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# ARCHAEOLOGY AND INDIAN UNIVERSITIES

(Presidential Address at the Archaeological Section of the  
All-India Oriental Conference, 16th Session,  
held at Lucknow.)

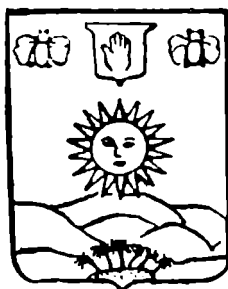
*By*

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Head of the Department of History, Deccan College  
Post-graduate and Research Institute, Poona 6.



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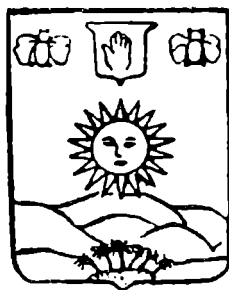
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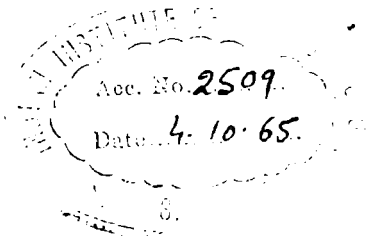


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# ARCHAEOLOGY AND INDIAN UNIVERSITIES

By

H. D. SANKALIA

*(Professor of Proto-Indian and Ancient Indian History, Deccan College Post-Graduate and Research Institute, Poona)*

I am thankful to the organizers of the All-India Oriental Conference for electing me President of the Archæology Section for this year. Working at a post-graduate research institute where opportunities for fieldwork in Archæology are available my mind is naturally occupied with the problems of teaching the subject at our Universities so as to create a living interest in the subject itself and of providing trained personnel for unearthing our past of which we know so little.

## *I. Needs of Indian Archæology*

Looking to the large and small problems in the subject, its vast and immense vista, stretching right from the dim Stone Ages down to almost the present period, and the manifold and varied material that one may have for study for each of the intervening periods, it must be admitted that the number of workers in this subject is extremely small at present. We must have an army of trained workers studying different branches of the subject, and undertaking fieldwork in different parts of India. The vastness of the country demands that there should be at least three or four centres in India where theoretical training in various aspects of archæology is given, coupled with field archæology and the methods of scientific preservation, cleaning, modelling, etc.

I venture to offer a few suggestions on the subject in view of the practical experience that I have had for the last ten years and more.

## *II. Problems*

To my mind the most outstanding problem in which not only we, but scholars all over the world are interested, is the origin of the Harappa—(Indus) civilization. It raises a host of questions, to wit: Is it Aryan or non-Aryan or pre-Aryan? If the latter, was it really destroyed by the Aryans as is now believed on very inadequate evidence? With these questions is connected the question of the Aryan Civilization and one may ask: Who are the Aryans? Are they indigenous to India as some of our scholars believe and as our tradition maintains, or are they foreigners? If foreigners, did they enter India from the north-west, or the north, from across the mid-Himalayas and then spread westwards into the Punjab and eastwards into the Gangetic doab, as Pargiter believed? Whence did these Vedic and Puranic cultures spring up? How are they related to the different Stone Age Cultures—Neolithic, Mesolithic, and Palaeolithic?

## *III. Pre-History*

And even about these Stone Age Cultures we know so little. Of the Palæolithic we seem to have two cultural groups. The earlier, known as the pre-Sohan, is found hitherto on the banks of the Indus in the Rawalpindi District. It has affinities with the South-east Asian Chopper Culture. The later, found all over India, is the Hand-Axe culture. So far it is well documented by the material found in S. E. India, Karnatak, Gujarat, Chauntra (Punjab) and Mayurbhanj. A question may be asked whether India had any share in the origination of any of these cultures, or whether she merely received these cultures from the South-East or Africa and accommodated them on her soil. These questions cannot be answered until sufficient work is done in India.

The same is true of the Mesolithic. So far no positive evidence of this culture is available. The Teris of South India, near Tuticorin, seem to contain the oldest series of microliths, whereas the Gujarat microlithic culture signifying occupation of sandy dunes, extremely crouched human burials, the positive evidence of the domestication of the dog etc., reminds one of

similar cultures in Europe and Egypt, but so far it remains undated, and we cannot say that it is contemporary with them. It is suggested by Professor Piggott that the microlithic industries of India (as some of Europe) are perhaps connected with the North African Capsian. But even here we need stratigraphical evidence from several Indian and extra-Indian sites either to substantiate or to invalidate such a suggestion.

