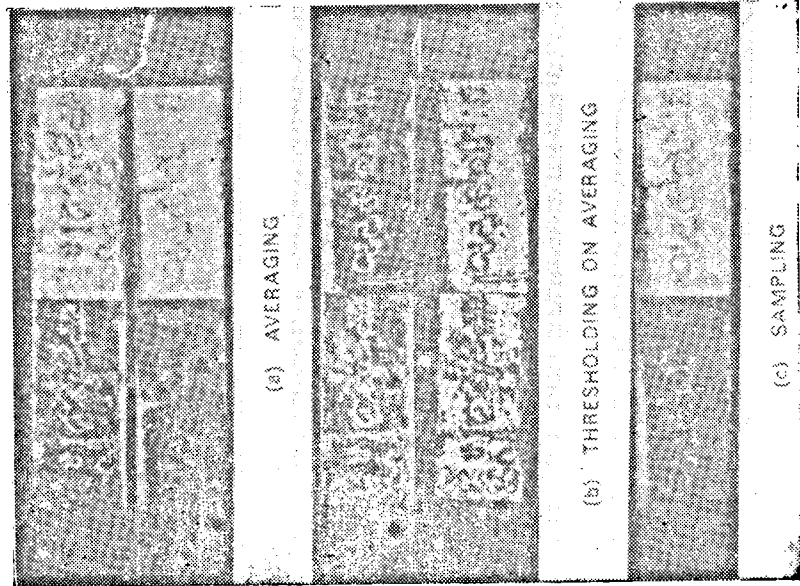
Averaging is another technique used in picture processing.



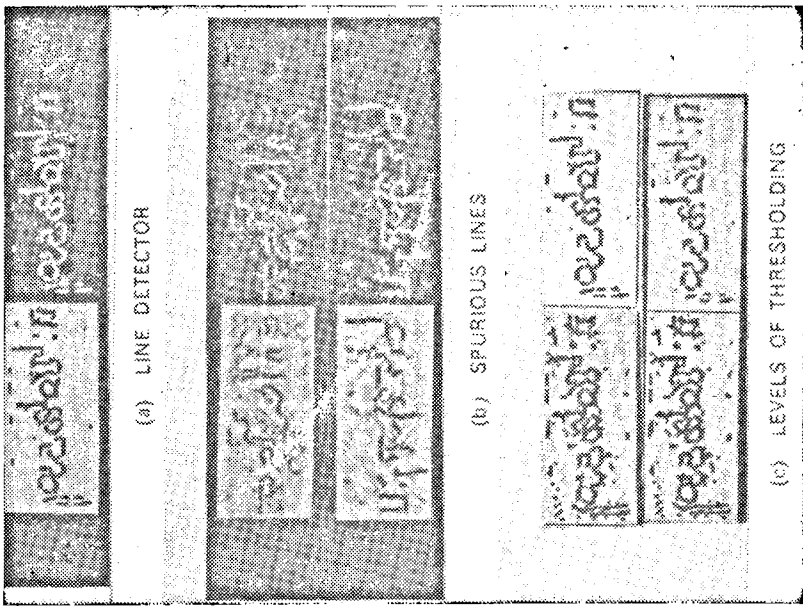
Computer Technique: Fig. 1



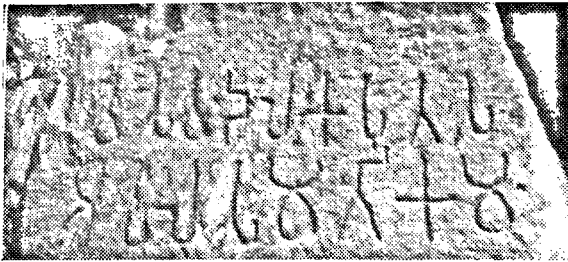
Computer Technique : Fig. 2



Computer Technique: Fig. 3



Computer Technique: Fig. 4



Chaṇḍālā: Inscription 1



Chaṇḍālā: Inscription 2

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The grey level value of each point is replaced by the average grey level of its neighbourhood. This is done quite easily by the computer. By this method isolated points will be smoothed out [Figure 3 (a)]. If thresholding is used after averaging, isolated points will get removed. This method is quite useful in many areas of picture processing but is not very effective in our experiment [Figure 3(b)]. We have also tried out the technique known as *sampling* where only one in ten points was sampled and the rest of the picture reconstructed by the computer on the basis of the sampled points [Figure 3(c)].

Since we are primarily interested in lines in the inscriptions, experiments using *line detecting techniques* were carried out. Pallava Grantha inscriptions do have "dots" to denote the "m" and the "h" sounds but the dots do not often stand out in estampages. Making use of the redundancy in Sanskrit it is possible to read an estampage with a high degree of success even in the absence of dots.

The line detecting technique used in our experiments was developed by Vander Brug and is called the *semilinear line detector*. It looks for a sequence of adjacent points along the direction of the line whose average intensity is darker than the average intensities of each of the adjacent sequences in the direction across the line. Semilinear detectors are not easily distracted by adjacent noise points and they tend to bridge small gaps in the line. Line detector tends to produce pictures with lines of uniform thickness even when the thickness of lines in the original picture is not uniform. If the line detector is used after thresholding we get very good results for estampages which are not "noisy" [Figure 4 (a)]. If the original is not clear but contains too many spots and smudges (in other words, noisy) then the line detector produces lines which are not in the original [Figure 4 (b)]. Threshold selection is a critical decision and we have given examples for different thresholds [Figure 4 (c)]. Other line detecting techniques known as linear and non-linear detectors, if tried, might give similar results.

The techniques described here are quite general in nature and are applicable to different kinds of scripts and inscriptions found on stone, copper plate and other surfaces. It is hoped that, in future, computer methods of image enhancement will prove to be of value to those working with new inscriptions.

Acknowledgement :

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Notes :

1. Azriel Rosenfeld, *Picture Processing by Computer*, New York, 1969.
2. Gordon J. Vander Brug, "Semilinear line detectors", *Computer Graphics and Image Processing* (forthcoming).
3. *South Indian Inscriptions*, Vol. I, pp. 23-24.
4. Michael Lockwood, Gift Siromoney and P. Dayanandan, *Mahabalipuram Studies*, Madras, 1974, p. 59. In this inscription the chief queen (unnamed) of Narasimha II (or Rājasimha) is compared to Pus karadēvatā or Lakshmī. Raṅgapatākā, in our opinion, was the queen-mother the surviving wife of Paramēśvara. Raṅgapatākā is compared to Pārvati. This view is different from the traditional view that Raṅgapatākā was Rājasimha's queen.

NĀṆEGHĀṬ INSCRIPTION
OF AN UNKNOWN QUEEN-
A HISTORICAL RE-APPRAISAL

PARMESHWARI LAL GUPTA

ON THE TWO SIDE WALLS of the pass at Nāṅghāṭ, on the way from Konkan to Junnar in Poona district, is inscribed a long inscription in Prākṛit and in Brāhmī script¹. It relates to a queen, whose name is not available to us ; and it furnishes a long list of sacrifices, which were performed by the queen or her husband and records an inventory of the gifts that were made on this occasion. The importance of the inscription lies not so much for this list or inventory as for the five lines at the beginning, which are inscribed on the left wall of the pass. Scholars believe that it reflects on the history of the Sātavāhanas.

The first line begins with the salutations to gods and then in the next three lines something is told about the queen's family ; and the fifth line describes the virtues of the queen herself. Then follows the description about the sacrifices and the gifts. Unfortunately, the inscription is so much weathered that many words and letters are now missing. Scholars have tried to restore the lacunae conjecturally and interpret the inscription for the purpose of history on the basis of their own formulated views. This has, in our opinion, misled the history.

Therefore, it is proposed to review here the first five lines and to re-appraise their contents, without going into any conjectural restorations. These lines are :

1. [Om (or Sidhaṁ) namo Prajapati]no dhaṁmasa namo
Īdasa namo Saṅkhaṁsana-Vāsudevana chanda-sūrānan² [mahi]
mā [va] tanaṁ chatuṁnaṁ Lokapālānaṁ Yama-Varuna Kubera
Vāsavānaṁ namo kumāravarasa [Vedi]³ sirisa Ra(ño)

2.(v)*irasa sūrasa apratihata-chakasa Dakhi[napa*]-ṭha-patino*.....

3. [*ma*].....[*bālā**]*ya mahāraṭhino Aṁkiya-kulavadhanasa sagara-girivara-vala [yā] ya pathiviya pathama vīrasa ya va alaha (vaṁtaṭhtha ?)*.....*salasu mahato maha*.....

4. *Sirisa*.....*bhāriyā (ya) devasa putadasa varadasa kāmadasa dhanadasa [Vedi]³ siri-mātu (ya) satino Sirimatasa cha mātu (ya) sīma*.....

5. *vatiya*.....*ā (n) āgavara-dayiniya māsapavāsiniya gahatāpasāya charita-bramhachariyāya dikha-vrata-yañña-sumdāya yañā-hutā dhūpan-sugandhāya niya*.....

These lines in the epigraph disclose no punctuations. The scholars have punctuated them according to the convenience of their own interpretations. So, the first and the foremost problem of the correct determination as to where a line ends and the other begins. But before we come to this, it seems necessary to point out that Bühler does not seem to have any justification in thinking that the first line begins with *Om namo*.⁴ It would be more in line with the early inscriptions to take that it begins with *Sidham* without *namo*. Proper sentence begins with *Namo Prajāpatino*.

Now, Bühler, editing the inscription, has placed the first punctuation for the first sentence, in the first line after the word [*Vedi*]-*sirisa*. He has assumed that the second sentence begins with the word *Raño*. This sentence contains salutations to various gods and ends with the name *vāsavānaṁ*. Thereafter, according to Bühler is the phrase *Namo kumāravarasa [Vedi]sirisa*. He has translated this phrase as 'Praise to Vedaśrī, the best of the royal princes.' Suggesting this phrase and its translation, Bühler seems to be conscious about its oddity. So, to justify them, he explains, "It seems to me that the queen described in the large inscription must have been ruling as guardian of her son prince Vedaśrī. For, though she is the chief person in the inscription, 'the best of royal princes', Vedaśrī, is addressed in line 1 with *namo* 'adoration to' or 'praise to', and treated with the same reverence as the gods invoked in the beginning of the *maṅgalācharaṇa*. That fact points to his occupying a privileged and particular high position".⁵

But the statement that a prince, who is just a minor, would be so adored and ranked with gods is in no way convincing. Nowhere such an adoration is ever known in an Indian epigraph for even a king, not to speak of a minor prince. It is unthinkable

that a mother would ever adore her son in such a way and treat him like a god, how-so-ever beloved he may be to her. Bühler has a supporter in Katare (S.L.) for his punctuation of the sentence and the translation of the phrase. Katare, however, has quite a different explanation for their justification. He holds that Vedaśrī was not alive when the inscription was recorded. He points to the worship of the dead as gods in India⁶ and suggests that Vedaśrī was adored for this reason. But this explanation is equally ridiculous. Katare has failed to realise that the dead ancestors are worshipped in India and not the dead descendents. The worship of a son as *pitṛi* is unheard of. Such a worship by a mother, how-so-ever great might be the son, cannot be ever thought of in any form. As such, it is evident that the construction suggested by Bühler holds no validity,

Rapson perhaps realised the absurdity in the construction suggested by Bühler. He ignored the restoration of the words *namo Prajāpatino* at the beginning and took the word *namo* in each instance with the preceding name of the god in genitive.⁷ Thus in his opinion the sentence began with *dhammasa namo* and ended with the word *namo* after *vāsavānaṃ* and before *Kumāravarasa*; thereby he meant that the next sentence began with this latter word. Sircar (D.C.) holds almost the the same view; he, however, admits the word *Prajāpatinō* as the probable restoration but this he says not in his edited text but only in its Sanskrit rendering⁸. Thus these scholars, quite successfully obviate the objections raised above. But then their own suggestion is not immune from objection. As has been pointed out by Mirashi (V.V.)⁹ in all ancient Prākṛit and Sanskrit inscriptions, where any invocation of gods is made, the word *namo* occurs before the name of the god adored. Therefore, the word *namo* in this inscription should also be associated with the names of the gods that follow it and not with those that precede. To this extent, it may be said that Bühler was right in his restoration of the sentence at the beginning and admitting the word *namo* at its proper places. The only error that lies in his interpretation is that he includes a human name along with those of the gods. Every thing goes well, once it is realised that the word *kumāravarasa* is not an adjective governing *Vedisiri*; but is a proper noun in itself and it refers to god Kārttikeya¹⁰. Thus the first sentence ends with the salutation to the god Kārttikeya, and not to any human being.

Now, the second sentence begins with the word *raño* according to Bühler, with Kumāravara according to Rapson and with *Vedisiri* according to Mirashi, as explained above. The letters beyond *Vedisiri* are destroyed ; so, it is difficult to suggest as to how the sentence would have ended and what the sentence actually meant. Thus there is no course other than to conjecture. But before entering into any guess, it seems necessary that we should first look at the forms that were used in this kind of ancient epigraphs.

Invariably, the epigraphs begin with the word *siddham* ; and it is followed by the date in the regnal year of the reigning king, month and the day. Here in this inscription, we have the invocation to gods after the word *sidham*. This form is known, besides here, in the inscriptions found on the *Āyaka* pillars at Nāgārjunikoṇḍa. As such, it may conveniently be suggested that the present inscription is a forerunner in the lines of those inscriptions. And then, as such, we have in most of the Nāgārjunikoṇḍa inscriptions of the Ikshvākus, two forms. Most of the inscriptions describe the person recording the epigraph after the invocation to gods ; but there are a few which mention the date first after the invocation to gods and then describe the person recording it. So, it is desirable that we should first know which of the two forms was adopted in the present inscription ; and only then any kind of suggestion may be made for the possible restoration of the lacuna. But what has been said so far about this sentence is said without paying any attention to this basic point.

It has been suggested by Rapson that the sentence begins with the name of the prince Vedaśrī and the word *raño* that follows the word *Kumaravarasa Vedisirisa* is meant for his father, whose name is destroyed but whose epithets are available in line 2 of the inscription. He further conjectures that the epithets are meant for Sātakarṇi¹¹. If it was so, it means that this sentence begins with the introduction of the queen, who recorded the epigraph. But any reference to Vedaśrī and his father at this place has no justification. The two are mentioned further in the next line. So, his suggestion is unacceptable.

Mirashi takes the beginning of the sentence with *Vedisiri* and suggests that it should be construed with *raño* ¹² ; and the expression should be taken to mean 'during the reign of king Vedaśrī'.

He further suggests that the words in the second line continue the description of the same king Vediśrī ; and then he says the words lost at the end of line 2 probably recorded the regnal year, season, fortnight and the day when the inscription was incised. It may well be conceded to Mirashi that the second sentence, beginning with *Vedisirisa raño* might refer to the reigning king in the normal way of traditions seen in inscriptions. But to say that any word in line 2 gives any description of king Vediśrī and that this description was followed by his regnal year etc. would mean to suggest a thing unknown. Nowhere in inscriptions, long descriptive epithets are used in course of describing the date of the inscription in the regnal year of a king. They simply name the king ; and the same is the case with the Karle and Nasik Cave inscriptions of Vāsishṭhīputra Puḷumāvi which Mirashi has cited in favour of his suggestion. The present inscription was no exception to this.

Moreover, certain epithets for Vediśrī are used in line 4 of this very inscription. Had the epithets in line 2 been meant for him, they could well have been placed along with those epithets in line 4 ; and that would have been the most appropriate. Since it is not, it is self-evident that the epithets in line 2 were not meant for Vediśrī. It would be, therefore, well approaching to the truth to say that the words *Vedisirisa raño* were straight away followed by the words referring to his regnal year and the season, fortnight and the day when the inscription was recorded ; and this part is now lost. It may thus be inferred that the second sentence contained only the date ; and the inscription was recorded when king Vediśrī was ruling. He was neither minor nor dead.

Now, the third sentence, according to the norm of the inscriptions, should have the biographical details of the queen, who recorded the inscription. Ladies, in the inscriptions recorded by them, invariably describe themselves as mother or wife or daughter of someone named. In many inscriptions, they present themselves with more than one of these relations ; and in a few cases all the three relations are mentioned in detail. When they mention all the three relations, they usually introduce themselves first as daughter and name their father with or without his epithets and status ; next they name their husband with his epithets and status ; lastly, they call themselves mother and name their son or sons ; and at the end they disclose their own name. This biographical sentence,

thus, has four distinct parts.

The third sentence, containing the biographical information about the queen, is spread over here in the lines 2, 3 and 4 of the inscription. They refer to all the three relations referred to above; but surprisingly enough, the name of the queen is nowhere available. It is difficult to postulate if she preferred to keep herself anonymous or that her name is lost in the missing portion of line 4 towards the end. Most likely, the latter would be the case. Barring the queen's name the last i.e. the third part of the biography is available in its entirety in line 4. There she is described as *Devasa putadasa varadasa, kāmadasa, dhanadasa Vedisiri-mātuya Satino Sirimatasa cha mātuya*. This discloses that she was the mother of two sons Vedisīrī and Śrīmat Sati. The former is endowed with some epithets that show that he was the reigning king.

The second part of the biography describes her as wife (*bhāriyā*). This part, ending in *bhāriyāya*, had the name of her husband, just before this word; but it is only partly available as *sirisa*. And this name is preceded by a long series of epithets, which is broken at places. However, in our opinion it begins with the word *Maharaṭhino* in line 3 and shows that the husband of the queen was a Mahārāṭhī; he belonged to the family of Aṅgiya and was foremost warrior on the earth (*pathaviya pathama vira*).

The earliest part of the biographical sentence began somewhere in line 2 and continued to some length in line 3. This portion, however, is badly damaged; only the central portion of line 2 and the letter *ya* as the tail in line 3, are available to us. According to the conventional pattern, this part should describe the queen as daughter and mention the name of her father with his epithets and status. And so, it may well be anticipated that the letter *ya* at the end was the part of a word like *sutāya kanyāya* or *bālāya* to suggest the meaning 'daughter of'; and the epithets available in line 2 related to her father, whose name would have been at the beginning of line 3, exactly before this word; but it is now lost. The epithets available in line 2 show that he was the lord of the south (*dakṣiṇāpatha-pati*) and was *vīra, sūra* and *apratihatachakra*.

But Sircar (D. C.) has postulated the existence of the name of the father-in-law of the queen in this part; he holds that the epithets in line 2 related to her father-in-law and not to her father.

He has restored conjecturally the lines 2 and 3, in his Sanskrit rendering as : *Vīrasya śūrasya apratihata-chakrasya Dakṣiṇā-patha-pateḥ.....(Rājñah Śimuka-Sātavāhanasya snushayā)..... ; bālāyā Mahārathinaḥ Aṅgika-kula-varadhanasya sāgara-girivara-valayāyāḥ pṛithivyāḥ prathama-vīrasya (Śātakarṇi)-śriyāḥ bhāryayā*¹³. His first part, thus, ends at *snushayā* of his conjectural restoration; and it describes the queen as the daughter-in-law of the king Simuka Sātavāhana. His second part, that describes queen's father, begins, according to him with the word *bālāyā* and ends at *Aṅgiya-kula-varadhanasya*. He has thus detached the word *bālāyā* from our first part and to it he has added the first portion of our second part. With this he comes with the suggestion that the queen belonged to Aṅgiya family and her father was a Mahārathī. The remaining portion of our second part, that begins with *sāgara* and ends in *bhāriyāya* forms his third part and refers to her husband, who according to him was Śātakarṇi Śrī.

This conjectural restoration and suggestion is influenced by the dogma that prevails amongst the scholars about the inscription being related to the Sātavāhanas. It is untenable for more than one reason. Firstly, with only one exception, no lady is known to have described herself in such biographical lines in any inscription as daughter-in-law. If ever a lady felt the need to introduce her father-in-law in her inscription, she did so not by referring to herself as his daughter-in-law but by naming her husband as his son. The sole exception to this is the inscription on the *Āyaka* pillar G at Nāgārjunikoṇḍa; there Mahādevī Bhaṭidevī has called herself the daughter-in-law of Mahārāja Vāsishṭhīputra Śrī Chātamūla¹⁴. But then she did not mention her father. We have no instance where father and father-in-law both were mentioned. Therefore, it is very unlikely that the queen had mentioned her father-in-law in the present inscription.

Secondly, Sircar's construction of the phrases bears an apparent inconsistency. At three places the relationship of the queen is disclosed after the person is named, viz. *Simuka-Sātavāhanasya snushayā ; Śātakarṇi-śriyāḥ bhāryayā Vediśriyāḥ mātrā;* and strangely enough at the fourth place she is called *bālāya* before naming her father. The construction of this phrase may not be grammatically wrong; but it breaks the coherence in the sentence, which is unwarranted. Had the word *bālāya* been meant to be related to *Mahārathinaḥ Aṅgikakula-varadhanasya*, the drafter of the record

could well have said it as *Aṅgikakula-varadhanasya bālāyā* in the same way as he did about the other three ; he had no difficulty in doing so. This, by itself, suggests that in the record *bālāyā* would have never been meant to be associated with the phrase that begins with the word *mahāraṭhino* but would have been associated with the phrase that preceded it.

Thirdly, according to Sircar's restoration and suggestion, the queen has named three of her relatives, viz. her father-in-law Simuka Sātavāhana, her husband Śātakarṇi Śrī and her sons Vediśrī and Sati Śrīmat ; it is quite strange that she missed to name her own father and was satisfied by only saying that he was a Mahāraṭhī and belonged to Aṅgiya family. This by itself shows that the phrase is incomplete. Had the queen meant to describe her father by these epithets, she would have certainly added his name after Aṅgikakula-varadhanasya and that would have been befitting and dignified. Since the personal name is absent at this point and there is no lacuna in this line, it is most unlikely that the epithet related to any other person than her husband whose epithets continue along with these epithets.

Lastly, no Sātavāhana ruler is known to be the lord of the south (*dakṣiṇāpatha-pati*) earlier than Gautamīputra Śātakarṇi, the 23rd king of the Purāṇic lists, while Simuka was the first of that list. So, Simuka Sātavāhana could never be a *Dakṣiṇāpatha-pati* of this inscription. Apart from others this fact alone makes the restoration suggested by Sircar void.

Our analytical study of these lines of the inscription, thus, reveals that the queen, whose record is this inscription, was the daughter-in-law of the family called Aṅgiya ; she was the wife of a Mahāraṭhī, whose name ended with *śrī* ; she was the daughter of a mighty king of the south ; and she was the mother of two sons-Vediśrī and Satiśrī ; the former was the reigning king when the record was written.

These conclusions, however, are not in consonance with the prevailing view amongst the scholars that the inscription belonged to a Sātavāhana queen. It is, therefore, necessary to examine the evidence on which this view is based, before the above results are admitted as final.

There are some label inscriptions inscribed over relievo figures (which are now lost) drawn near the present inscription on the walls of the same pass. These label inscriptions are read as : (i)

Rāyā Simuka Sātavāhano Sirimāto ; (ii) *Dēvī Nāyanikāya rañocha Siri Sātakaṇino* ; (iii) *Kumāro Bhāya* ; (iv) *mahāraṭhi Traṇakayiro* ; (v) *Kumāro Hakusiri* ; (vi) *Kumāro Sātavāhano*¹⁵. The names in label No. (ii) are given in the sixth case ending; so it is suggested that they refer to the reigning king and queen. Of the other label inscriptions it is said that No. (i) represents the father of the king; No. (iv), the father of the queen; and the rest represent the princes, the sons of the royal couple. In the light of this belief, it is further believed that the queen of the present inscription was Nāganikā (Nāyanikā of the label No. ii) and her husband was king Śātakarṇi (of the same label); she was the daughter of Mahāraṭhī Traṇakayiro (of the label No. iv). The names of her sons Vediśrī and Sati Śrīmat are sought amongst the other label inscriptions.

There is nothing in the label inscriptions, by themselves, to say that they belong to any chain of relations. But it may be reasonable to assume that the label No. (ii) related to a royal couple ; but we cannot be sure if the names of the king and queen in the sixth case ending may be an evidence to say that they were the reigning royal couples, as is generally suggested ; they may or may not be the reigning couples. This, however, does not matter much for our purpose. With this identification, it may be a natural conclusion that the person named in the first label would be a royal ancestor, most likely, he would be the father of the king. And in the same vein , it may also be suggested that the relievo figures that followed that of the royal couple , would be of their sons. Then , it might also be assumed that these figures of the princes were engraved in order of their seniority, i. e. Kumāra Bhāya..... was the eldest and Kumāra Sātavāhana was the youngest. The flight of our imagination might take us also to say that at the time when these figures were engraved, the eldest prince Bhāya... was probably dead or was incapable of holding any administrative post. So, the next son Traṇakayiro was entrusted with the responsibility of a Mahāraṭhī (probably governor of a province) and the other two princes were too young to hold any official post when the figures were carved. There is nothing in the relievo inscriptions to show that Mahāraṭhī Traṇakayiro was the father of the queen. Had it been so, we should naturally have had his figure if not just after the figure No.(i) in order of precedence, atleast after the figures of the royal couple and before the figures of the

princes and never in between the figures as we have it here. This basic fact invalidates the suggestion, by itself; and it needs no further comment.

Mahārāṭhi Traṇakayiro is suggested to be the father of the queen of the inscription, only because we have the word Mahārāṭhi in it; and it refers to a person who did not belong to the Sātavāhana family. Such a person, in an inscription of a queen, could only be her father; and as such, without considering the precedence in the engraving of the reliefs, scholars jumped to the conclusion that Mahārāṭhi Traṇakayiro would be the same person who is mentioned in this inscription. This suggestion by itself has no basis.

The other thread to connect this inscription with the persons of the label inscriptions lies in the identification of Kumāra Hakuśrī (of label No. v) with Sati Sirimata of the present inscription. No doubt we have *ha* in place of *sa* in the Dravidian Prākṛit and some of the Sātavāhana inscriptions (viz. *San̄gha* = *han̄gha*; *Siri Sātakanī* = *Hiru Hātakanī*); but *ku* or *ka* for the letter *ti* is quite unknown. *Sati* may be *Hati* but never *Haku*. Had the label inscriptions meant to represent *sa* by the letter *ha*, the correct form would have been *Hakuhiri* and never *Hakusiri* and all the letters *sa* in the labels would have been replaced with *ha*; and then *Rayo.Simuka Sātavāhano.Sirimato* would have been *Himuka Hātavāhanō Hirimato*; *Siri Sātakanino* would have been *Hiri Hātakanino* and *Kumāra Sātavāhāno* would have been *Kumāra Hātavāhano*. Since they are not, it is difficult to understand as to why only at one place *sa* was replaced by the letter *ha*. Therefore, the identification of Hakuśrī with Sati Śrīmat, on the very face, is absurd. Gopalachari had been conscious about this absurdity; so, he tried to connect this inscription with those of the label inscriptions by suggesting that there were two other relieve figures and their inscriptions in between the figures of Kumāra Bhāya (No. iii) and Mahārāṭhi Traṇakayiro (No. iv); and he thereby suggests that these missing figures represented the two princes Vediśrī and Sati Śrīmat of the present inscription.¹⁶

If we admit Gopalachari's suggestion, it would then mean that Nāganikā had six sons (or at least five, if we exclude Mahārāṭhi Traṇakayiro) and not only two as mentioned in the inscription. It could have been well understandable had she mentioned only the son, who was then reigning and left the others; if she preferred to mention more than one son, it owes an explanation as

to why she ignored the other three or four sons. Since the names of the princes given in the label inscriptions are missing in this inscription, there could be no other explanation than to admit that the label inscriptions had nothing to do with the present inscription.

To associate this inscription with the label inscriptions, Katare (S.L.) has come forward with the suggestion that the prince Sati Śrīmat of the inscription should be identified with Śrī Sāta, Sāti and Sātakarṇi found mentioned on coins ; and thus he identifies Sāti of the inscription with Sātakarṇi of the label inscription¹⁷. And at the same time he furnishes another ingenious suggestion that Nāganikā was the mother of Sātakarṇi and not his queen¹⁸. He argues that had she been his wife, her name should have been written after him and not before him. Since her name is written first, she was his mother and was a regent during his minority. Thus, in his opinion Nāganikā was the queen of Simuka. He further explains the reason of not placing her by the side of Simuka by saying that he was by then dead and his minor son was his successor ; so, as a regent, she was placed along with her son Sātakarṇi. Thus he conjectures that line 4 of our inscription has the name of Simuka Śrī as the husband of the queen.

In putting this curious suggestion, Katare has failed to realise that the precedence of the name of wife over the name of her husband is not so strange as he presumes ; rather it is well known in our ancient literature, viz. Sītā-Rāma, Rādhā-Kṛishṇa, Sāvitrī-Satyavān. Besides, in the present case, the inscription concerned was engraved over the figures as labels. It is very likely that Nāganikā was figured first by the side of the figure of Sātakarṇi, very much in the same way as we have the figures of Kumāradevī and Chandragupta I on the Gupta coins. On them the name of Kumāradevī is written along with her effigy and that of Chandragupta along with his own. Here also the name of Nāganikā would have been above her figure and that of Sātakarṇi over his own ; and this would naturally make the name of Nāganikā written first ; and thus here does not arise any occasion for the precedence of husband's name over that of his wife. In spite of these facts, even if we admit what Katare says, there is no reason to say that the coins bearing the legends Śrī Sāti, Sāta and Sātakarṇi relate to one and the same person. They were

undoubtedly issued by more than one person. Since we have already written elsewhere on this point,¹⁹ we need not dilate upon it here; it would be enough to say that there is no justification in identifying Sati Śrīmat of this inscription with Sātakarṇi of the label inscription via coins.

Thus, there is nothing to connect the inscription with the persons mentioned in the label inscriptions and thus to regard it as a Sātavāhana document. If it is to be related with the Sātavāhanas, it may be done so only by admitting that it belonged to a princess of the Sātavāhana family, who was married in a family called Aṅgiya. This association can well be suggested on the basis of the term *Dakṣiṇāpatha-pati* used in the inscription for the father of the queen. The Sātavāhanas were the lords of the south only in the latter period of their life; so this inscription containing this epithet cannot be dated in any earlier period.

That the inscription is late in date is also borne out by the fact that invocations to gods, which are seen in this inscription are quite unknown in the Sātavāhana inscriptions. This shows that it cannot be placed along with any Sātavāhana inscription. Moreover, it follows the pattern of the inscriptions of the Ikshvāku queens, i. e. it has first the invocations to gods then the date and lastly the biographical details. This leads the inscription quite close in time to the Ikshvāku inscriptions.

Sircar (D. C.) has pointed out that that the *ī*-signs and the letters like *va*, *pa*, *da*, *cha* exhibit an amount of development. According to him, *va*, though without serif, is on the way of becoming triangular. *Pa* is almost Kushāṇa. He places this inscription between the Besnagar Pillar Inscription of Heliodorus and the Hāthīgumphā inscription of Khāravela.²⁰ The dates of these inscriptions are uncertain and they are variously dated. So far as we are concerned, we feel that what has so far been read *Dimita* in the Hāthīgumphā Inscription is nothing but *Vimaka*; and *Vimaka* here refers to *Vima Kadphises*. So, the Hāthīgumphā inscription may be placed only in the first century A.D. Accordingly the present inscription should also be placed earliest in the same century.

Notes :

1. G. Bühler, *ASWI*, V, pp. 60 ff; for other references see Lüder's List, No. 1112.

2. Bühler reads *Chanda-sutanam*; but it makes no sense.

3. Krishna Sastri reads *Khada* (*ASI, AR*, 1923-24, p. 88). This is an important variation suggested. A note of this should be taken. We have retained the accepted form only for convenience. This does not mean that we are convinced of the accepted reading.

4. *Op. Cit.*

5. *Op. Cit.*

6. *JNSI*, XVI, p. 81.

7. *BMC, AK.*, intro. p. xlv.

8. *Select Inscriptions*, 2nd Ed., p. 195.

9. *JNSI*, XIV, pp. 29-30.

10. *Ibid.*

11. *BMC, AK.*, intro. pp. xlv-vi.

12. *JNSI*, XIV, p. 30.

13. *Select Inscriptions*, p. 195.

14. *E.I.*, XXI, p. 62.

15. Bühler, *ASWI*, V, p. 64.

16. *Early History of Andhra Country*, p. 33.

17. *JNSI*, XIII, pp. 37-39.

18. *Ibid.*

19. *Ibid.*, XVI, pp. 88-89.

20. *Select Inscriptions*, p. 193, fn. 1.

COINS OF SAMARA
KŌLĀHALA—
A STUDY

R. NAGASWAMY

TWO COINS OF TAMIL NADU, one bearing the legend *Samarakōlāhala* and the other *Bhuvanēkavīra*n are listed among the Pāṇḍya coins by Elliot¹ and Desikachari². There are six different varieties of these issues.

- TYPE-I³ : Obverse : a seated Garuḍa on a fish. Flanking the Garuḍa, above are shown *śaṅkha* and *chakra*. Reverse : legend reading 'Samarakōlāhala' in Tamil characters. The legend is in three lines. The lines are separated by line markings.
- TYPE-II⁴ : Obverse : a seated Garuḍa flanked by *śaṅkha* and *chakra*. Reverse : Tamil legend reading : *samarakōlahala* in three lines, separated by line markings. (Fig 1).
- TYPE-III⁵ : Obverse : a seated Garuḍa flanked by *śaṅkha* and *chakra*. Reverse : Tamil legend reading 'samarakōlāhala' without the intervening line markings. Typologically and palaeographically the coin seems to be earlier than types 1 and 2.
- TYPE-IV⁶ : Obverse : Seated Garuḍa holding a snake flanked by *śaṅkha* and *chakra*. Reverse : Tamil legend reading 'Bhuvanēkavīra' in three lines—line markings present (Fig 2).
- TYPE-V⁷ : Obverse : Seated Garuḍa holding a snake. *Śaṅkha* and *chakra* present above the Garuḍa. Two semicircles with festoons probably representing a parasol are shown.

Reverse : Legend in Tamil script reading *Bhuvanēkaviraṅ* in three lines found. Separating line-marks are present.

TYPE-VI⁸ : Obverse : Seated Garuḍa holding a snake; *śaṅkha* and *chakra* present.

Reverse : Two fishes facing each other separated by a sceptre. No legend.

In an earlier article, I have assigned these coins to 14th-15th century A.D. on palaeographical grounds⁹. N. Kasinathan has rightly pointed out that these are not Pāṇḍya coins and were issued by a Bāṇa chieftain, Sundara Tōluḍaiyāṅ Mahābalivāṇādhirājaṅ who ruled the Madurai-Ramnad regions in the 15th century A.D.¹⁰. Kasinathan has suggested that this Bāṇa chief embossed the Garuḍa emblem on the coin as he adopted Vaishṇavism, the religion of his suzerains, the Vijayanagara emperors. These coins are discussed here in the light of three inscriptions from Pudukkottai District.

An inscription dated Śaka 1390, coming from Sevalur¹¹ in Thirumayyam Taluk, Pudukkottai District, was issued by a Bāṇa chieftain. The Bāṇa is called Thirumāliṛuṅjōlainiṅṅāṅ Mābalivāṇādhirājaṅ. He established a special rite named *Sundara Tōluḍaiyansandhi* in the local temple. Obviously he also had the name Sundaratōluḍaiyāṅ. Besides these names his various titles are also recorded in the same epigraph. Among his titles *Samarakōlāhala*, *Bhuvanēkavira* and *Virakaṅjukaṅ* deserve special mention.

Another inscription issued by the same Bāṇa, comes from Nekkonam¹², of the same taluk. His name Sundarattōluḍaiyāṅ is specifically mentioned. His titles *Samarakōlāhala* and *Bhuvanēkavira* also occur. Among the new titles found in this inscription, the following deserve special mention:

Madhurāpuri Mahānāyakaṅ.

Pāṇḍya-kulāntakaṅ.

Sētumūla-rakshā-durandharaṅ.

Rājakula Sarpa-Garuḍaṅ.

Garuḍakētanaṅ.

This epigraph was issued ten years later than the previous record. The way in which the Bāṇa issues records in his own name suggests that he was exercising independent authority over this region. Obviously he has also issued coins in his own name.

It is evident from his title *Garuḍakētanaṅ* that he was having Garuḍa as emblem in his flag and that was his *lāñchhana*. The Garuḍa on the coins under discussion is obviously his *lāñchhana*—the emblem.

Both the epigraphs mentioned above, begin with *Aḷagar Tiruvuḷḷam*. Aḷagar is the presiding deity of Aḷagarkōil, also called Tirumāliruṅjōlai. The name of the chieftain is given as Tirumāliruṅjōlainiṅṅāṅ in the record. This chieftain named also his son Tirumālirunjōlainiṅṅāṅ. The later record was issued by this chieftain to commemorate the naming of his new-born son. These names suggest that he was a great Vaishnavite devoted to the presiding deity of Aḷagarkōil. The presence of *śaṅkha* and *chakra* in his coins indicate his Vaishṇava affiliation.

Another significant title of this ruler reads *Rājakulasarpa-garuḍa* i. e., a Garuḍa to the snake of opposing ruling families. It denotes that he subdued the opposing ruling dynasties. This is also indicated in his coins. The Garuḍa, shown with a snake in his arm, represents this personification.

That he was a conqueror of the Pāṇḍyas is denoted by the title *Paṇḍyakulāntaka* and *Madhurāpuri-mānāyaka*. This conquest is also denoted by one type of coins issued by him. Type-1 shows the Garuḍa seated on the fish, the emblem of the Pāṇḍyas.

Another interesting epigraph—an excellent Tamil verse—comes from Kuḍumiyāmalai, in Kulattur Taluk of the same District. It records that the Garuḍa standard of Tirumāl Māvali Vāṇādhiraṅga is the only flag worthy of praise, while the tiger standard of the Chōḷas, the fish standard of the Pāṇḍyas and the bow standard of the Chēras are insignificant¹³.

Mention may also be made of a number of epigraphs in this place which are in excellent poetic form, indicating that he was a great patron of letters.

The coins bearing the legends *Samarakōlāhāla* and *Bhuvanē-kavira* are thus not only the issues of Sundara Tōluḍaiyāṅ Māvālivāṇādarāyaṅ, but also seek to portray his personality, a rare instance in South Indian Numismatics.

Notes :

1. Elliot, *Coins of Southern India*, p. 126.
2. T. Desikachari, *Dravidian Coins*, pp. 16-17.
3. *Ibid.*, Plate IV, Fig. 74.

WEIGHTS AND
MEASURES IN
KARNĀṬAKA (UPTO 1300 A.D.)

S. GURURAJACHAR

THE SYSTEMS OF WEIGHTS and measures that prevailed in Karnāṭaka during the period under review have been discussed briefly here, in the light of contemporary epigraphs and some important literary works, notably the *Mitaksharā* of Vijñānēśvara (A.D. 1070-1100) and the *Vyavahāraṇita* of Rājāditya (A.D. 1190).

Different units of weights and measures, linear as well as cubic, are mentioned in the epigraphs. Indeed, the leading feature of the system lies in its wide diversity, and to evaluate any uniform standard is very difficult; more particularly so regarding surface measures. Moreover, most of such technical terms have now become obsolete and we have no means to determine their modern equivalents.