The Neolithic and Megalithic monuments are concentrated in Southern India, particularly in the Bellary District. Recent work at Brahmagiri in Mysore points to the Megalithic as an iron-using culture introduced in South India about the 4th century B.C and it has been suggested by Professor Heimendorf that possibly it was brought into India by proto-Dravidians, who were a Mediterranean people. How far is this hypothesis true? Does it cover the entire mass of megaliths spread all over South India or are any of them earlier?

A similar suggestion, I think, has been made about the Neolithic Culture. (Please see page 10).

The sum and substance of the few pre-historic studies that have so far been made is that almost all the cultures and civilisations in India, came from outside India—a conclusion which requires much more substantial evidence than we have at present. But until it is forthcoming, the various conjectures and hypotheses have got to be allowed.

#### *IV. Proto-History*

If this is the state of our knowledge of the Stone Age Cultures of India, that of the proto-historic cultures is no better. This is in one sense the Darkest Age of Indian history. It is the period which, on the present data, seems to lie between the Indus Culture and the dawn of historic period which begins with Chandragupta Maurya. For, until a few months ago, we had no archaeological material belonging to this vast period of nearly 2,000 years. But it is this period in which, according to the Puranas and the Mahabharata, various dynasties flourished in the Indo-Gangetic plains and the first Vedic settlement existed in Vidarbha, south of



the Narmada. Those of us who believe in the historicity of Rama and Krishna would say that they also lived in this or much earlier period.

No amount of literary studies, however, could make any one believe in this traditional history, unless we are able to handle some objects which might have been used by the Aryans of the historic past known through their Puranic dynasties. These objects must be found in some known context, either from Indian, or ex-Indian, i.e. Iranian, Iraqui, Anatolian or Egyptian evidence, and these objects must be obtained by stratigraphic methods alone.

It is not merely in the pre- and proto-historic spheres that we need most such excavations. These are equally needed for the historic periods. The chronology of the Kushanas, and the Satavahanas, as well as of the Later Guptas, based as it is on surface collection of coins and stray inscriptions is still not satisfactorily solved. How much more light on these questions may be had if we had a couple of excavations in each locality or sub-locality ?

#### V. *Ancient History*

And the Golden Age of our History, the Gupta period ? What little we know of it is mainly based on literature, and a few inscriptions and coins, sculptures and terracottas. These surely do not tell us of the whole culture of the period. We do not know of the civic life: town planning, sanitation, houses, vessels for drinking and eating, items of food and clothing, a real insight into the religious practices of the several strata of society and the environment—the climatic conditions, the flora and fauna—in which the people in different parts of India lived 1500 years ago. And finally the men and women themselves. To what races of men did they belong ? It may be interesting to know the affinity which may (or may not) be disclosed between the racial types then existing and the present ones, if perchance skulls or full skeleton material which has escaped cremation turns up.

What is true of the Gupta period is also true of the later periods, whether it is the period of the Pala in Bengal and Bihar or the Chaluka-Rashtrakuta in Karnatak or the Chola in South India or the still later period of the proto-Rajput dynasties,—the

Gurjara-Pratihara, Gahadvalas or the Chaulukyias of Anhilwad. What little we know is the dynastic history and to some extent the art history, deduced from sculptures on temples. An intimate knowledge of the life of these periods would really constitute the true history.

#### *VI. Plan and Organization*

Let us therefore turn our attention and make an organized, and well planned attempt, on an All-India basis, taking into consideration the regional or local needs, talents and financial resources, at obtaining such a knowledge of all periods of Indian history, within a reasonable period of time, say of 10 years to begin with. Of course, this does not mean that we shall know everything by this time. But it is expected that sufficient material will be collected to write a fuller cultural history of the past than the one we have at present which is purely dynastic.

One of the most important ways, in some cases the only way, in which this material can be collected is archæological exploration and excavation.

#### *VII. Agencies*

The agencies which do this kind of work compared to the size of the land and its wealth in ancient material, are pitiably few. These can be counted on the tips of one's fingers. First, we have the Archæological Department of the Government of India. Only one or two of its several Circles, except the excavation branch, have been doing any excavation. Then there are the States. Of these, Mysore, Hyderabad and Madhya Bharat have their own Departments of Archæology, but proper archæological work, particularly systematic exploration, followed by excavation and publication of the report, is lacking. In Saurashtra a new Department is being organized. Thus these old "stalwarts" are not sufficiently active at present.