Cultivable lands were measured with a measuring rod [*kōlu*, *g(h)le*]. The other system was to measure in terms of the sowing capacity of land, e.g. *gadde*, *Khaṇḍugaṇi mūvattu*; or *gadde salage eraḍu*", etc¹.

We come across land measures like *kamma* or *kambha* (Skt. *stambha*) and *mattar*. The definition of these units is hardly clear. The unit varied considerably from place to place; if, according to some records,² 900 *kammas* went to the *mattar*, 100 *kammas* made up one *mattar* according to a few epigraphs³. Again, if the land was measured with *Gaṅgana-gaḷe*⁴, a *mattar* was equal to 30 *kambhas* only.

Furthermore, the measuring rod was itself no fixed unit, and it, too, varied considerably from place to place. Thus, there were in vogue rods of 10, 13, 18, 24, 28, 33, 70, 78 spans length⁵, to mention only a few.

Some measuring rods were peculiar to, and called after, cer-

tain places or regions, e. g. *Kuṣṭitakūṅṭeya kōl*, *Kūṅḍiya kōl*, *Kōgaḷiya-gaḍimba* and so on⁶. A few others bore the names or epithets of kings, such as the rods of *Vishṇuvardhana*, *Sanivārasiddhi*, *Drōhagharaṭṭa*, etc⁷. As in Tamil-nāḍu, some seem to have been associated with certain temples, e. g. *Praṇavēśvara-dēvara-agraḍimbada-gaḷe*, *Bhērunḍa-gaḷe*, etc.

Nivartana has been defined by Vijñānēśvara [on *Yāj.* I. 210] thus : with a rod of 7 hands long, 300 rods make up a *nivartana* ; and 10 such *nivartanas* go to a *gōcharma*. Dr. Fleet thinks that a *nivartana* was equal to 200 sq. cubits. Measurement of houses and house-sites was often expressed in terms of *hasta*.

Terms like *rājamāna* (royal measure), *rājamāna-daṇḍa* (royal measuring-rod), seem to imply some attempt at standardizing these various confusing units. All the same, it seldom met with any conspicuous success ; for these units continued to exist throughout our period, and still beyond that.

It has been rightly said that the people "must have had to spend a good deal of time, and to draw very much on local knowledge before concluding any business transaction"⁸.

As for the grain and liquid measures mention may be made of *khaṇḍuga*, *salage*, *koḷuga*, *baḷḷa*, *māna*, etc. *bhāra*, *tola*, *pala*, *karsha* and others stood for the weight-standards.

Then, as now, cheating in measurements was widely known as evidenced by Pampa, Nayasēna, Vijñānēśvara and others. Indeed, Brahmaśiva¹¹ holds them to ridicule who, while themselves buying something employed larger measures, but used smaller ones while selling the same.

The State seems to have had some control over the weights and measures, as Sōmēśvara¹² refers to officers in charge, called *tulādihikāriṇaḥ*—a fact reminding us of such an officer, *pautavādhyakshaḥ*, referred to by Kauṭilya.

Notes :

1. *E.C.*, XII, Si. 40 (1040 A.D.) ; V, Ak. 142 (1162 A.D.), etc.
2. *S.I.I.*, IX, i. No. 165 (1099 A.D.) ; also Nos. 276, etc.
3. *Ibid.*, XX, No. 84 (1123 A.D.) ; *M.A.R.* (1929), Nos. 70 (1160 A.D.) etc.
4. *E.C.*, VI, Tk. 11 (1149 A.D.).

5. *B.K.I.*, I. i, No. 108 (1069 A.D.); *E.C.*, VI, Kd. 96 (1149 A.D.)
etc.
6. *S.I.I.*, IX, i, No. 101 (1045 A.D.); *B.K.I.*, I. i, No.81 (1049 A.D.),
etc.
7. *E.C.*, II, No. 388 (1117 A.D.); *K.I.*, II, No.20 (1155 A.D.), etc.
8. Bk. No. 124 of 1932-33; *K.I.*, I, No. 17, etc.
9. G. Yazdani (ed.), *The Early History of the Deccan*, p. 438.
10. B. S. Kulkarni (ed.), *Samaya-Parīkṣhe*, §47.
11. R. Shama Sastry (ed.), *Abhilashitārthachintāmaṇi*, III, 1265.

KURAN̄DI TIRUKKĀṬṬĀMPALLI,
AN ANCIENT JAINA
MONASTERY OF TAMIL NADU.

R. CHAMPAKALAKSHMI

KURANDI TIRUKKATTAMPALLI was the name of a huge monastic establishment of the Jainas in the Tamil country. It seems to have flourished between the 8th and 10th centuries A.D. The present paper makes an attempt to locate the area of its activity and its history on the basis of epigraphic data. Inscriptions referring to this monastery come from *Śamaṇarmalai* — a long range of hills about five miles west of Madurai —, *Paḷlimaḍam*, a hamlet of Tiruchchuli in the Aruppukkottai Taluk of the Ramanathapuram District and *Kaḷugumalai* in the Kovilpatti Taluk of the Tirunelveli District.

The above inscriptions refer to *Tirukkāṭṭāmpalli* as *Kuraṇḍi Tirukkāṭṭāmpalli* and *Kuraṇḍi* as situated in *Veṅbunāḍu*. *Veṅbunāḍu* may be located in the modern Aruppukkottai Taluk of the Ramanathapuram District. Yet, the majority of inscriptions referring to this *paḷli* come from *Śamaṇarmalai* near Madurai, which appears to have been outside *Veṅbunāḍu* (which belonged to either *Churavi* - or *Ten Paṅambu-nāḍu*). In fact, all important evidences would point to the location of the monastery in *Śamaṇarmalai* itself. This hill was evidently under Jaina occupation right from the 2nd-1st centuries B. C. to about the 10th century A. D. Brāhmī inscriptions in the natural caverns with beds at three different spots on this hill would indicate that Jaina monks made use of this hill as their retreat even before the beginning of the Christian era. The second group of inscriptions at this place are the *Vaṭṭeḷuttu* inscriptions assigned to the 9th-10 centuries A.D. They refer to a succession of Jaina teachers who either presided over the *paḷli* or belonged to it. One of these inscriptions clearly refers to this *paḷli* as the great monastery of the southern region (*teṅ vaṭṭai*) and to

the hill as Parāntaka-parvata¹. A specific reference to Guṇasē-nadēva as the teacher in charge of this *paḷli* is made in several other inscriptions from this hill.

What makes the identification difficult is the reference to Kuṇṇḍi as situated in Veṇbu-nāḍu. Again, in Paḷli-maḍam there is a Śiva temple called the temple of Kālanāthasvāmin, built into which at several places are stones with inscriptions referring to Kuṇṇḍi Tirukkāṭṭāmpaḷli². Inscriptions referring to the Jaina monastery belong to the reign of the early Pāṇḍya monarch Māraṇjaḍaiyaṇ (Neḍuṇjaḍaiyaṇ Parāntaka Varaguṇa I, 768 - 815 A.D.). This Māraṇjaḍaiyaṇ also figures in an inscription from Ēṇuvāḍi in the Tirunelveli District recording a land grant to a Jaina temple of Aruvāḷattu Bhaṭṭāraka of Tiruviruttalai³. The inscriptions of the Śiva temple are dated in the reign of Vīra Pāṇḍya “who took the head of the Chōḷa”⁴ (947-66 A. D.).

These records would show firstly that the Jaina monastery had temples or a temple affiliated to it and one of them was at Paḷli-maḍam and that it flourished till about the 10th century A.D. when the temple was either destroyed or allowed to fall into ruins and a Śiva temple was erected in the same place out of the materials from the earlier Jaina temple. Secondly, they would also show that the Kuṇṇḍi of these inscriptions must have been a Jaina centre in Veṇbu-nāḍu — the Aruppukkottai Taluk of Ramanathapuram District—and most of the teachers of the monastery hailed from this centre. The area over which this *paḷli* wielded influence was considerable i.e. approximately an area covering a distance of 15 to 20 miles from Śamaṇarmalai in the north to Paḷli-maḍam in the south. The monastery was apparently supported by two big villages Kiḷkuyilkuḍi near Śamaṇarmalai and Paḷli-maḍam. This monastery was so important as to attract visiting Jaina teachers from Śravaṇa Beḷgoḷa and other parts of Karnāṭaka. One of the inscriptions in Śamaṇarmalai is engraved in Kannaḍa characters of about the 11-12th centuries A.D. and records the names of five Jaina teachers, two of whom Ārya-dēva and Bālachandradēva came from Beḷgoḷa⁵. They are said to have belonged to the Mūla Saṅgha of the Jains and to have performed penance and died on this hill. These two teachers are also known from the inscriptions of the Pārśvanātha-basti on the Chikkabeṭṭa in Śravaṇa Beḷgoḷa⁶.

THE MONASTERY AND ITS TEACHERS :

This southern monastery of the Jains may be said to have had its centre at Kuṛaṇḍi in Veṅbunāḍu while the main retreat of the monks was at Śamaṇarmalai. A close examination of the nature of the remains in Śamaṇarmalai would provide useful information about the strength and influence of this monastery.

The Śamaṇarmalai group of hills stretches in an east-westerly direction for a distance of about two miles. The village of Kīlkuyilkuḍi (also called Kīlakkuḍi) lies at the south-western extremity of the hill and Muttuppaṭṭi (also called Ālampaṭṭi, a hamlet or part of Vaḍapaḷaṅgi) is situated at the north-western end. The name Śamaṇarmalai obviously derives from the long association of the Jainas with this group of hills i.e. from 2nd c. B.C. to the 10th c. A.D. as evidenced by the Brāhmī and Vaṭṭeḷuttu inscriptions and Jaina sculptures representing Tīrthaṅkaras, āchāryas and other attendant deities. The slopes near Muttuppaṭṭi have a cavern with stone beds called Pañchavar-paḍukkai. Near Kīlakkuḍi the hill contains two caverns, the Śeṭṭippoḍavu and Pēchchipaḷḷam, the latter a little higher on the hill on the eastern slopes. There are also the remains of a structure (probably a shrine) on this hill. Not far from the Śeṭṭippoḍavu cavern is another hamlet called Koṅgar-Puḷiyaṅguḷam.

The Brāhmī inscriptions at Koṅgar Puḷiyaṅguḷam have been read as follows :⁷

1. *Kūra Koṣupitavan upācha-an upāruv.....*

U (-p)-pāruva(n), a lay devotee, gave (caused to be given (this) canopy.

2. *Kūra Kotala Ku-ittavaṅ Chera ātaṅ eṅ*

I, Chera(u ?) Ātan, plaited (the) fronds (for the) canopy.

3. *Pākan-ūr pe ta(?) tan pitaṅ itta Vēpōṅ*

Peratan pi(t)tan of Pā(k)-kanūr thatched (lit caused to be thatched) this canopy.

These inscriptions are clearly related to the occupation of the caverns probably by Jaina ascetics, after they were rendered habitable by lay devotees.

The Brāhmī records from Muttuppaṭṭi are read as follows:

1. *Chai y-aḷan vintai - ūr Kavi-y*

(The cavern) of Chaiyaḷan (one who came from Ceylon) (of) Vintaiyūr.

2. *Nākapērūr = atai chāttan makan.*

(The son of Chāttan of Nākapērūr).

3. *ma...nam...ey.* (a fragment).

At least three places are known from these records *viz.*, Pākānūr, Vintaiyūr and Nākaṇḍērūr from where lay Jaina devotees hailed. It would be useful to identify and locate them. The above records have been assigned to 2nd-1st centuries B. C. and 1st-2nd centuries A. D. respectively. From these inscriptions we have no clear evidence as to the nature of this establishment, nor do we have any indication as to the origin of the huge monastery of the 9th-10th centuries A. D.

On the other hand, there are indications to show that more than 60 ascetics must have lived at this hermitage here at the beginning of the Christian era. There are six caverns with more than 30 stone beds near Koṅgar Puḷiyaṅguḷam. More than 30 beds have been located near Muttuppaṭṭi. Further, a number of damaged beds have been noticed in Seṭṭippoḍavu near Kīḷakkuḍi.

After a long gap of about 600 years, we once again come across a group of Vaṭṭeḷuttu inscriptions dated by epigraphists to the 9th-10th centuries A.D. The names of eleven monks belonging to at least three generations are known from these records. The most wellknown of them all was Kuṛaṇḍi Aṣṭa-upavāsi whose disciples presided over this monastery⁸. He had two disciples Guṇasēnadēva and Māganandipperiyār. The former presided over this monastery and had several disciples under him, ascetics as well as lay devotees. Kanakavīrapperiyaḍigaḷ, Varttamānapaṇḍitar and Chandraprabha were some of his ascetic disciples⁹. A disciple of Varttamānapaṇḍitar, by name Guṇasēna-p-periyaḍigaḷ was also a president of this *paḷḷi*¹⁰.

Guṇasēnadēva had other lay disciples such as Deyvabala-dēvaṅ, Andalaiyāṅ, Kaṇḍaṅ porpaṭṭaṅ or ne(ri)paṭṭaṅ, Araiyaṅ, Kāvidi Śaṅgaṅambi, all of whom are given the epithet Śaṭṭaṅ,¹¹ which may mean that they were the chief ones among the lay disciples.

A succession of four different Jaina teachers is recorded in yet another inscription¹² giving the names of Abhinandana Bhaṭāra II, disciples of Arimaṇḍala Bhaṭāra, disciple of Abhinandana Bhaṭāra I, who was himself a disciple of Kanakanandi Bhaṭāra. The same Kanakanandi Bhaṭāra is mentioned as the teacher of an Āditta Bhaṭāra and Pūrṇachandraṅ in inscriptions from Kaḷugumalai¹³ in the Tirunelveli District, assignable to the

same period on palaeographic grounds. A servant (*pādamūlattāṅ*) of Kuṛaṅḍi is also mentioned in an inscription and he seems to have called himself after Kanakanandi as “*amittin-ma(rai) Kal Kanakanandi*”¹⁴.

Most of these ascetics and lay devotees are said to have caused images of Jain deities to be carved at several spots on this hill, in and outside the caverns.

Four other Jaina teachers of Kuṛaṅḍi are also mentioned in the Kaḷugumalai inscriptions viz., Śiṅu Bhaṭāra and his teacher, Kuṛaṅḍi Tirtha Bhaṭāra and his disciple Kanakanandi-p-periyār¹⁵. Besides, a number of lay disciples from Kuṛaṅḍi are also known from Kaḷugumalai inscriptions to have caused images to be carved¹⁶.

Teachers from Kuṛaṅḍi seem to have been associated with other Jaina centres in the Tamil country. As far north as Śōlavāṅḍipuram in the South Arcot District, a Chōla record of the period of Gaṅḍarāditya (10th century A.D.) mentions one Guṇavīrabhadra of Kuṛaṅḍi who was given charge of a whole village called Paṅaiippāḍi which was granted to the Jainas of Śōlapāṅḍyapuram for the maintenance of ascetics and for worship to the local Jaina deities¹⁷.

By far the most important teacher of the Jainas was one Ajjaṅandi, who seems to have been associated with this monastery. His image is carved on the Śamaṅarmalai, below which is a label inscription *Srī Ajjaṅandi*¹⁸. Ajjaṅandi's mother Guṇamatiyār is also mentioned in one of the Śamaṅarmalai inscriptions¹⁹. Ajjaṅandi himself must have toured all over the Tamil country for he figures in several inscriptions from places such as Aivarmalai (Aiyampālaiyam), Uttamapālaiyam, Karuṅgalakkuḍi, all in the Madurai District²⁰, Eruvādi in the Tirunelveli District²¹ and as far as Vallimalai in the North Arcot District²², and Chitrāl in South Travancore. He has some times been identified with the Ajjaṅandi mentioned in the famous Tamil epic *Jivaka Chintamani*.

From the above survey of the epigraphic data on Kuṛaṅḍi Tirukkāṭṭāmpaḷli, it is evident that this was a large and important monastic establishment in the Tamil country and probably occupied the same position in this region as Śravaṇa Beḷgoḷa did in the Mysore region. Hence, it was looked upon as the monastery of the southern region.

Two important questions arise out of a study of the inscriptions on this monastery. The first is related to the identification and exact location of Kuṛaṇḍi. There is a village of this name in the Aruppukkottai Taluk of the Ramanathapuram District and is situated on the northern limits of this district, not more than four miles south of Śamaṇarmalai. Two other places Koraṇḍiyūr and Kuraṇḍikuḷam situated within half a mile of each other and about six miles south of Śamaṇarmalai, also appear to be interesting possibilities. All the three places are also easily accessible from Paḷḷimaḍam, where the Śiva temple containing stones with inscriptions referring to this *paḷḷi* exists. It would therefore, be highly fruitful to make a thorough survey of these three places for any Jaina vestiges.

The second question is more fundamental to an understanding of the history of Jainism in the Tamil country. Was the Śamaṇarmalai region occupied by the Jains continuously from the 2nd century B. C. to the 10th century A. D. ? If so, how can the gap between the two groups of inscriptions, the Brāhmī and the Vaṭṭeḷuttu groups, a gap of 600 years be explained? Would it be correct to say that the Jains suffered some set back in this period and re-occupied these centres later ? How can this situation be related to the accepted view that the Jains lost all their influence in the Madurai region and other Tamil centres as well, as a result of the religious conflict spearheaded by the Śaiva nāyaṇārs, Appar and Jñānasambandar in the 7th century A.D. ? Why is the evidence from inscriptions in this region and elsewhere in the Tamil country contrary to this generally accepted view? i. e. lack of Jaina inscriptions between 5th-7th centuries A. D. all over Tamil Nadu and increase in Jaina inscriptions from 8th-9th centuries A.D.

All the above questions arising out of a study of Jaina inscriptions clearly indicate the need for a re-appraisal of epigraphic evidence and its correlation with literary and monumental evidence relating to the Jains. A close study of the palaeography of the Brāhmī and Vaṭṭeḷuttu inscriptions and the fixing of their relative chronological position are a desideratum. The dated Vaṭṭeḷuttu inscriptions of Chengam, North Arcot District, the Vaigai bed inscription of Śēndaṇṇ and the Paḷḷimaḍam inscription of Māṅgaṇjaḍaiyaṇṇ may well provide some points and thereby the framework for a chronological table of the Vaṭṭeḷuttu inscriptions. That some of the Brāhmī inscriptions belong to a period

later than the 3rd - 4th centuries A.D. is an interesting possibility that cannot be ruled out.

Notes :

1. 62 of 1910 from Muttuppaṭṭi.
2. 428, 430 and 431 of 1914.
3. 605 of 1915.
4. 420, 21, 23, 24, 26, 29 of 1914.
5. 244 of 1950-51.
6. *Ep. Carn.*, Vol. II, Nos: 77 etc.
7. The reading of I. Mahadevan has been followed here. See his "Corpus of Tamil Brahmi Inscriptions", *Seminar on Inscriptions*, Madras, 1966.
8. 61 and 62 of 1910.
9. 61 of 1910 and 330 of 1908; 382 of 1908 and 242 of 1950-51.
10. 330 of 1908.
11. 331 of 1908; 66 of 1910; 69 of 1910. A disciple of one of these Śaṭṭans was Achchāṅ Śrīpālaṅ —65 of 1910.
12. 63 of 1910.
13. 52 of 1894; *SII.*, vol. V, 341; 70 of 1894, *SII.*, vol., V, 359.
14. 68 of 1910.
15. 36 and 56 of 1894; *SII.*, vol. V, 325 and 345.
16. 9, 43, 85, 92 of 1894; *SII.*, vol. V, 318, 332, 374 and 381. One of them is called Kuraṇḍi-k-Kāvidi.
17. 252 of 1936-37.
18. 54 of 1910.
19. 64 of 1910.
20. 692 of 1905, 729 of 1905 and 562 of 1911.
21. 603 of 1915.
22. *Ep. Ind.*, Vol. IV, p. 141.

SOME PROBLEMS
OF PERSO-ARABIC
EPIGRAPHICAL STUDIES

Z.A. DESAI

THE PERSO-ARABIC EPIGRAPHIC STUDIES in India are of very recent origin, hardly two and a half decades old. Though systematic efforts to collect, copy and study inscriptions were formally initiated in 1946 these became effective only from 1949 with the establishment of a full-fledged office of the Asst. Superintendent for Muslim Epigraphy. The work, again, started in right earnest four years later and during the past two decades, this office has been doing some useful work in this branch of Indian Epigraphy. Not that the study of Arabic and Persian inscriptions was totally unknown or unattempted. Whatever Arabic and Persian inscriptions were found by the officers of the Archaeological Survey of India and others were duly published through scholars, both foreign and Indian, prominent among them being Paul Horn and Blochtman who edited a fairly large number of such inscriptions in the second half of the last century. The turn of the century saw the emergence of a separate medium for their publication, first in the form of a biennial supplement to the *Epigraphia Indica* and then as an independent journal, *Epigraphia Indo-Moslemica*. Of the former, only one issue was published as that of 1907-08 under the editorship of Sir E. Denison Ross, sometime Principal of the Calcutta Madrasa, while subsequent issues under the new designation were published under the editorship of Horovitz, then Professor of Arabic at the Anglo-Mohamedan College, Aligarh. Horovitz edited the 1909-10 and 1911-12 issues, in which interesting articles were published. The 1909-10 issue is particularly valuable as it was almost entirely devoted to a List of Published Mohamedan Inscriptions of India, prepared by Horovitz himself. Subsequent issues were likewise edited with equal efficiency by

Ghulam Yazdani who had in the meantime become Director of the newly established archaeological department in the Nizam's Dominions, Hyderabad. The series ran successfully, with a lapse of four issues caused by the conditions created by the Second World war, until the issue of 1949 - 50, after which it was rechristened as *Epigraphia Indica - Arabic and Persian Supplement*. The new series was made an annual publication after its 1959 and 1960 issue.

From 1952 - 53 onwards when the systematic collection of inscriptions commenced, the *Annual Report on Indian Epigraphy* regularly started to list Arabic and Persian records in a separate appendix. So far, 4,500 inscriptions, mostly new finds, have been listed in these *Reports* which furnish all such necessary details as for each inscription as the findspot, date, dynasty and king if any, the language and the script, its contents and also the history if any, of its publication. Apart from this, there is a detailed review of the nature and historical importance of these records. Thus these *Reports* are a vast store of information on which historians can largely draw.

It is, therefore, a matter of great regret that Arabic and Persian Epigraphy has been a victim of neglect and indifference. Scores of publications on medieval Indian history have come out in which their authors have not cared to consult even the epigraphical material available in print, leave alone search for it. These scholars perhaps labour under the impression that for the medieval period, in view of the availability of written sources in the form of historical works, documents, etc., they can dispense with epigraphical evidence unlike in the case of the ancient period of Indian history where it constitutes the chief source material. But as has been shown on a number of occasions, Arabic and Persian inscriptions do provide sufficient new material for the history of the period, and this is more particularly true of the provincial, regional and local history during the Imperial Dynasties, the historical chronicles of which mainly confine themselves to the narration of happenings at and achievements of the central authority.

Even under the independent provincial kingdoms, the local and regional history received little attention at the hands of the chroniclers, and we have to turn to the epigraphical records for a coherent and continuous account of the locality and the region. Also for the history of some minor or local dynasties such as, for example, the Khanzadas of Nāgaur, the Auhadis of Bayana and

the like, inscriptions are a very important source. Even for provincial kingdoms, we get fairly interesting and important information of varied nature from epigraphical records. This is particularly true of information about local or regional officials, governors, noblemen and the like.

As has been repeatedly bemoaned by epigraphists, collection of inscriptions alone, without their proper study and publication, will not mean much. No doubt, this will save the material from possible extinction or disappearance, but it will be like a closed book. Therefore, their proper decipherment, study and publication should go hand in hand with their collection.

This would, in turn, raise the question of availability of trained personnel for the job—collection, decipherment, study and publication. For an efficient epigraphist, a thorough knowledge of the languages of the epigraphs, Sanskrit, Tamil, Telugu, Kannada, Arabic, Persian, Hindi, etc., is absolutely necessary. Talking of my field, I am appalled to find that not only the standard of the knowledge of Persian and Arabic languages has reached its nadir, but even the number of the students offering these languages is becoming progressively less every year. While it is difficult to get good and experienced epigraphists, even raw material which can be moulded, with training and experience, into a fine tool is difficult to find. The main reason for this sorry state of affairs is the want of prospects that looms large over the minds of our younger generation.

This naturally brings us to the question of training promising scholars in this field. It has been our experience that the inclusion of epigraphy (that too only part, for I am not aware if Perso-Arabic Epigraphy is included) as a part (and not even full) paper at the post-graduate level at some of our universities has not helped to bring up epigraphists. I do not think the Diploma in Epigraphy which forms part of the course of studies here at the Kannada Research Institute also holds good for Perso-Arabic epigraphy. The only effective way is to provide practical training to scholars desirous of and having aptitude for this vocation. An in-office training for at least two years should be sufficient for the purpose. Another suggestion which I would like to put forth is that this type of training should be given as a matter of routine to such technical staff of the Central and State archaeological departments and university departments of archaeology and Ancient

Indian History as are qualified for it. The personnel thus trained can be reasonably expected to evince interest in epigraphy side by side with their own subjects. This will certainly give a much needed fillip to the epigraphical work in all parts of the country.

Equally great, if not greater, is the need for ensuring speedy publication of the epigraphs. As it is, only a fraction of the limited number of inscriptions collected has been properly edited and published. The need for taking urgent steps in this direction cannot be over-emphasised. It is no doubt a good sign that at the instance and under the inspiration of the Honourable Minister of State for Education, Dr. S. Nurul Hasan, himself an eminent historian—to whom, it may perhaps be news to many of us here—we owe the institution of a separate Epigraphy Section in the Indian History Congress, the Indian Council of Historical Research has, under the able stewardship of its Chairman Prof. Dr. R. S. Sharma, embarked upon an ambitious scheme of publication of Indian inscriptions in handy volumes for the use of those engaged in historical research. These volumes are expected to cover inscriptions in North and South India dating from the 6th to the 15th century A. D. The sub-committee appointed by the Council for laying detailed plans for carrying out the project has finalised the titles of 35 volumes and assigned them to different scholars. While this laudable project has our whole-hearted support and our best wishes, it is regretted that the Perso-Arabic section has been unrepresented in the sub-committee as well as in the scheme itself. For, though the project is designed to cover inscriptions upto the 15th century, it is rather surprising if not inexplicable that there is no mention about Arabic and Persian inscriptions at all. Through this forum, I take liberty to invite the attention of the Council to this lapse and make a fervent appeal that the council should make amends as early as possible.

Apart from the publication of new material, there is need for the reprinting of earlier works and journals which are long out of print and are in great demand, even if it is by the limited fraternity of research scholars. Just as historical works, translations and reports are being reprinted by enterprising publishers, old epigraphical publications should also receive similar attention. There is urgent need for reprinting the *Epigraphia Indo-Moslemica* of which even good libraries do not possess stray issues, leave alone

a complete set. In this connection I would venture to suggest that their reprints contain a supplement incorporating corrections and amendments wherever necessary.

In the end, I would once again request our scholars working on their research projects, particularly those dealing with medieval period not to ignore the epigraphical material, as they are wont to. For we are sorry to find that recent publications do not at all take into account the published inscriptions.

It augurs well for the epigraphical studies that the need for the same is being increasingly felt. The Kannda Research Institute, the Departments of Archaeology of Andhra Pradesh and Tamil Nadu etc., are making laudable efforts in this direction and it is hoped that they will pay due attention to the Perso-Arabic section also and that their efforts will be emulated by other institutes and departments. It is heartening to note that the establishment of the Epigraphical Society fortunately provides a forum at which legitimate problems relating to different aspects of epigraphy can be discussed and solutions to these found with the mutual cooperation and good will of all of us.

HARĪSHI
INSCRIPTION OF
RĀSHṬRAKŪṬA KANNARA IV

A.V. NARASIMHA MURTHY
H.R. RAGHUNATHA BHAT

THAT CHRONOLOGY AND GENEALOGY constitute the backbone of history is a wellknown fact. History itself is at the mercy of its sources. As and when new material comes up either in the form of inscriptions or written records, known opinions have to be revised in the light of new evidences. In this context, the part played by epigraphy for the reconstruction of ancient Indian history is well-known. Here is an attempt to show how a newly discovered inscription adds considerably to our knowledge of Rāshṭrakūṭa history. Though much work has been done on the Rāshṭrakūṭas by Altekar and others, many problems in their genealogy are yet to be worked out.

The present Harīshi inscription of Kannara, the son of Khoṭṭiga, whom we propose to call Kannara IV, hereafter, which is edited in this article was recently discovered and copied during the course of field work in Soraba Taluk. It is engraved on a small, but thick stone slab which is erected in front of the Kal-lēśvara temple at Harīshi, a village about 20 miles to the north-west of Soraba, the headquarters of the Taluk of the same name, in the Shimoga District, Karnataka State. The writing covers an area of 1.6". There are 10 lines of writing. Except a small portion at the lower part and also at the sides affecting a few lines, the inscription is preserved.

The characters are Kannada-Telugu of the 10th century A.D. The alphabet, however, appears to have still retained its archaic and cursive features. Noteworthy is the top-mātrā (*tale kaṭṭu*) which is angular. In some cases the class-nasals have been used

for *anusvāra*. cf. Line—1: *Satangaḷeṅṅu*; Line—6 *gavuṇḍageya*; Line—8 . . *Sa dandu*.

The language of the record is Kannaḍa and is in prose. As regards the orthography, the consonant following *r* is duplicated in some cases. cf. Line—3: *pravarttisutire*, and definitely in line—6: *Nūrūrggavuṇḍageye*. Of the other orthographical peculiarities *Samvaschara* for *Samvatsara* (cf. Lines—1 and 2), *Pannischāsira* for *Pannirchchāsira* (cf. Line—5) and *Kaṇnara* for *Kannara* (cf. Line—3), may be mentioned here. Instead of vowel *u* consonant *vu* has been used as in the case of *vuttara*.

The present inscription introduces, probably for the first time, a ruling king *Kannaradēva*, the son of *Koṭṭigadēva*. Though the dynasty to which he belonged is not stated in the record there can be no doubt that he was a *Rāshṭrakūṭa* king of that name. This is confirmed and corroborated not only by the usual imperial epithetes like *Mahārājādhirāja*, *Paramēśvara*, *Paramabhaṭṭāraka*, but also by the typical *Rāshṭrakūṭa* diction of the text and contemporary palaeography. In this connection it should be noted that the area where the present record was under the *Rāshṭrakūṭa* rule. More than twenty inscriptions of the *Rāshṭrakūṭa* kings *Kṛishṇa III*, *Khoṭṭiga* and *Karkka III* have been noticed in the area¹. A solitary inscription of *Khoṭṭiga* already found in the area is noteworthy². From this fact, *Khoṭṭiga* mentioned in the present record could easily be identified as belonging to *Rāshṭrakūṭa* dynasty. Personality of *Kannaradēva*, on the basis of a single epigraph, however, cannot be assessed. It may be suggested at present that *Kannaradēva* must have ruled for some months in the first half of 972 A.D. Under what circumstances he was overthrown or died and how his successor *Karkka II* came to the throne in September 972 A.D. are points which cannot be answered at present.

This inscription also refers to one *Chaṭṭayyadēva* in connection with *Banavāsi Twelve Thousand*. It is very likely that *Chaṭṭayya* was still governing *Banavāsi Twelve Thousand*, in A.D. 972, as a subordinate of the *Rāshṭrakūṭa Kannaradēva IV*, if *Chaṭṭayyadēva* figuring in the present epigraph of 972 A.D. is identical with *Chaṭṭayya*, the known *Kadamba* chief³. That he was ruling over the province mentioned in the present inscription is also known from other records⁴. Thus we can see that *Chaṭṭayya*, the first member of the *Hāngal* branch of the *Kadamba*

family, who probably renewed the Kadam̄ba rule in Banavāsi province, was governing Banavāsi Twelve Thousand from c.972 A.D. to c. 1015 A.D., of course with occasional breaks.

The present record further mentions a certain Dēvayya of Nūr. But it is not possible at present, to identify him properly. It may, however, be pointed out that Dēvayya might be an officiating local chieftain (*gavuṇḍa*) of Nūr, under Chaṭṭayyadēva of Banavāsi Twelve Thousand.

The date of this inscription is given in two contexts. The first two lines of the inscription mention Śaka year 894 as well as Āngīra-samvatsara. In the line 7 we get the other details of date, viz., *āsāḍamāsada bahuḷa navamī, ādityavāra*, which are most possibly pertaining to the above Śaka year. Thus the importance of the inscription also lies in its date which corresponds regularly to Sunday, July 7, 972 A. D. This seems to be the date of the present record.

The purport of the Harīshi inscription of Kannaradēva IV, cannot, unfortunately, be made out because the lower part of the stone slab, which probably contained the grant portion, is worn out.

Of the geographical names occurring in the present inscription Banavāsi Twelve Thousand (*Banavāsi Pannischāsīra*) province is so wellknown that it hardly needs any further elaboration here. The other place-names mentioned in the record are *Sirigaḍani*, *Nūr* and *Nerase*. The first one cannot be identified properly at present. But possibility of identifying Nūr with modern Narūr, a village just three miles from Banavāsi cannot be ruled out. *Nerase* can be identified with the present Nyārase, village about 10 miles to the south of Harīshi, where the inscription is found.

Thus the Harīshi inscription is probably the first and perhaps the only known, dated, lithic record of Kannaradēva (Kṛishṇa IV), the son of Koṭṭigadēva of the imperial Rāshtrakūṭa dynasty, which constitutes perhaps the most brilliant chapter in the early history of the Decan.

TEXT⁵

- 1 . . . Śakanripa Kāḷātīta Samvaścha[ra]Śataṅgaḷeṇṭu.
- 2 [to]mbattanāḷkaneya Āṅgira de[i]bba samvaścha[ram]

- 3 [pravartti]sutire Srī Koṭṭigadēvana magam̄
 4 . . . rāja Paramēsvara Paramabha[ṭṭā]raka rājya vuttarō
 5 . . . [Yu] Hire Chaṭṭayyadēvaṃ Banavāsi Panniśchāsi-
 rakam̄
 6 . . . gey[y]uttire Dēvayyam̄ Nūrūrggavunḍageye. . . .
 7 [asada]masada bahula namiyum aditya [vara] . .
 8 . . . sadandu Sirigaḍaniya Chaṭaraji [ya] . .
 9 . . . yanum̄ Neraseya . . .
 10 na

Notes :

1. E.C., Vol. VIII, Part ii, Sb. 70, 476, 75, 77, 83, 246, 408, 570, 240, 474, 200, 501, 326, 203, 455, 457, 454, 479.

2. *Ibid.*, Sb. 531.

3. See. *J.K.U.* (Social Sciences) Vol. III (1967) p.102. As the date of the present inscription is slightly earlier (July 7, 972) than those of Sb. 454 (Dec. 27, 972) and Sb. 455 (Dec. 15, 972) of *E.C.*, VIII, pt. 2, the reference to Chaṭṭayya in the Harishī inscription may also be pushed back as early as July 7, 972 at present.

4. Eg. *E.C.*, VIII, pt. 2, Sb. 454, 455, 451, 479, *ARSIE*, 1939-40, B.K. Nos. 34-85, 89 and 90-92.

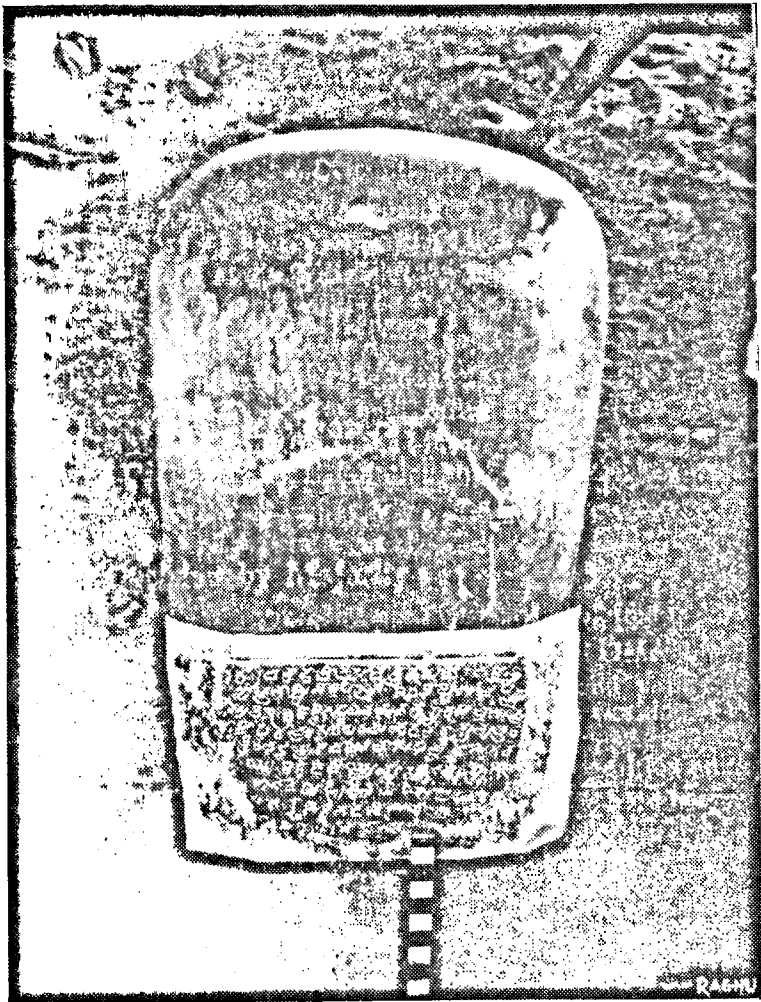
5. From an ink impression. We are thankful to shri K. G. Krishnan, Dr. K.v. Ramesh and Shri Sitaram Jagirdar for their suggestions.