There remain the universities. Among these, the Calcutta University was the first to undertake an archæological excavation, but has not followed up the initiative. Since 1940 our Institute has been doing some work, and lately the Universities of Allahabad, Baroda, and Poona have entered the field and the

results are very promising indeed. The work of the University of Allahabad is beginning to fill up the long gap between the 4th century B.C. and the Harappa Civilization and shows us objects contemporary with the time of Buddha and king Udayana, whereas the work of the Poona University seems to give us a glimpse of a sequence of cultures from pre-history to history in Maharashtra.

Compared, however, to the magnitude of the problem and immense areas which await systematic investigation and exploration what is being done at present by these universities and the Archæological Departments is indeed insignificant. If we really value this kind of work which to my mind is the only means of unearthing our glorious past, it is absolutely necessary that it should be planned for the whole country and undertaken in collaboration with all the Universities and Government departments for stated periods. So far as the Universities are concerned two arguments are usually advanced against their participating in archæological fieldwork, namely, they do not possess trained personnel and their financial resources are very limited.

#### *VIII. Finance and Trained Personnel*

These are not indeed formidable obstacles. Young men are being trained in scientific excavation for the last 10 years and since 1945, the Department of Archæological Survey, Government of India, has been organizing schools of training, where young men from universities are associated with the excavation work done under their auspices. Persons in charge at Baroda, Poona and Allahabad and even in the Government of India are the products of this commendable effort on the part of the Government of India. Certainly many more trained students can shortly be made available if universities take active interest in archæology by assigning 'table' archæology its proper place in the University curriculum and by providing specific grants for fieldwork as well.

The question of large-scale explorations or excavations is out of place so far as the Universities are concerned. What is suggested here is that each University should confine its activities to the region in which it is situated and carry out a systematic

exploration of the area year after year. This does not require much money. It can be managed within less than a thousand rupees. Regular work on scientific lines would soon form the basis of a first class gazetteer of several kinds of sites from which promising ones could be selected for excavation. This may be on a small scale initially. And for it no large funds would be necessary.

If a particular site later on proves to be really important, two or three universities in one State, or adjacent States might organize a joint expedition, or seek support of local and even Central Governments. Public patronage is also bound to come forth on account of local patriotism and the fundamental value of the work.

### *IX. Past Experience*

Such has been our experience. We began with a systematic survey of the surface monuments. Initially we started with the Poona District and one pupil was put on to the work of gathering, classifying and evaluating the known archaeological monuments in the Deccan (Maharashtra). Our work soon drew the attention of the Government of India and the first joint expedition to Gujarat was organized. It was so successful that the next year the University of Bombay assisted us with a small grant for two years in succession. Invitation was then received from the Kolhapur State to excavate a Satavahana site near the city of Kolhapur. We then appealed for public support and the House of Tatas and, later, Wadias gave munificent grants to conduct further investigation in Gujarat and to enable us to invite Professor Zeuner of the London University to undertake a study of the Environment of the Stone Age Cultures of Gujarat and other parts of India. This year, with the help and under the auspices of the young University of Poona excavations were conducted at Nasik and the adjacent areas. This has given us positive evidence of several human cultures, which flourished at Nasik since palæolithic times, thousands of years ago, and have come down through Chalcolithic times to the 17th century when the site was fortified by the Muslims.

The Deccan College Research Institute started with a modest aim. Its own funds, even now, are small. But with generous

help from several quarters, it has been going on from one venture to another. Other universities can do similar or even better work, under more promising conditions, if they make a provision for archæological fieldwork and select trained people who are keen on fieldwork.

My plea today, therefore, is that the Universities and Museums in India have hitherto played an insignificant part in revealing India's past. They must now come forward and do whatever little they can in unravelling the past which might serve as a beacon light for the future historians.