NEW LIGHT ON
THE PIPRAHWA
VASE INSCRIPTION

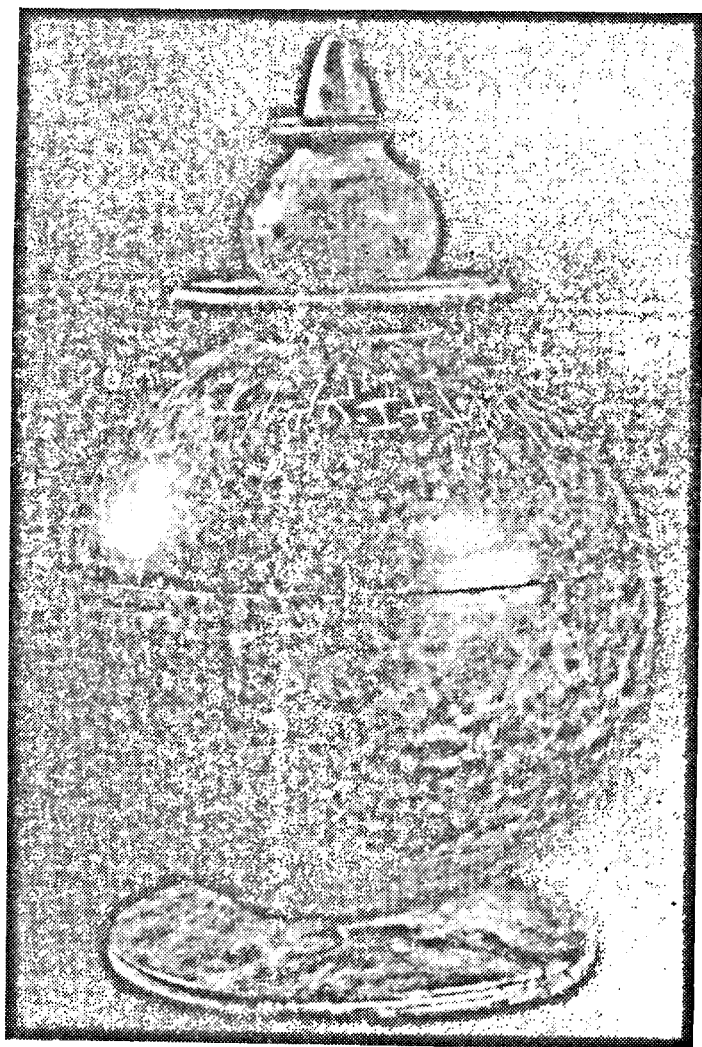
K.M. SRIVASTAVA

PIPRAHWA IS VERY WELLKNOWN for having yielded one of the earliest Brāhmī inscriptions. Situated in Basti District, Piprahwa is about 25 kms. north of Naugarh, a Tehsil headquarter and a railway station on the Gorakhpur-Gonda loop-line of North-eastern Railway. The ancient site of Piprahwa can be approached from Naugarh *via* Birdpur which lies on the road to Lumbini.

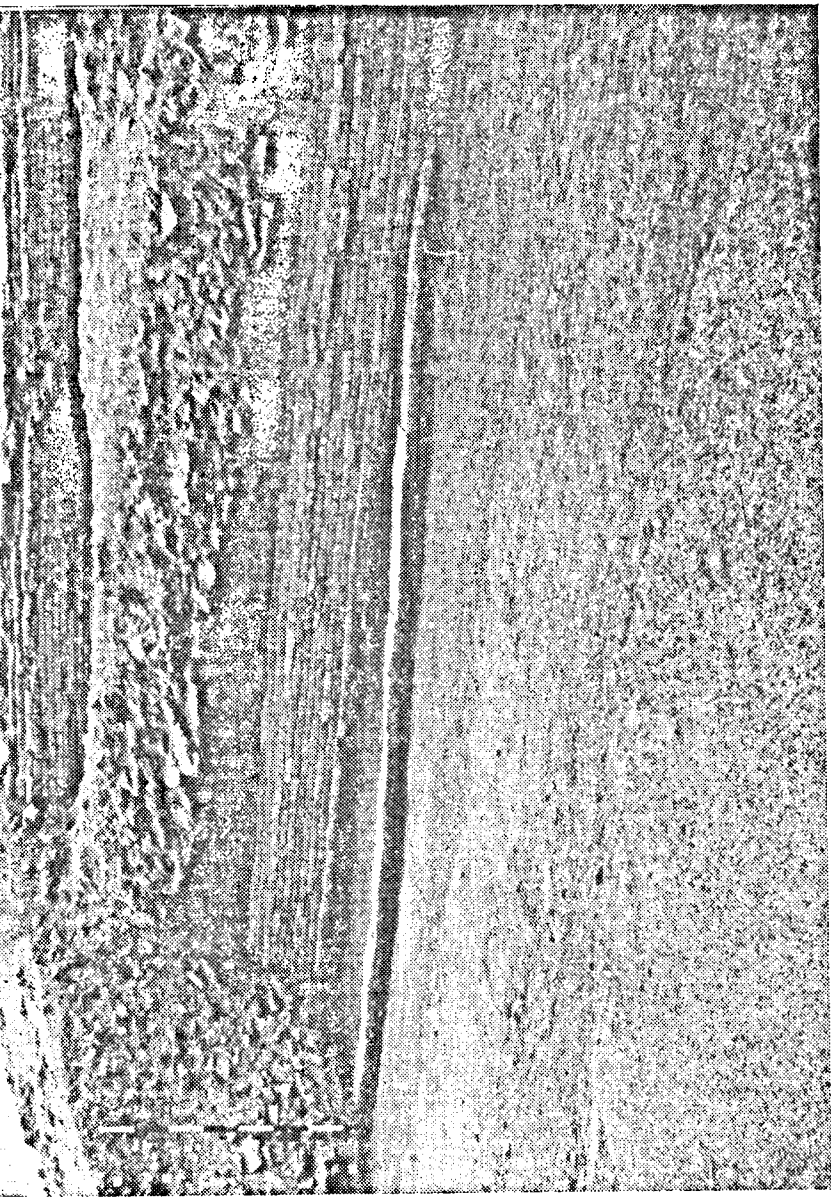
In the year 1897 W.C. Peppe', a landlord of Birdpur, bored a shaft in the *stūpa* at Piprahwa in search of valuables and reliquaries. In the initial stages it was abandoned after digging upto a depth of 8' only. In October, 1897, V.A. Smith inspected the *stūpa* and pronounced it to be very important and ancient. The excavation was, therefore, resumed in January, 1898. Ten ft. below the summit of the *stūpa* Peppe' came across a small broken soapstone vase similar to those found lower down. Mixed up with clay, beads; crystals; gold ornaments; cut stars, etc. were the precious objects within the vase. Peppe' observed a circular pipe-like hole filled with clay which went further down to 2'. On the top, the pipe was 1' in diameter, which was reduced to 4'' at the bottom; There was no further change in the diameter till the bottom of a massive sandstone coffer, 4 ft. 4 inches x 2 ft. 8½ inches x 2 ft. 2¼ inches in size. The covering slab of the coffer was observed at a depth of eighteen feet below the summit of the *stūpa* and 31.5 inches to the east of the clay pipe. The pipe was encircled by moulded or roughly cut-to-the-size bricks. At the bottom of the coffer, the clay pipe turned into a rectangular shape measuring 17 x 5 inches, which went to a depth of one brick, when again it became circular and reduced to the original diameter of 4 inches till the end of brickwork two feet below the bottom of the huge



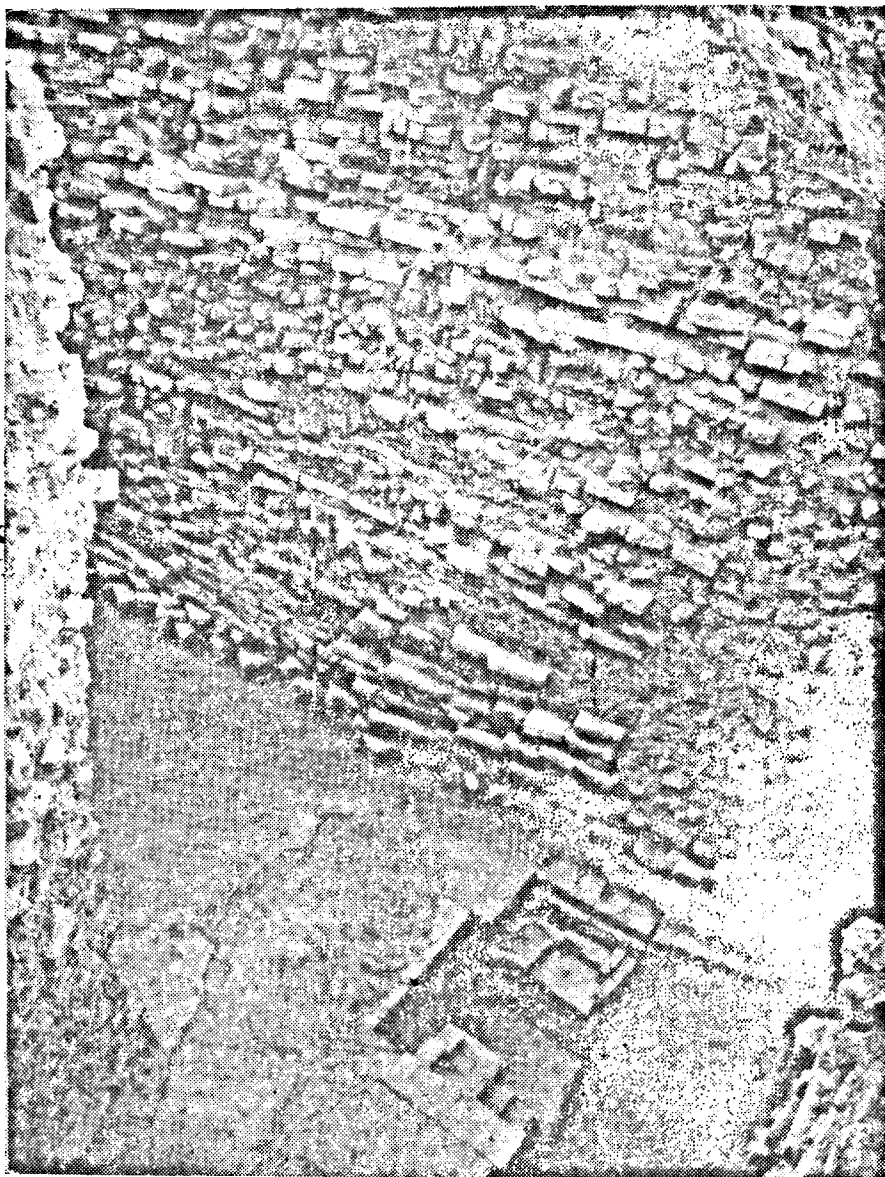
Harishi Inscription



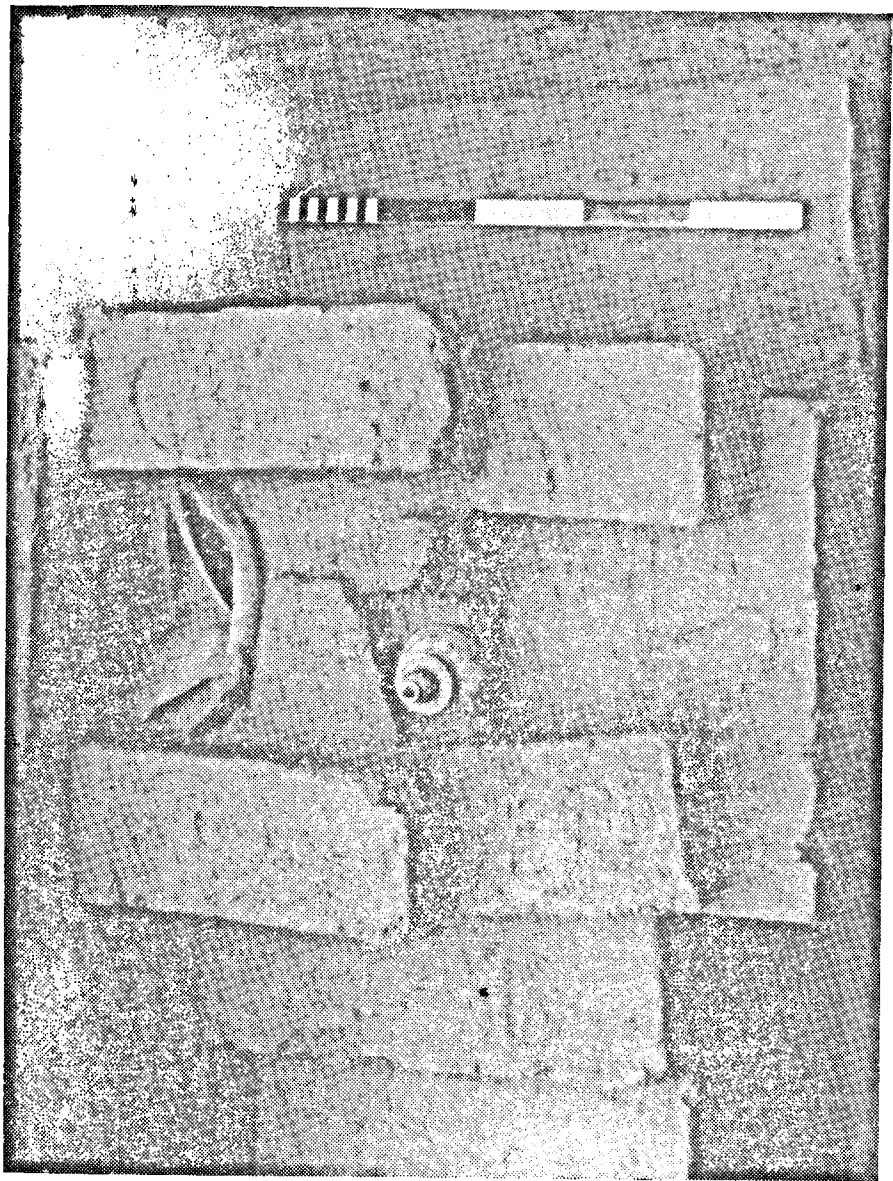
Piprahwa: Inscribed Casket: Plate 1



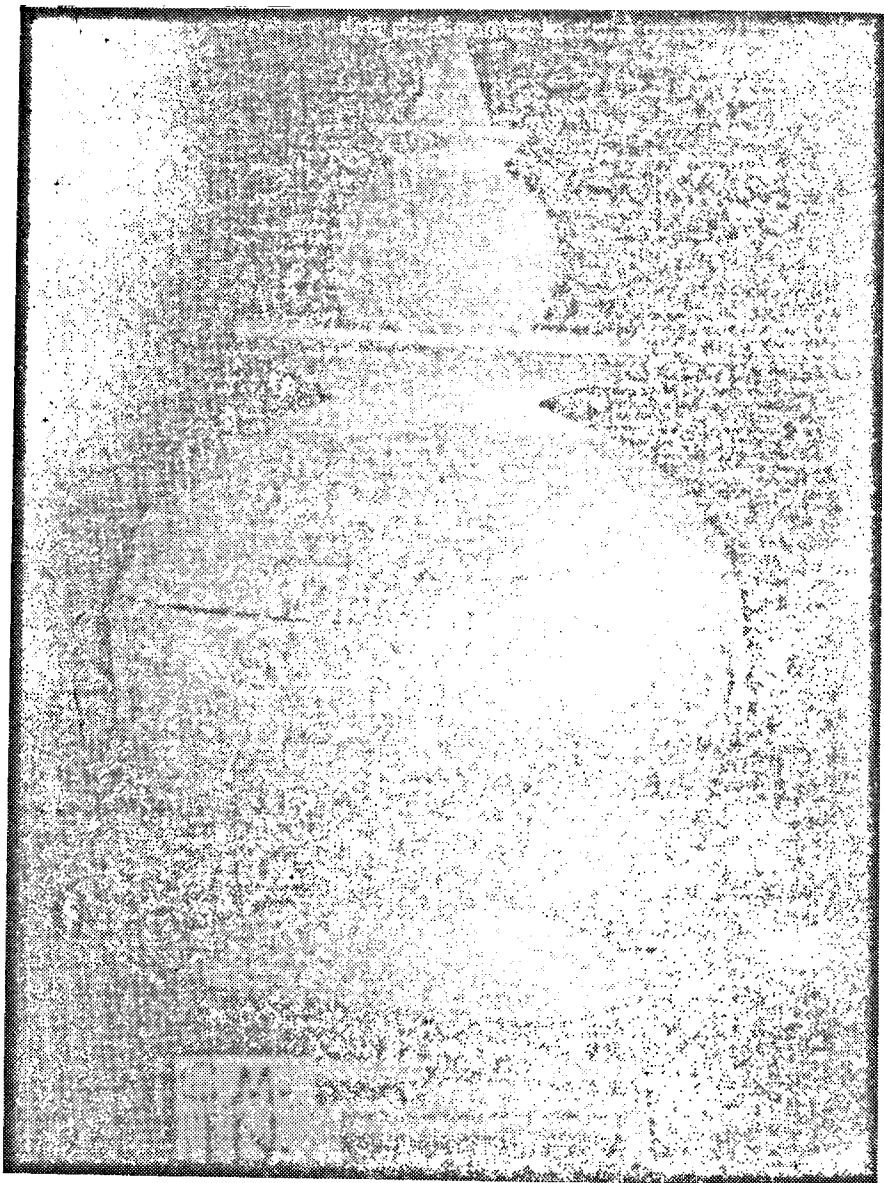
Piprahwa: Earlier Stūpa: Plate 2



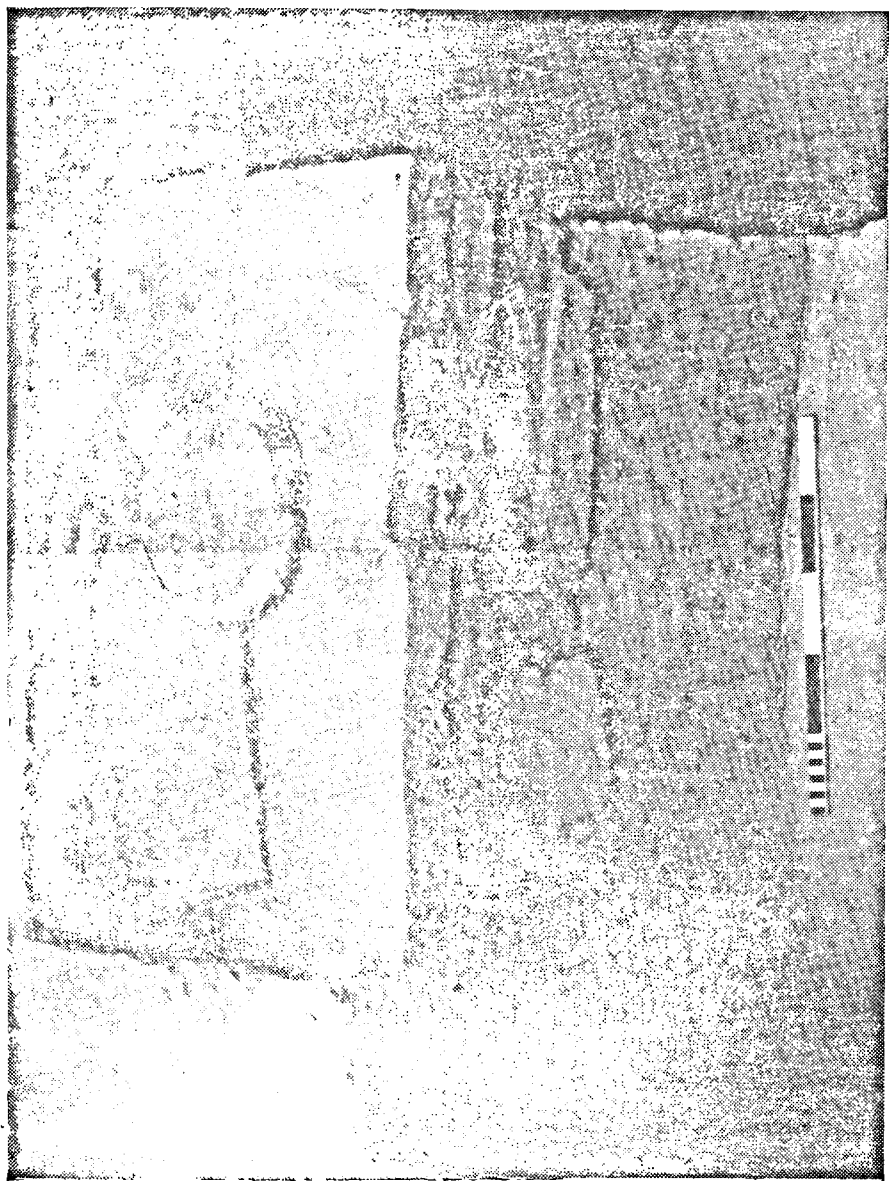
Piprahwa: Two Brick Chambers :Plate 3



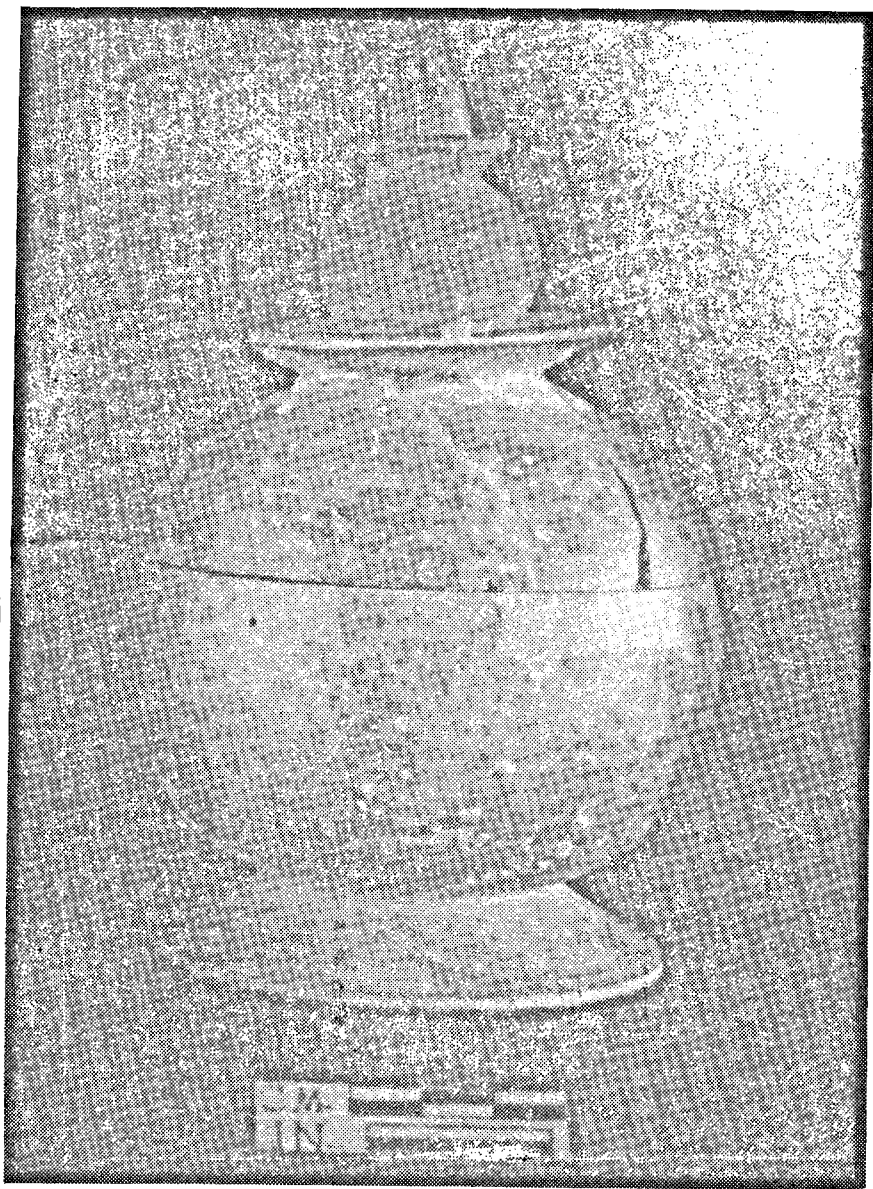
Piprahwa : Casket and Dish Plate 4



Piprahwa: Soapstone casket Northern Chamber: Plate 5



Piprahwa: South Chamber Two Dishes: Plate 6



Piprahwa : Soapstone casket Southern Chamber Plate 7

box.

The covering slab of the coffer was broken into four pieces on account of the weight above. A deep groove was provided in the lid, so that it could fit closely into the flange on the sides of the coffer. Four, roughly semi-circular projections, two each on the longer sides, were meant for easy handling. The weight of the covering slab was 408 pounds and of the coffer as a whole 1537 pounds.

The coffer contained the following objects:¹

1. A soapstone vase $7\frac{1}{2}$ inches high and $4\frac{1}{2}$ inches in maximum diameter.
2. A similar, but inscribed, soapstone vase 6 inches high and $4\frac{1}{8}$ inches in diameter.
3. A soapstone *lōṭā*-shaped vessel $5\frac{1}{2}$ inches high (with lid) and $5\frac{3}{4}$ inches in diameter. The lid was lying away from the vessel.
4. A small soapstone round casket $3\frac{3}{4}$ inches in diameter and $2\frac{1}{4}$ inches high.
5. A crystal casket, polished to the perfection, $4\frac{1}{4}$ inches in diameter and 4.5 inches high (with its cover). The lid had a beautiful handle in the shape of a hollow fish, filled with seven granulated stars in gold leaf and several tiny paste beads.

In addition to the above, the coffer contained many wooden and silver vessels smashed to pieces. Inside the vessels or relic urns there were various valuable objects, the number of which exceeded several hundreds. The objects included fragments of bone; gold ornaments in different design; impressions of two females, elephant and lion figures in gold leaf; gold and silver flowers and stars; tiny amulet-like gold box; gold *triratnas*; a gold disc impressed with profuse connected spirals; plain gold bars; rolls of gold leaves; pearls of many sizes, some of which are welded together in sets of two, three or four; a carnelian and malachite bird; leaves serrated and veined; seed vessels; *triratnas*, and flowers in semi-precious minerals; coral ornaments; beads of various shapes and sizes in gold, silver, carnelian, amethyst, topaz, garnet, coral and crystal; cut semi-precious stones; pieces of mica and specially rolled copper wire. The entire collection is lying in the Indian Museum, Calcutta.

Of all the finds, the most important was the inscription on

the lid of the smaller soapstone vase (No. 2 above) (Pl. I). The script is Brāhmī, but the execution of letters is rather crude. First of all the inscription was read and interpreted by Bühler. He read the inscription as '*ya salalanidhane Budhasa bhagavata Sakiyana sukiti bhatinaṃ sabhaginikana saputadalana*'. As it is necessary, Bühler did a little restoration in the inscription in order to interpret it in a proper manner. His restoration made the inscription to read as '*(1) ya sal(i)lanidhāne Budhasa bhagavata(sa) Sākiyāna sukiti bhatinaṃ sabhaginikāna Saputadālāna*'. He translated the inscription thus :-

"This relic shrine of divine Buddha (is the donation) of the Śākya Sukiti brothers (i.e., either 'of Sukiti's brothers' or 'of Sukiti and his brothers'), associated with their sisters, sons and wives"².

According to the interpretation of Bühler, presented by him in a preliminary note, the relics contained in the vase were those of Buddha, which the Śākys of Kapilavastu received as $\frac{1}{8}$ th share at Kuśinagara on his death. The Śākya^s built a *stūpa* over the corporeal relics of Buddha. Besides referring to the relics of Buddha, the inscription came out to be the first document on the Śākya^s.

A. Barth read the inscription and interpreted it almost at the same time and in the same manner as Bühler, though independently of each other. The text of the inscription, according to Barth, is as follows:³

*iyam salilanidhane budhasa bhagavate
Sakiyanaṃ sukiti bhatinaṃ sabhaginikanaṃ
saputadalanaṃ.*

He translated the inscription thus :- "This receptacle of relics of the blessed Buddha (is the pious gift) of the Śākya^s, the brothers of Sukirti (or Sukirti and his brothers), jointly with their sisters, their sons and their wives".

V. A. Smith observed two lines in the inscription and read it thus :-⁴

Line 1 "*Iyam salila nidhane Budhasa bhagavato
Sakiyanaṃ sukiti bha-*

Line 2 *tinaṃ sabhaginikanaṃ saputra dalanaṃ*".

The interpretation presented by Smith is a little confusing. He says that the depositors believed the fragments of bone to be part of the sacred body (*sariram*) of Gautama Buddha himself. Complicating the entire issue he expressed that, "The Śākya^s of Kapilavasatu as the relations of Buddha, obtained a share of the

relics of the master at the time of the cremation. It is possible that the Piprahwa *stūpa*, which is only eleven miles from Kapilavastu, may be that erected by the Śākya brethren immediately after the death of Gautam." Smith is not clear enough whether the *stūpa* at Piprahwa is the same which was erected by the Śākyas at Kapilavastu over the corporeal relics of Buddha received by them after the cremation at Kuśinagara or of the Śākyas massacred by Vidūḍabha on account of his statement that Piprahwa is only eleven miles from Kapilavastu.

T. Bloch held a view different from that of Smith and observed only one line in the inscription⁵. He said, "This inscription is in one line only, round the hemispherical lid of the urn, with the exception of the two syllables *yanam*, which stands above *saki*." He read the inscription in the same order as Barth.

The translation rendered by Rhys Davids is slightly different from that presented by Bühler. He interprets the inscription thus⁶:-

"This shrine for relics of the Buddha, the August One, is that of the Śākyas, the brethren of the Distinguished One, in association with their sisters and with their children and their wives". Rhys Davids, like Bühler and Barth, was also of the opinion that the *stūpa* at Piprahwa is the same which, according to the Buddhist text *Mahāparinibbanasutta*, the Śākyas of Kapilavastu had raised immediately after the Master's death over their share of the relics.

Pischel did not change the interpretation of Rhys Davids basically but approached it in a different manner. He objected to the idea of gift or of pious act and introduced the words "Pious foundation" in their place. With this modification he translated the inscription thus⁷:

"This receptacle of the relics of the blessed Buddha is the pious foundation of the Śākyas, of the brothers with their sisters, with their children and their wives."

J.F. Fleet was the first scholar who changed the order of the text of the inscription. He was of the opinion that the record does not begin with the word *iyam*, as believed by other scholars, but with *sukiti-bhatinam*⁸. The ground for the change in the beginning, as believed by Fleet, was the engraving of *yanam* of the word *Sakiyanam* above *saki*. He felt that *sakiyanam* was apparently the last word to be engraved and the available space having

exhausted, *yanam* was put above *saki*. Thus according to Fleet the inscription should be read as '*sukiti-bhatinam sa-bhagiṇikanam saputa-dalanam iyaṁ salila-nidhane Budhasa bhagavate sakiyanam*.'

Fleet interpreted the inscription in two different ways which are inconsistent with each other. In the beginning he considered the relics to be of Buddha himself. With this view he translated the inscription thus ⁹:

"Of the brethren of the Well-famed One, together with (their) sisters (and) together with (their) children and wives, (is) this receptacle (or deposit) of relics of Buddha, the Blessed one, (namely) of the Sakiyas".

Though the reading of Fleet continued to be the same, he gave an altogether new interpretation a year later in the following lines¹⁰:

"Of the brethren of the Well-famed One, together with (their) little sisters (and) together with (their) children and wives, this (is) a deposit of relics, (namely) of the Kinsmen of Buddha, the Blessed one".

On the basis of the above translation Fleet tried to impress that the relics were not of Buddha, but of his kinsmen. The number of the kinsmen, as belied by him, were more than several hundred and each of them an object was placed inside the stone box. In order to justify his new interpretation he emphatically said, "The record in fact commemorates, an enshrining of relics, not of Buddha himself, but his kinsmen, with their wives and children and unmarried sisters. And now we see the meaning of the curious nature of the articles numbering more than seven hundred, which were found in the *stūpa* alongwith the inscribed vase."¹¹

Elucidating his interpretation further, Fleet said that the kinsmen of Buddha were Śākya of Kapilavastu massacred by king Vidūḍabha, son of Prasēnajit as a revenge of the stinging reproach by the Śākya on account of his mother having been a slave girl of the Śākya. The argument of Fleet that *Budhasa Sakiya* meant "the kinsmen of Buddha" is not convincing enough. He said, "In the expression *Budhasa sakiya*, "The kinsmen of Buddha"—an expression which assuredly was not invented for the occasion, but must have been an habitual one—I find the older form of the tribal name. The Sakiya, the kinsmen of Buddha became known as the Sakiyas, after no doubt, the time when he had passed away."¹² There is no justification in Fleet's assump-

tion that *Budhasa Sakiya* was changed into Sakiyas after the death of Buddha. The Śākya community should have been proud in associating the name with Buddha rather than dropping it.

Sylvain Levi proposed two interpretations of the inscription.¹³ According to the first one the relics were of Buddha consecrated by the Śākyas, his pious brothers, together with their families. The second interpretation of Levi is similar to that of Fleet. He believes that the relics have nothing to do with Buddha. They are of the Śākyas, his pious brothers, who, according to the wellknown legend, were massacred by Vidūḍabha, together with their wives and little children.

While dealing with the inscription of Piprahwa vase and the various interpretations of the scholars, A. Barth declared the translation of M. Senart to be the best of all and perfect¹⁴. Senart translated the inscription thus:—¹⁵

“ This receptacle of relics of the blessed Buddha of the Śākyas (is the pious gift) of the brothers of Sukīrti, jointly with their sisters, with their sons and their wives ”.

Without going into the details of the merits and demerits of the various interpretations presented by different scholars, the author has made an attempt in this paper to analyse the inscription in the light of the recent work and discoveries made by him at Piprahwa. The analysis is confined to two main issues, namely the date of the inscription and the actual information conveyed by it.

Bühler always remained on the look out for some evidence or the other to push back the early use of writing in India. He, therefore, declared the inscription vaguely to be anterior to Aśoka, during whose time writing is said to have been introduced in the country in the third century B.C. Bühler died before giving an account of the reasons which led him to push back the date so early. There can be only two reasons. Firstly, the absence of signs for lengthened vowels and secondly his interpretation of the inscription. Though several scholars consider the first reason to be sufficient enough for an earlier date, it is not justified. Notation of long vowels is generally neglected in early records. It is entirely absent from one of the inscriptions of Ramgarh Hill, which no scholar has tried to assign a date prior to Aśoka. With one single exception the sign is equally absent from the copper-plate inscription of Sohgaora.

According to Bühler's interpretation of the inscription, as already mentioned, the relics contained in the inscribed soapstone vase were of Buddha, which the Śākyas of Kapilavastu received as one-eighth share at Kuśinagar on his death. There being a wide gap between the date of the death of Buddha in 483 B.C. and the time of Aśoka, Bühler was not in a position to reconcile his interpretation without declaring the inscription to be anterior to Aśoka. He was, however, very cautious in not assigning a specific date to the inscription.

In the absence of any tangible evidence to assign a date of fifth century B.C. to the inscription, the author seriously thought over the problem. The only argument which could help in bridging the gulf between the time of Aśoka and the date of the death of Buddha was that the inscribed casket found by Peppe' was not the original one enshrined by the Śākyas over their share of the relics. The inscription was simply a record to point out to the earlier and original relics below. In this connection the remarks of Sylvain Levi are quite relevant. He said that the inscription simply recalled a more ancient consecration and was probably engraved at the time of the reconstruction of the *stūpa*.¹⁶

In order to resolve the knotty problem a detailed examination of the *stūpa* at Piprahwa, particularly in search of earlier and original caskets, was considered more than a necessity by the author. Excavations were, therefore, undertaken at the site with two objectives in view. Firstly, to find out the original caskets, if they were there and secondly, to establish the precise location of Kapilavastu, which had been eluding the archaeologists for more than a century.

The scientific excavation of the *stūpa* was started in January, 1972. After a partial exposition of the *stūpa* on the western side, it was observed that in its latest stage, it had a square base. At regular intervals of 80 cms., rectangular niches were provided in the square base, obviously for keeping sculptures. Square base and niches in a *stūpa* being new features not observed earlier, they were further exposed on the northern side. During the course of exposition, an earlier ring of burnt bricks, below the square base, came to light. The ring appeared to be the brick-edged outline of an earlier *stūpa* (Plate II).

The discovery of the earlier *stūpa* was a very good indication for earlier and original relics. A small trench, just an extension

of the shaft bored by Peppe' in 1897-98, was sunk in the north-eastern quadrant of the *stūpa*. Though the size of the trench was very much restricted, it revealed interesting features. The pit dug by Peppe' was clearly visible on the section. That Peppe' was satisfied with the stone box containing the valuables and the inscribed casket is evident from the cutting. Certain solid grounds made him to believe that there were no further relics. Both the circular pipe, which led him to the box, and the burnt brick courses of the *stūpa*, came to an end. Peppe', therefore, could not think of further relics below, though he went a little deeper towards the western side.

At a depth of about six meters from the extant top course of the burnt brick *stūpa*, two burnt brick chambers were observed in the trench sunk in the centre (Plate III). The burnt brick chambers, separated from another by yellow *kankary* deposit of 65 cms., were at a much lower level than the spot where the stone box, containing the inscribed casket, was found. There is a mud deposit, six cms. thick, between the last course of the burnt brick *stūpa* and the chambers. The chambers were identical in shape measuring 82 x 80 x 37 cms.

The specific purpose of the chambers to keep sacred objects was apparent from the nature of their construction. Two burnt bricks, of the size of 40 x 27 x 7 cms. each, were placed one above the other in three courses on the top. Below the last course there was a mud deposit $7\frac{1}{2}$ cms. thick. Further below, there were bricks, slightly longer, but width reduced to half were used. The size of these bricks was 42 x 13 x 7 cms. Some of these bricks were kept in brick-on-edge position to give the chamber the shape of a box.

When the three courses of brick in the northern chamber, laid one above the other, were removed, a soapstone casket came to light. By the side of the casket and separated by brickbats, a red ware dish covered by another dish of the same type was observed (Plate IV). The covering dish had broken into three pieces in such a manner that each piece appeared to be individual compartment meant for covering individual object. Both the soapstone casket and dish were very carefully packed with the help of bricks and brickbats. The maximum diameter of the soapstone casket is 7 cms., whereas of the dish 26 cms. The height of the casket is 12 cms (Plate V). It contains charred

bones. The contents of the dish could not be distinguished because it was completely smashed and filled with mud. That there were no bone fragments in it is, however, certain. It might have contained ash.

In the southern brick chamber the dishes and casket were placed in a different position. Two dishes of the same type and size, as in the northern chamber, were kept side by side, just below the topmost course of the brick (Plate VI). Both the dishes were smashed to fragment as a result of the lapse of time and the weight above them. When two further courses of brick were removed, another soapstone casket, with the lid broken into three pieces, came to light. This soapstone casket is bigger in size, the maximum diameter being 9 cms., and height 16 cms (Plate VII). Like the other casket it was also carefully protected between bricks and brickbats. Since the lid of the casket had broken, it got filled up completely with earth. On removal of the earth, charred bones were found inside.

As the relic caskets were picked up from the deposits coterminous to the period of Northern Black Polished Ware, they can be dated to fifth-fourth centuries B.C., earlier in date than the inscribed casket discovered by Peppe' at a higher level in 1897-98¹⁷. The synchronization of the date of the caskets with the date of the death of Buddha confirmed that the newly discovered caskets were the original ones, consecrated by the Śākyas at Kapilavastu over one-eighth share of the corporeal relics of Buddha received by them at Kuśinagar, after his cremation. More than forty terracotta sealings and a lid of a pot with the legend *Kapilavastu*, found during the course of excavation at Piprahwa, further corroborate that the *stūpa* at Piprahwa is the same, which was first constructed by the Śākyas over the relics of Buddha. The new caskets dispelled another doubt which was a source of constant anxiety to scholars. There was no unanimity amongst them so far as the interpretation of the inscription is concerned. Some of them believed rightly that the relics were of Buddha, whereas others held the opinion that the relics were of the Kinsmen of Buddha massacred by Vidūḍabha. Now, it is certain that the fresh relics are of Buddha and the inscribed casket found by Peppe' in 1897-98 simply recalled an earlier consecration and was engraved at the time of reconstruction of the *stūpa*.