### *X. Regional Problems and Universities*

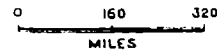
It may now be pertinent to sketch out in broad outlines the problems that the Universities can successfully tackle. A glance at the location of the various Universities in India in their regional context, and the relation that they bear to the archæological sites would indicate the nature of the work to be undertaken. India has at present twenty-six Universities. There is one each in E. Punjab, Delhi, and Rajputana. Archæologically, the Punjab is rich in antiquities of the Stone Age, as well as of the Chalcolithic and later periods. Evidence is also now available, as shown by the work of Mr. Ghosh and Mr. Lal of the Archæological Department, of the Chalcolithic and later—perhaps Aryan—Cultures in Southern Punjab and Northern Rajputana. Earlier work of Carlyle followed by the work of Banerji and D. R. Bhandarkar has shown that Rajputana is prolific in monuments and coins of the early and mediæval period. There is thus plenty of scope for work in pre, proto and early historical period, a work which if systematically carried out, even on a small scale, will throw light on the Stone Age Cultures, the Aryan problem and the regional evolution of architecture, sculpture, and iconography, as well as dress and ornaments. So these Universities may undertake either jointly, individually or in co-operation with Government of India planned fieldwork which is bound to yield important results.

### *XI. Uttar Pradesh*

The Uttar Pradesh has five Universities. Of these Allahabad is already engaged on excavation at Kausambi. But the