The statement regarding the determination of the relics may

not be readily acceptable to scholars unless and until a few fundamental questions, it leads to, are answered satisfactorily. The first question which can be mooted is why the inscription on the casket found by Peppe' in 1897-98 referred to the relics of Buddha, when actually it was not the original one. There should not be any difficulty in resolving this issue. The inscription was engraved simply to record the relics of Buddha are kept inside the *stūpa*. The massive coffer containing the inscribed casket was placed inside the *stūpa* at the time of its reconstruction as a measure of religious zeal. In this connection the statement of Sylvain Levi, made in the beginning of the century and quoted above, is of particular interest. He said that the inscription merely recalled a more ancient consecration, and that it was probably cut on the occasion of a reconstruction of the *stūpa*.

The indiscriminate destruction caused by the shaft bored by Peppe' in 1897-98 rendered it impossible to establish that the bone fragments contained in the inscribed casket were a part of those in the earlier and original caskets and, if so, how they were taken out. Further, the legend that Aśoka broke open all the eight *stūpas* raised over the corporeal relics of Buddha should not be taken too seriously.

Taking into consideration all the details mentioned above, there is hardly any basis, now, to justify that the inscription is anterior to the time of Aśoka. The next issue is the purport of the inscription. In order to understand the inscription in proper perspective, it is necessary to recall that the massive stone coffer found by Peppe' in 1897-98 contained five caskets. During the course of excavations by the author as well, five vessels, two soapstone caskets and three dishes, were observed to be embedded in the two burnt brick chambers. The identical number of five in both the cases must have a bearing on the meaning of the inscription. The five vessels cannot be said to contain mortal remains of five different individuals, because this presumption would lead to an incredible belief that all the five died at one and the same time. All the vessels contained the relics of Buddha in one form or the other.

The primary concern and interest to the scholars should, now, be the people who donated the five vessels, each containing the mortal remains of Buddha. These five communities or individuals have been very clearly visualized in the interpreta-

tion presented by A. Barth. They are (1) Śākya (2) brothers of Sukīrti (or Sukīrti and his brothers) (3) their sisters (i.e. sisters of Sukīrti) (4) their sons (i.e. the sons of the sisters of Sukīrti) and (5) their wives (i.e. wives of the sons of the sisters of Sukīrti). However, the author is rather inclined to construe the text a little differently than that by Barth. The depositors seem to be the (1) Śākya, (2) the brothers of Sukīrti (of good deeds or of lofty fame i. e., an appellation of Buddha and not Sukīrti and his brothers, second alternative suggested by Barth), (3) of his sisters (Sukīrti's, rather Buddha's), (4) their sons as also (5) their wives. This translation leads to a new conclusion that the blood-relations of Buddha also got some portion of the mortal remains of Buddha, besides the Śākya, and all of them being members of the Śākya community enshrined their portions along the Śākya people in general.

In the light of the latest discoveries at Piprahwa coupled with the caskets found by Peppe', the argument of Fleet that the caskets contained the relics of the Śākya, massacred by Vidūḍabha, have hardly any grounds to stand upon. The earlier interpretation presented by him is, therefore, much more valid.

Notes :

1. W.C. Peppe', *JRAS.*, 1898, p. 573.
2. G. Bühler, *ibid.*, p. 387.
3. A. Barth, *Journal des Savants*, October, 1896, p. 541, translated into English by G. Tamson in *Ind. Ant.*, May, 1907, p. 117.
4. V.A. Smith, *JRAS.*, 1898, p. 586.
5. T. Bloch, *ibid.*, 1899, p. 425.
6. T. W. Rhys Davids, *ibid.*, 1898, p. 598 fn.
7. Pischel, *ZDMG.*, LVI, 1902, p. 217. Also *Ind. Ant.*, May, 1907, p. 119.
8. Fleet, *JRAS.*, 1905, p. 679.
9. *Ibid.* 10. *Ibid.*, 1906, p. 49.
11. *Ibid.* 12. *Ibid.*
13. Sylvain Levi, *Journal des Savants*, 1905, p. 540. Also *Ind. Ant.*, May 1907, p. 120.
14. A. Barth, *Journal des Savants*, October, 1906, p. 541, translated into English by G. Tamson in *Ind. Ant.*, May, 1907, p. 124.
15. M. Senart, *Journal Asiatique*, VII, (1906), p. 136.
16. Sylvain Levi, *op. cit.*
17. K. M. Srivastava, A Note on the Recent Excavations at Piprahwa, Distt. Basti (U.P.), *Purātattva*, Bulletin of the Indian Archaeological Society, 1972-73, No. 6, p. 51.

CHŌLA HEGEMONY
IN SOUTH INDIA—A COMPARATIVE
AND CRITICAL ASSESSMENT

K.V. RAMESH

THE MAIN AIM OF THIS PAPER is to highlight, in the wider context of South Indian history, yet with particular reference to Tamiḷnāḍu and Karnāṭaka, certain nuances and subtleties, mostly complementary, discernible in the birth, growth and decline of Chōla imperialism during the momentous early medieval era covering a period from the middle of the 9th to the middle of the 13th century A. D. As a necessary prelude to this, I commence this paper with a brief and somewhat generalised history of the political geography of South India from the dawn of Indian history in the 3rd century B.C. But, before doing so, I must also point out that, in this paper, Āndhra and Kēraḷa, two of the four major divisions of Dravidian South India, have inevitably received less or no attention mainly because the political efforts and achievements of these two regions have been, for centuries at a stretch, overshadowed by the din and grandeur of major South Indian empires all of which have had the nuclei of their power only in Karnāṭaka and Tamiḷnāḍu.

While the inscriptions of Aśōka reveal next to nothing about the political divisions which may have existed then in the Karnāṭaka—Āndhra region, we learn from the same source that the extreme south, that is to say, Tamiḷnāḍu and Kēraḷa, were divided into the traditional Chōla, Pāṇḍya and Kēraḷa kingdoms. Leaving aside this scanty information and the still nebulous Sātavāhana era, it is only from about the 3rd-4th century A.D. that we hear of the existence, in the Karnāṭaka - Āndhra region, of the kingdoms of the Sālaṅkāyana, Ikshvāku, Viṣṇukuṇḍin, Gaṅga, Kadamba, Bāṇa, Koṅkaṇa - Maurya, Bhōja, Āḷupa and Pallava ruling houses. As for the Tamiḷ country, after the lapse of a few historically uncertain centuries, it is only towards the end of

the 6th century that its political geography falls into firmer shape with the immigration of the Pallavas and the re-emergence of the Pāṇḍyas. We now behold, from about the end of the 6th century, and almost on seemingly parallel lines, the birth and growth of the first really effective imperial powers of the South, the Chalukya and the Pallava hegemonies with the centres of their power located in Karnāṭaka and Tamiḷnāḍu respectively. And, surprisingly enough, as may be inferred from the meagre evidence available, both these pioneering dynasties appear to have been alien to the respective soils of their growth into imperial stature. This imperial wheel, thus set in motion in the South, continued to run its course without a break for over seven hundred years, till the end of the thirteenth century, and it is easily seen that, all the while, Karnāṭaka and Tamiḷnāḍu successfully retained the honour of serving as the centres of power for predominant South Indian empires. With the establishment of the Vijayanagara empire, the whole context of imperial hegemony and feudal hierarchy underwent such radical changes that the history of that and the subsequent epochs has little to contribute to the essence of this paper.

The imperial power of the Vātāpi Chalukyas was eclipsed in the middle of the 8th century while that of the Pallavas of Kāñchī survived for a century more. What is of pointed relevance to the present study is the one significant though subtle difference in the imperial legacies appropriated from these two powers by their respective successor dynasties. The genesis of this difference may be enunciated in the following words. —

The major and more permanent parts of the Vātāpi Chalukya empire fell into one linguistic - cum - territorial entity and, if paucity of material can be treated as evidence, we are forced to conclude that no long - standing political institutions and divisions had been indigenously evolved in that territory at the time of the advent of Chalukyas. They thus became the first political power to establish the unitary empire of Karnāṭaka, an empire which survived as a live historical tradition in the succeeding centuries. When the Vātāpi Chalukyas were successively replaced by the dynasties of the Rāshṭrakūṭas, the Kalyāṇa Chāḷukyas and the Kalachuris, the latter inherited sovereignty over what may be conveniently dubbed as a readymade empire. Whatever recalcitrance was demonstrated by lesser powers here and there within that unitary empire merely necessitated mopping up operations. That the elimination

of one dynasty placed the other on the throne of the Karnāṭaka empire is amply borne out by the following claim made for Rāshtrakūṭa Dantidurga. —

*yō Vallabhaṁ sapadi daṇḍa-balēna jivvā
rājādhirāja paramēś varatām-upaiti*

he who became an emperor by defeating the Chalukya ruler in 'battle' (*Ep. Ind.*, Vol. VI, p. 210, verse 6.) and—

*Kāñch-iśa Kēraḷa-narādhipa Chōla-Pāṇḍya-
Śrīharsha-Vajraṭa-vibhēda-vidhāna-dakshaṁ
Karnāṭakaṁ balam-ajēyam-ananta-rathyaiḥ
bhṛityaiḥ kiyaḍbhir-āpi yaḥ sahasā jigāya*

he who defeated the imperial Karnāṭaka army which had successfully routed the lord of Kāñchī, the Kēraḷa, Chōla and Pāṇḍya kings and Harsha and Vajraṭa'. (*Ibid.*, verse 5).

In other words, as far as Karnāṭaka was concerned, it was merely a question of one imperial dynasty being replaced by another aspirant and perpetuating the fact of imperial hegemony over an empire which had come to be recognised as a permanent territorial feature, as a *Chakravarti-kshētra*, from at least the beginning of the 7th century A.D.

On the other hand, the tradition which obtained in the Tamiḷ country at the time of the establishment and subsequent replacement of the Pallava empire was significantly different. Tamiḷian political tradition had for centuries been built up on the unquestioned existence of the three ancient kingdoms and kingships of the of the Chōḷas, Pāṇḍyas and Chēras. While the Vātāpi Chalukyas, so to say, stepped into a politically underdeveloped area and set up a new imperial tradition, the Pallavas interfered with and supplanted a concept of tripartite kingship, which had derived its territorial definitions from ageold tradition, a tradition which had all along governed and dictated the Tamiḷians' political ambitions, alliances and rivalries, with a new ideal of imperialism. While, in Karnāṭaka, the imperial power of the Vātāpi Chalukyas was replaced by that of another immigrant dynasty, the imperial power of the Pallavas was dislodged by the Chōḷas, one of the traditional ruling houses of Tamiḷnāḍu. What the Chōḷas achieved was, however, not a mere succession to the throne of a readymade empire which did not survive its creators, the Pallavas, but the inheritance of the ideal of imperialism, introduced by the Pallavas, goaded by which they set about the task of carving out a new em,

pire of their own. To put it succinctly, while the imperial dynasties of the Deccan were primarily masters of the Karnāṭaka empire whose area was, more or less, co-extensive with that of the Kannaḍa-speaking territory, the Chōḷa empire was what may be described as the traditional Chōḷa kingdom plus whatever regions the Chōḷas had conquered and retained from time to time and for any length of period. To illustrate this point, one may allude here to the fact that while the early Chōḷas of Tañjāvūr adopted such epithets as *Tañjai-koṇḍa*, *Madirai-koṇḍa*, etc., to signify their occupation of vantage cities either within or just outside the traditional Chōḷa territory, the imperial rulers of Karnāṭaka, down to the Kalachuris, boasted only of their real as well as imaginary conquests of far off kingdoms and countries. While the title *Vātāpi-koṇḍa*, assumed by Narasimhavarman, the Pallava conqueror of the Karnāṭaka empire, when compared with the title *Kachchiyum-Tañjuiyum koṇḍa* assumed by Kṛṣiṣṇa III, the conqueror of the Chōḷa empire, shows that the imperialism of the Pallavas of the Tamiḷ country and the dynasties of Karnāṭaka reflected the same moods and modes, Chōḷa titles such as *Tañjai-koṇḍa* and *Madirai-koṇḍa*, the like of which are not met with in pre-Hoysaḷa Karnāṭaka history, show that the Chōḷas had to reckon with the problem of establishing an empire in spite of the strong Tamiḷian bias in favour of the long accepted tradition of tripartite kingship. †

Another graphic illustration for the above thesis is provided by the happenings in the reign of Parāntaka I. He had built up an empire stretching from Nellore in the north to the very tip of the peninsula, gaining mastery over the other traditional Tamiḷian kingdom of the Pāṇḍyas. At the end of his reign, when disaster befell him, he was left with only his tiny traditional Chōḷa territory more or less bounded on the north and south by the two rivers bearing the same name Vellāru. His immediate successors had to do it all over again, re-earning the hard way their claim over such titles as *Madirai-koṇḍa*, *Madhur-āntaka*, *Pāṇḍiyaṇai-chchuram-iṅgakkīṇa*, etc. It is thus clear that, in the case of Tamiḷnāḍu and the Chōḷas, it was a question of their imbibing from their pioneering predecessors the spirit of imperialism, inspired by which they strived for and succeeded, in different degrees during different reigns, in adding territories to their traditional kingdom and maintaining an artificial empire which, unlike Karnāṭaka, did not have an imperial core. In Tamiḷnāḍu itself non-Chōḷa terr-

itories included in the Chōḷa empire remained part of that empire always under protest, overt or covert as dictated by military considerations prevalent from time to time. This is the reason why attempts at Chōḷanising non-Chōḷa place-names and territorial names failed to take root and to survive Chōḷa hegemony.

One significant feature which marked the early medieval or Chāḷukya-Chōḷa period of South Indian history as a result of this difference, of the territorially and linguistically unitary and traditionally accepted Karnāṭaka empire on the one hand and the traditionally fluctuating dynastic empire of the Chōḷas on the other, may be stated as follows.—

The hegemony of Karnāṭaka rulers having been, for most of the time, universally recognised within the bounds of a well-defined empire, there was, as the centuries rolled by, a steady decline in the hankering for fresh conquests and territorial expansion. Warding off outside aggressions apart, they thought and acted in terms of expanding their sway over adjacent areas, in terms of interfering with the goings on in the neighbouring States, more as part of necessary political game without, at the same time, unduly or permanently endangering their hold on their own traditional possessions. Yet, this very sense of security made them complacent and was responsible for not spurring them on to spectacular military efforts in the Kalyāṇa Chāḷukya period, say, like the historic Chōḷa march right up to the river Ganges or their overseas expeditions. Secure within their imperial shell they, even the weaklings among them, vaingloriously laid claims to victories over such impossible foes as the rulers of Aṅga, Vaṅga, Kaliṅga, Kamēra, Pārasīka and Nēpāḷa without the fear of reprisals.

On the other hand, the Chōḷas, goaded by the realisation that the continuance of their sovereignty over their non-Chōḷa possessions wholly depended upon the validity of their military strength, developed active land and naval forces which they kept on constant duty. Spurred on by the need to keep up their aggressive front if only to ward off defections and secessions, they actually went about making fresh conquests on the mainland as well as across the seas.

It is not a little surprising that the legacy of a unitary Karnāṭaka empire inherited by the Chāḷukyas died with them and that the ideal of dynastic imperialism initiated by the Chōḷas did not become the legacy of Tamiḷnāḍu.

CHAṄḌĀLĀ
ROCK
INSCRIPTIONS

C. S. GUPTA

IN APRIL, 1971, AN ACCIDENTAL discovery revealed two rock inscriptions written in early Brāhmī characters, in the Chaṅḍālā forest range situated in the Umrer Tahsil of the Nagpur District. The inscriptions were first seen by Bhandarkar, an officer of the forest department who informed S.G.Chatte, former teacher in the neighbouring village, Mandhal. Chatte communicated the same to Dr.S.B. Deo, the then Head of the Dept. of Ancient Indian History, Culture and Archaeology of the Nagpur University. Dr. Deo published a short news in the local newspapers along with the photographs¹. Notes on the readings and interpretation of the inscriptions were later published by me and Dr. Deo in the local journals².

There are two inscriptions, engraved on two big slabs. On one slab the inscription is incised breadthwise in 2 lines. The other one, consisting of only four letters, is engraved lengthwise in one line. These inscribed slabs form part of a dump of debris which appeared due to the fall of some construction. The spot is on the slope of a hill in the said Chaṅḍālā forest. The nearest village Pullar is situated about 2 kms. from it. The site is about 10 kms south of the village Mandhal, which is 55 kms to the south-west of Nagpur.

The slabs bearing the inscriptions are in vertical position: The one with the bigger inscription is about a metre in width and about 3 metres in length. To its right there is a slab (broken at the top end) bearing another inscription, about .20 metre in width, .30 metre in depth and 2 metres in length.

The letters of the inscriptions are well sunken. The letters of the first inscription are about 7 cms. in height while that of second are about 5 cms. The script appears to be of the Northern

type of the Aśokan Brāhmī characters and can be safely placed in c. 3rd cen. B.C. According to Dr. Deo, the first inscription dates back to c. 2nd cen. B.C. and the second one to a little later period. But as the forms of the letters *k* and *s* are the same in both the inscriptions and as the palaeography of the inscriptions closely resembles that of the Aśokan inscriptions, they cannot be placed in c. 2nd cen. B.C.

The language of the inscriptions is Prakrit. The forms of some words, e.g. *Vaisa* (Skt: *Vaiśya*), *kamaṁ* (Skt. *karma*) deserve attention. According to Prakrit grammar they should be *vaissa* and *kammaṁ* respectively. Here it may be mentioned that in most of the Prakrit inscriptions found in Vidarbha the tendency of assimilation in Prakrit words is not traceable³.

The inscription no. 1 is incised in two lines. The lines consist of nine and eight *aksharas* respectively. The left top part of the first letter is damaged, but from the remaining part of the letter, and looking to the word, it can be restored as *vai*. I read the inscriptions as follows.

INSCRIPTION NO. 1

1. [Va]isa Vaṁdalaka-putasa

2. Apalasa [saṁ]matikamaṁ [I*]

Translation: The work executed by Apala, son of *vaiśya* Vandalaka.

INSCRIPTION NO. 2

1. *Okiyasa*

Translation: Of one who provides water or one which is related with water.

The first inscription is clear enough to suggest that the work of construction of the structure was executed by one Apala, who was the son of Vandalaka, a *Vaiśya* by *varṇa*. The complete second line appears to be one compound (*samāsa*). The meaning of the word *sammati* is '(deed) executed by,' as stated by T. W. Rhys Davids and William Sted.⁴ He has also discussed various compound words related to the word *kamma* e.g. *patthitakamma*, *navakamma*, *pāpakamma*, etc.⁵ This inscription may be interpreted in another way also. Considering that the words

mati-kamaṁ means a work of wisdom it can be translated as “The work of wisdom (caused) by Apala, the son of *vaiśya* Vandalaka.”⁶ Dr. Deo has suggested the following reading of this inscription :

va(?)sa vaṁdalakaputasa

Apalasammati kamaṁ

He writes that a few letters in the first line are damaged, but it may be the name of a person as it ends with the genitive singular *sa*. Vandalaka is a proper noun and his son's name Apala is given in the second line. The meaning of the last four letters of the second line is not clear, but supposing that *kama* means *karma* or action, this will mean that the work of excavation of this cave was done by Vandalaka's son Apala or with Apala's consent⁷.

I have personally examined the inscription *in situ* and found that only top part of the letter *va* is damaged and there is no sign of any more letters preceding it. Similarly there is no indication of the length of medial *i* on the letter *t*. On the contrary it is clearly *i* as seen in the plates published by Dr. Deo⁸ and here,

The second inscription is very short and lacks in details. It is not clear whether it refers to the deed prosecuted by a person who was engaged in some work concerning hydraulics or the distribution of water as done at the present day *pyāūs* or it was a place of providing water to thirsty travellers. Looking to the nature of the structure, it can be inferred that the structure was intended to serve as a place of rest and water-feeding centre for the travellers⁹.

Dr. Deo has taken it to be a proper noun and translated it as “a gift given by a person named Aukika”.¹⁰ If at all this inscription refers to a person by name, it should be Okiya and not Aukika. There is also the possibility of this inscription being left incomplete. In this case this may refer to either the profession of the donor or the native place of the donor. According to the latter interpretation it will mean “of a person hailing from a place named Oka”. This type of inscriptions mentioning the place-names of the donors is common at Sanchi and Bharhut¹¹. It may also be interesting to note that the word *oka* itself means a place, house, etc. and the word *Okiyasa* may have the sense of a local person.

There is every possibility of Chaṇḍālā being situated on the

ancient trade-route connecting Kauśāmbī in the north and Bhadrāvātī (modern Bhandak, Chanda District) in the south. This is also supported by the finding of rock-carvings on a slope of a spur just near the foot of the Chaṇḍālā hills. The rock-carvings depict a variety of animal figures (bulls, elephants, etc.), wheels to represent carts and some geometrical designs. This was done probably by the children of the halting caravan in their leisure. Apala and his father belonging to the business community (*vaiśya*) must have felt the necessity of making arrangements of water for the thirsty travellers.

Thus, it can be concluded that at Chaṇḍālā, Apala, the son of *vaiśya* Vandalaka caused the construction of a place for serving water to the travellers.

Notes :

1. *Nagpur Times*, dated 2-4-1971 ; *Taruṇa Bhārata* (Marāṭhī), dated 3-4-71.
2. Chandrashekhar Gupta, *Chaṇḍālā Guhālekha, Dhammadīpa*, Nagpur 1971, Vol. 7, pp. 49-55 ; S. B. Deo, *Māṇḍhalajavaḷila Lekhayukta prāchīna leṇe, Vidarbha Shāśodhana Mandala Vārshika 1971*, Nagpur 1972, pp. 108-11.
3. For details see my paper entitled *Vidarbha kā abhilekhīya Prakṛitasāhitya, Dhammadīpa*, Vol. IX, pp. 65 ff.
4. *Pali-English Dictionary*, Vol VIII, London, p. 154.
5. *Ibid.*, Vol, III, pp. 18-19.
6. I owe this suggestion to my teacher, Dr. A. M. Shastri.
7. *op. cit.*, p. 110.
8. *op. cit.*, p. 13.
9. *Udaka—oka : iya : sa Okiyasa*.
10. *op. cit.*, p. 111.
11. I owe this suggestion to Dr. A.M. Shastri.

MŪḌABIDURE SETṬRA- BASTI INSCRIPTION OF BAMMADĒVĀLPĒNDRADĒVA

P. N. NARASIMHA MURTHY

MUDABIDURE IN SOUTH KANARA DISTRICT of Karnataka is only too well known as a great and living centre of Jainism. There a number of bastis in this town. The best known among them being the Tribhuvana-chūḍāmaṇi-chaityālaya. Not far from that chaityālaya is the Setṭra-basti from where the record under study hails. The stone in question is in three panels. The top one enshrines the figure of a Jina seated under a triple umbrella and flanked by two female chauri-bearers one on either side. The left-half of the central panel depicts a seated *digambara* Jaina *guru* facing right holding a palm-leaf manuscript in his left hand, his right hand being in *chin-mudrā*; while the right-half depicts a seated figure facing front and in meditation. The third panel contains the inscription with which we are now concerned.

The text of the inscription, engraved in 7 lines is in Kannaḍa characters and language. The letters are very well developed and highly roundish, closely resembling the Hoysaḷa script of the 13th century A.D. Thus, on grounds of palaeography this inscription may be safely assigned to the second half of the 13th century A.D.

- 1 Svasti Śrīmatu bhuvana-vikhyāta Pāmḍya-kula-tilaka Sō -
- 2 ma-vaṁśōdbhava Baṁmadēvālpēndradēvara rājyābhyu -
- 3 dayada 15 Pārthiva-saṁvatsarada Vṛishaba-mā-
- 4 sa 7 neya ēkādaśi Budhavārad-aṁdu svasti-śrī
- 5 samasta-guṇa-saṁpāṁnarappa Uttama-setṭiyaru
- 6 samādhi-vidhiyim muḍipe svargasthar-ādaru
- 7 Śrī-Vitarāga[11*]

The importance of the inscription lies in the fact that it refers itself of the reign of the king Bammadēvālpēndradēva. The

epigraph is dated in his 15th regnal year, Pārthiva, Vṛishabha 7, Ēkādaśi, Wednesday. These details when referred to the Śaka year 1207 regularly correspond to 1285 A.D., May 2, f.d.t. .04. The inscription records the death of Uttama-seṭṭi by the observance of *samādhi-vidhi*.

The name Bammadēva as that of an Āḷupa ruler is for the first time met with in this inscription. It is known from other available records¹ that during the period from about 1275 A.D. to 1292 A.D., the Āḷupa throne was occupied by a queen named Ballamahādēvi. The Keñjūru inscription² of this Ballamahādēvi, belonging to 1281 A.D., mentions a certain Baṅkidēva of Āḷupa extraction. This Baṅkidēva figures as *aḷiya* Baṅkidēva as early as in 1254 A.D., in the Kōṭe³ and Brahmāvara⁴ inscriptions of Vīrapāṇḍyadēva, the predecessor of Ballamahādēvi. We have also some inscriptions independently issued by this Baṅkidēva during the years 1286-1315 A.D.⁵ It is very likely that the *Seṭṭra-basti inscription* actually belongs to the reign of this Baṅkidēva. If this is accepted it would mean that Baṅkidēva had started ruling on his own as early as in 1270 A.D., even while Ballamahādēvi was on the throne.

A few words need to be said about the period to which this inscription belongs. As already pointed out above the inscriptions of the queen Ballamahādēvi occur in the South Kanara District from 1277 to 1292 A.D. The inscriptions of a certain Nāgadēvarasa occur between the years 1292 and 1298 A.D.⁶ This Nāgadēvarasa claims to be the son of Ballamahādēvi. The inscriptions of Baṅkidēva issued on his own occur during the years 1287 to 1305 A.D. And now, we have the inscription of Bammadēva belonging to 1285 A.D. Thus, between the years 1270 and 1305 A.D., the inscriptions of four rulers namely Ballamahādēvi, her son Nāgadēvarasa, Baṅkidēva and Bammadēva have been found, those of Ballamahādēvi, Nāgadēvarasa and Baṅkidēva overlapping one another. To solve this problem it has been suggested elsewhere⁷ that Baṅkidēva may have claimed the Āḷupa throne for himself on the basis of the *aḷiya-santāna* system of succession then in vogue among certain communities of South Kanara. If this explanation is accepted it will mean that Bammadēva *alias* Aḷiya-Baṅkidēva had rebelled and proclaimed himself ruler as early as in 1270 A.D. However, this possibility awaits confirmation from future discoveries.

The ruler is described as *Bhuvana-vikhyāta Pāṇḍya-kula-tilaka* and *Sōmavaṃśōdbhava*. We know from other available epigraphical records that the Āḷupas described themselves as belonging to the Solar race and Pāṇḍya family from at least the 8th century A.D. onwards.

Uttama-seṭṭi, who is said to have gone to heaven by observing *samādhi-vidhi* is eulogised as *Samasta-guṇa-saṃpanna*, that is, endowed with all good qualities. He obviously belonged to the merchant class and it is very likely that the image facing front in the right-half of the central panel represents this Uttama-seṭṭi. It is well known that the merchant community was one of the major patrons of Jainism in medieval South Kanara.⁸

Notes :

1. K. V. Ramesh, *A History of South Kanara*, pp. 127 ff.
2. *Ibid.*, p. 125 ; *ARSIE.*, 1931-32, No. 336.
3. *ARSIE.*, 1928-29, No. 509.
4. *Ibid.*, No. 485. Also K. V. Ramesh, *op. cit.*, p. 121.
5. *ARSIE.*, 1927-28, No. 377 ; 1929-30, Nos. 484 and 527 ; 1930-31, No. 338 ; 1949-50, No. B 277 ; *SII.*, Vol. vii, Nos. 77, 188, etc.
6. *ARSIE.*, 1927-28, No. 420 ; 1929-30, No. 587.
7. K. V. Ramesh, *op. cit.*, pp. 128-29.
8. I am very much grateful to Dr. Gururaja Bhatt and Dr. K. V. Ramesh for their help in preparing this paper.

INDIGENOUS STATES OF NORTHERN INDIA (circa 200 B.C. to 320 A.D.):
 Dr (Mrs) Bela Lahiri, M.A., D.Litt., University of Calcutta, 1974,
 pp. xvi and 398, Rs. 50.00

This work is the doctoral thesis of Dr Bela Lahiri who is already known to scholars of Ancient Indian history by her learned papers in Research Journals. The period chosen for study is generally considered as Dark Age in ancient Indian history as compared to the Mauryan and Gupta periods. But the period witnessed hectic political activity. Unfortunately, it did not attract scholars because of the paucity of source material. It is gratifying to note that the author took interest in this Dark Age and produced a good and authoritative work.

The work is divided into four parts. The first part deals with the problems of the Śuṅgas and Kaṇvas and shows how they failed in their attempts to keep the empire intact. There is a good discussion on the autonomous towns and cities which declared independence. The second part deals with the monarchical states that grew up in Madhyadēśa after the decline of the Śuṅgas. There is a highly useful and scholarly discussion on the problems of "Mitras", and their coinage. The next part deals with some tribal States such as the Yaudhēyas, Audumbaras, Kulūtas, Kuṇindas, Madras, Vṛishṇis, Agratya, Rājanya, Trigarta and Vēmaki Janapadas. Here is seen a detailed discussion on the antiquity, identification, location and forms of the government of the tribes mentioned above. The fourth part deals with the tribal States of Rajasthan and neighbouring areas. It includes discussion on the Mālavas, Ārjunāyanas, Maukharis, Śibis and Nāgas. In the end is a discussion on the cultural importance of the period followed by a topographical list of inscriptions bearing on the subject. The book also contains seven plates of coins of the various tribes discussed above.

There are many controversial problems in the work and the author has tried to solve them with great care with the help of available source material. Some may not agree with her conclusions. But she has argued judiciously and objectively, and has shown great restraint in her arguments. Undoubtedly this is a pioneer-

ing attempt in presenting a comprehensive, scholarly work on the political history of North India of the early period and could be considered as a scholarly contribution to the study of ancient Indian history. As Dr R. C. Majumdar puts it in his foreword to the book "This scholarly work fills up a gap in our knowledge of ancient Indian history". The learned author and the University of Calcutta deserve our gratefulness for this publication. However, the price of the publication is high. The printing and get up of the book are satisfactory.

A. V. Narasimha Murthy

KANNADA LIPIYA UGAMA MATTU VIKASA (The origin and development of Kannaḍa script): Dr A.V. Narasimha Murthy. Pub. Institute of Kannada Studies, University of Mysore. Second edition, 1975. Price Rs. 10. 00. Pp. xii and 139 and 14.

Following in the footsteps of Bühler, Ojha, Sivaramamurthy, Dani and Mahalingam, Dr Narasimha Murthy has produced an eminently readable and instructive work of reference in Kannaḍa on the origin and development of Kannaḍa script. The book is divided into 7 chapters, the first one dealing with the antiquity of writing followed by a brief chapter on the origin of scripts in general and Brāhmī and Kharōshṭhī in particular. Chapter three deals with the art of writing and the materials used therefor, while in the next chapter are discussed the palaeographical features, developments and changes. Chapters 5 and 6 are, of course, the most important parts of the book dealing as they do with the development of the Kannaḍa alphabets and their medial signs respectively. These chapters are well illustrated with line-drawings. Chapter 7 concerns itself with a brief treatment on the development of Kannaḍa numerals.

At a time when the number competent epigraphists is on the decline and the need for inculcating interest in epigraphy among the younger generation is keenly felt, Dr Narasimha Murthy's book is a most welcome contribution. The present reviewer fervently hopes that the neat get up, lucid presentation and clear treatment of the subject found here will attract a large number of young scholars and create in them an abiding interest in epigraphy.

K. V. Ramesh

STUDIES IN TULUVA HISTORY AND CULTURE: Dr. P. Gururaja Bhatt, 1975; copies can be had from the author, Principal, St. Milagres College, Kallianpur, South Kanara, India, pp. LXIV and 451 and 468 art plates. Price Rs. 250-00 (300\$).

The concept of regional history has not developed in our country as yet. Our historians have a bias for dynastic history. We have some excellent works on dynastic histories but not many good regional studies. In this background the book under review has a freshness of approach very rarely seen in Indian history. With a view to acquainting the students of ancient Indian history, the author has compiled this work which is the result of the hard labour, painstaking exploration and thorough investigation and critical research of Dr Bhatt for the last fifteen years. Indeed it is a rare achievement in individual scholarship.

The work deals with the region of South Kanara, known as Tuḷunāḍu i.e., the tract of land on the West coast of the peninsular India. Though the area covered is small against the Indian background, the cultural wealth of the area is so rich that it may be considered as recapitulating the entire cultural evolution of ancient India. The book is divided into fourteen chapters. The first two chapters deal with the evolution of Tuḷunāḍu. The next four chapters deal with the political history from the earliest times to the modern period. Then follows administration, social and economic life. The last three chapters deal with religion, architecture and sculpture and Jainism in Tuḷu Country. The scholarship of the author is best manifested in the last three chapters where one finds a highly critical discussion on various forms of deities. Evolution of images and their iconographic studies particularly of Gaṇēśa, Viṣṇu, Sūrya, Mahishāsūramardīnī, Śiva, Pārvatī and Kṛishṇa are highly instructive. Each image is illustrated on fine art paper which enhances the value of this work. Most of these images, temples and bronze icons and epigraphs have been exposed to scholars for the first time. The famous Beḷmaṅṅu Copper Plate, which has the distinction of being the earliest Kannaḍa Copper Plate is also the discovery of Dr Bhatt. Thus the work is a great compendium of Tuḷuva culture. Perhaps without any exception it could be said that this is the best illustrated work on the subject. Thus the book should be of great interest to every student of ancient Indian history whether his field is political history or iconography, sculpture, administration,

Jainism or religion. This work has been characterised as the *magnum opus* of Dr Bhatt by learned scholars in their foreword and opinions.

A special mention should be made of the excellent get up and production of the book. The entire work has been projected by Dr Bhatt single-handed without the help of any institution, purely as a love of labour. The work is beautifully produced and the Manipal Power Press, Manipal deserve our congratulations. Though price appears high, the contents justify it. This book should be a prized possession of every individual scholar and library interested in ancient Indian culture and the libraries of Indian Embassies abroad.

The learned author Dr Gururaja Bhatt has put the world of scholars in ancient Indian history in a deep debt of gratitude by this masterly and scholarly work.

A. V. Narasimha Murthy

SASANAMUM TAMILUM (Inscriptions and Tamil Studies): Dr A. Veluppillai. Price. Rs. 10.00. Pp. 368.

This book contains six chapters entitled Palaeography, Language, Culture, Literature, Usages and Ceylon. The author discusses, under palaeography the various theories regarding the origin and the evolution of the Tamil, Vaṭṭeḷuttu and the Grantha scripts and states his preference to the opinion that 'Tamil Brāhmī,' following the recent terminology, evolved into old Vaṭṭeḷuttu. The author's use of the expression 'old Nāgarī' in relation to his enquiry of the Grantha script is not quite correct. The expression 'Grantha-Tamiḷ' is continued to be used by him in explaining the evolution of the Tamil script during the Pallava rule. The author who opines that Grantha is affiliated to old Vaṭṭeḷuttu (p.36) states that Grantha was used to write inscriptions in Malayāḷam language, replacing Vaṭṭeḷuttu. A major part of the section under language is devoted to explain the grammatical (or rather linguistic) changes—a special field of this author—substantiated by concrete examples quoted from inscriptions, in unlike the other sections. The section under culture is an excellent introduction, though it cannot be, by its very nature, as exhaustive as one may wish.

Literature is dealt with under two broad heads: *meykkīrttis* and stray verses. The example cited for illustrating the addition of passages under the first head in the course of the growing years of the reign of Rājarāja I is not correct since Rājēndra's *meykkīrtti* reached its final form in the 13th year itself (vide *JIH*, Golden Jubilee Vol. 1953, pp. 109-16). The section entitled Usages is a brief one, considering its immense scope, touching a maximum number of aspects of epigraphic subject-matter. The last but not least important section entitled Śāsanattu-Tamiḷ-Ilaṅgai is the author's own field of study but condensed to fit in with the background of its counterpart.

The book will certainly serve as a very good introduction for those who are interested in Tamil epigraphy.

K. G. Krishnan

MAHABALIPURAM STUDIES: Michael Lockwood, Gift Siromoney and P. Dayanandan. Pub. The Christian Literature Society, Madras, 1974. Price Rs. 18.00, pp. v and 112.

This attractively brought out booklet embodies the results of a variety of studies conducted by the three learned authors on the world famous monuments of Mahābalipuram. When a historian goes through their systematic presentation of their findings he cannot but happily wonder at the fine symphony which has been wrought by the history of art and architecture on the one hand and Philosophy, Statistics and Botany on the other.

The first chapter on Pallava *dvāra-pālas* and Mahishamardinī cave is built upon the analysis of stylistic development in the background of the authors' discovery that Pallava *dvārapālas* are *āyudha-purushas* and that the religious affiliation of any Pallava shrine could be decided on the strength of the particular *āyudha* characterising the *dvārapāla*. Chapter two on Pallava Sōmāskanda is of absorbing interest. In this chapter Sōmāskanda panels of the Pallavas receive statistical treatment bringing to light many interesting points. In chapter three on Pallava Gaṅgādhara the authors argue painstakingly that the making of God-king images probably originated in the Pallava empire. Chapter four contains a study based on God-king images and cult worship. We enter the

field of hot controversy in chapter 5 in which the authors discuss the authorship of Mahābalipuram monuments. Taking recourse to literary, epigraphical, palaeographical and architectural evidences and also to a study of dress and ornaments as depicted in the sculptures the authors conclude that it is difficult to believe with some scholars that one king, Rājasimha, created all the monuments of Mahābalipuram. Study No. 6 is in the form of a rapid survey of costumes and jewellery in Toṇḍai-maṇḍalam during the pre-Pallava, Pallava, Chōḷa and Vijayanagara periods. The authors conclude this chapter with a flurry of questions for which answers are yet to be found. In an appendix on a numerical taxonomy analysis of various Sōmāskandas the authors discuss the principles of classification in regard to the *Sōmāskanda* panels. For a student of architecture who is normally not equipped with the knowledge of computer techniques this appendix holds out frightening prospects. Nevertheless, [the reviewer does endorse the authors' hope that numerical taxonomy may be applied to advantage in the field of iconographical studies.

It may not be out of place to refer here to article No. 8 of the present Journal, contributed by one of the three authors of the work under review. While, as a pure epigraphist, the present reviewer has not been able to follow in full the technicalities of Dr Siromoney's arguments and to assess the full implications of his study of a Pallava-Grantha inscription applying computer techniques, the great impact this method of study is likely to make upon the decipherment of damaged inscriptions should be taken note of and the possibilities explored.

All serious scholars and students of South Indian architecture should go through this compact and scholarly work which contains a number of good illustrations. The value of the book would have been greater had diacritical types been used in printing.

K. V. Ramesh