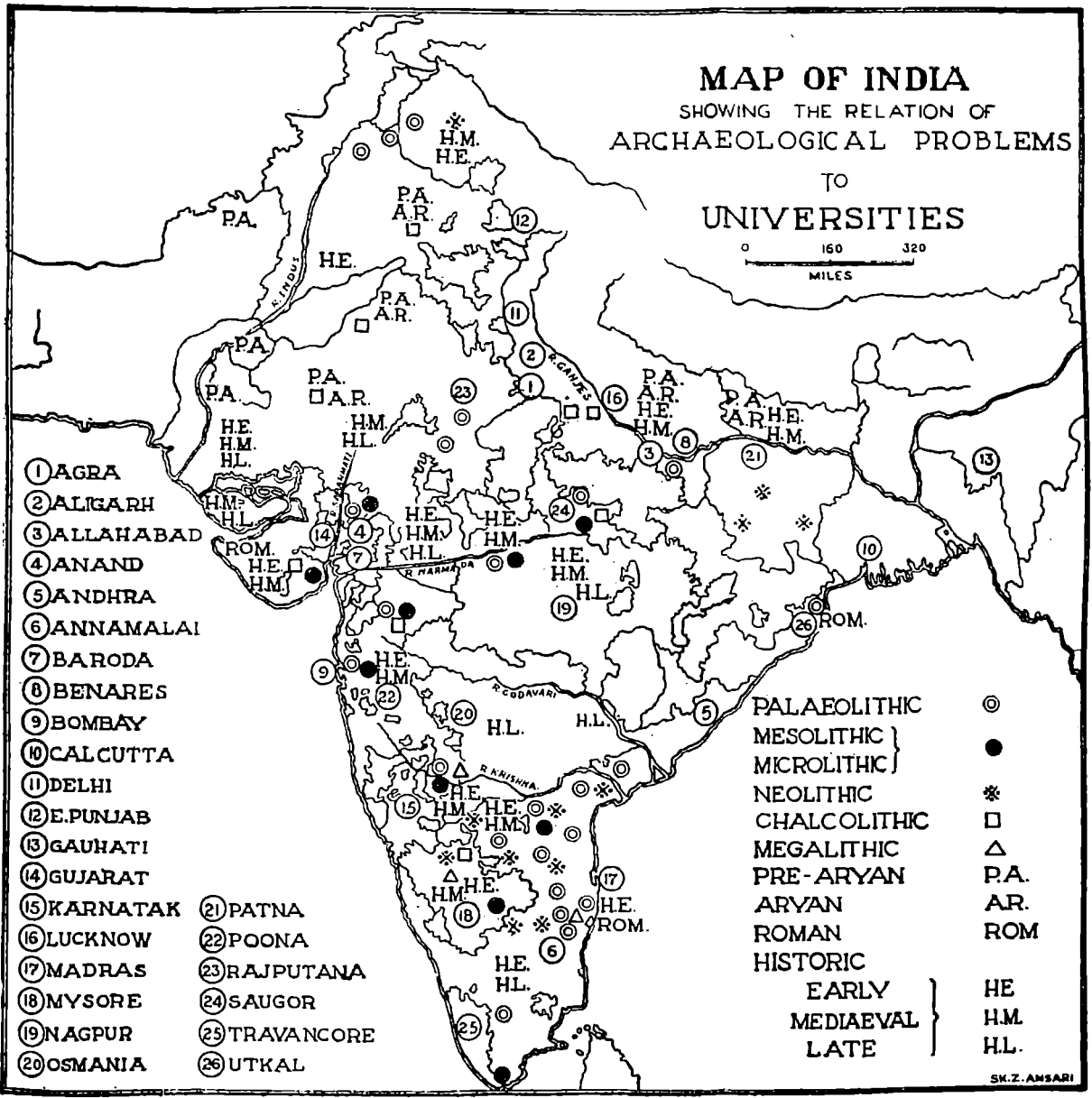
# MAP OF INDIA

SHOWING THE RELATION OF  
ARCHAEOLOGICAL PROBLEMS  
TO  
UNIVERSITIES



- ① AGRA
- ② ALIGARH
- ③ ALLAHABAD
- ④ ANAND
- ⑤ ANDHRA
- ⑥ ANNAMALAI
- ⑦ BARODA
- ⑧ BENARES
- ⑨ BOMBAY
- ⑩ CALCUTTA
- ⑪ DELHI
- ⑫ E.PUNJAB
- ⑬ GAUHATI
- ⑭ GUJARAT
- ⑮ KARNATAK
- ⑯ MYSORE
- ⑰ NAGPUR
- ⑱ OSMANIA
- ⑲ PATNA
- ⑳ POONA
- ㉑ RAJPUTANA
- ㉒ SAUGOR
- ㉓ TRAVANCORE
- ㉔ UTKAL

- PALAEOLITHIC ○
- MESOLITHIC } ●
- MICROLITHIC } \*
- NEOLITHIC \*
- CHALCOLITHIC □
- MEGALITHIC △
- PRE-ARYAN P.A.
- ARYAN A.R.
- ROMAN ROM
- HISTORIC
- EARLY } HE
- MEDIAEVAL } H.M.
- LATE } H.L.





rest should follow suit. The area is unusually large and rich. It is the Madhya Pradesh of the Aryans and teems with objects and mounds of pre-Maurya, Maurya, Kushana, Gupta, and later periods. We do not yet know of the existence of the Stone Age Cultures in the region. Possibly these are buried under the Ganga-Yamuna alluvium. But investigations may be instituted in the higher reaches of these and other rivers. Mirzapur, at the junction of U.P. and Bihar has already yielded a rich palæolithic industry. But even if the Stone Ages are left alone, there are plenty of later sites, a few of which if excavated, will give us not only an intimate picture of the material culture of ancient India, but will also help to solve many a vexed problem in Gupta chronology, at least, by providing stratigraphic data of the period or perhaps that of the Puranic dynasties.

### *XII. Madhya Pradesh*

The present Madhya Pradesh has only two universities, at Nagpur and Saugor. As Cunningham, Hiralal, Banerji and others have shown the State is unusually rich in Stone Age, Copper Age and historical finds—stupas, temples, images and inscriptions and coins. The Stone Age tools are from a number of places, of a variety of stone types and belong to various cultural stages. But no attempt has so far been made to connect these up stratigraphically into a sequence or to prepare an up-to-date list of their occurrence, which may be of help to future workers. This can, however, be easily started at little cost. One would also like to see a Vakataka town and regional histories of art and architecture, as well as recording of place-names from inscriptions would throw a new light on the obscure problems. There has been an impact of so many cultural forces—primitive and advanced—in this area that detailed, individual studies (monographs), dealing with relics and monuments of each dynasty are urgently needed.

### *XIII. Orissa*

Orissa is hitherto known by its famous temples. But this province on the eastern seaboard is still the home of many primitive tribes, who live in a sort of Stone Age Culture. It is also a much debated question whether this area is not responsible for the introduction through Assam and further east of a



shouldered type of stone axe, different from that found further south. The solution of these and other local as well as inter-provincial culture relations can be expedited if local scholars lend a helping hand in working them out. Listing of all types of monuments is a prime necessity. It may be followed later by small excavations. The University of Utkal can certainly attempt the former with the help of a trained scholar. The various monuments of the historical periods also deserve a much more detailed study. Excavations at Sisupulgadh have proved how very useful they are in showing up a traditionally old site in its true light and thus fixing the base for building up history forwards or backwards.

#### *XIV. Assam*

The Gauhati University, Assam, can embark upon a similar work, for the problems there are of a similar nature.

#### *XV. Bihar*

The Patna University has already ventured into this field, I understand, and have found valuable data for the Maurya period. And they propose to prepare a detailed list of surface monuments. This is bound to reveal a number of interesting and hitherto unknown types of monuments as well as promising sites which may be excavated. In this listing a systematic collection of pottery types should not be omitted.

#### *XVI. Bengal*

- Whenever conditions become normal, it is hoped that the Calcutta University will resume their fieldwork activities. Their anthropological Department was the first to enter the prehistoric field. And it deserves to be congratulated on continuing their work against great odds.

#### *XVII. Peninsular India*

We may now turn to the southern or peninsular universities. That of Andhra and Osmania lie in the midst of prolific Stone Age sites, besides that of the historical period. Andhra, in fact may well become a centre of Neolithic studies. The line of investigation that was begun by Dr. Wheeler and the Deccan College at Brahmagiri and Sangankallu respectively should indeed be

continued by these Universities either singly or in co-operation with the Southern Circle. There are many other problems of the historical period as well which might interest these universities. The Osmania University can also contribute materially to our knowledge of the Stone Age and later cultures if they co-operate with the Hyderabad Department of Archæology, which has already done so much in bringing to light the varied stores of antiquities within the State. Until the discovery of copper objects at Brahmagiri and at Jorwe (Sangamner District) this year, Kallur in Hyderabad State was the only site south of the Vindhya which possessed large copper objects, viz., swords. Further investigation into its full significance, the question whether these belong to a Copper or Chalcolithic culture and the places where the remains of this culture can be found, is long overdue. There are thus three sites with copper objects in the Deccan. And we should know what relation they bear with the Indus and Gangetic Copper cultures. Though the Jorwe copper axes look typologically similar to those from the Indus and Gangetic basins, its pottery, painted black on red, with highly carinated shoulders and flaring rims, bear no resemblance whatsoever, with the Chalcolithic ware of India or Western Asia. So an intensive search for a Copper age site in South India, especially to the South of the Narmada is needed and the Universities on this side should embark upon it, either in their own respective regions or at select places under joint expeditions.

Literally heaps of relics of the Early Stone Age and Later—megaliths, urn fields, rock and structural temples and probably Pallava and Chola town sites lie around the Universities of Madras and Annamalai and they may select any of these for regional and typological studies so as to give some idea of the life of the people under the Pallavas or the Cholas. The work of the late Dr. Minakshi on the Pallava sculpture and of Dr. Sivarammurti on Amaravati needs now to be supplemented by actual discovery and study of the objects. This alone will give us a vivid idea of the material culture prevailing in the various periods of history which are at present known by dynasties only, both in South and North India. Nothing but excavations can supply such an evidence.

The archæological problems facing the far south of the western coast—near Travancore, are not well-known to me. Probably some of the problems, for instance those of the raised beaches and their relation to the Late Stone Age Cultures, are similar to those present on the east coast. But we do know that this area was in close commercial contact with the Roman world. Coins and other objects proving this contact have already been found there. What we now need is two or three excavations which will further enlighten the Indo-Roman relations and their effect on the hinterland by supplying an assortment of objects.

### *XVIII. Karnatak*

Mysore and Karnatak Universities occupy one linguistic unit, viz., Kannada. The eastern parts of this unit are unusually rich in relics of several cultures—Palæolithic, Microlithic, Neolithic, Megalithic—as well as monuments of the Kadambas, Chalukyas, Rashtrakutas, Hoyasalas and others. Here is an area which if systematically explored would provide the much-needed sequence of prehistoric cultures and their relation to the historic. This in its turn might clear up a number of ethnic and linguistic questions. Writing of detailed monographs on the monuments of the dynasties just mentioned, on the lines of those of Gujarat and the Deccan is also a desideratum. Excepting the excavations conducted by the late Dr. Krishna and by Dr. Wheeler in Mysore none have since been undertaken in Northern Karnatak. It is, however, known to contain promising sites, at Herekal and Madhavpur, for instance. Many more might be lying unknown. The listing of sites now being done by the Kannada Research Institute, should be followed by excavations and in these the Karnatak and the Mysore Universities can play a leading part.

### *XIX. Gujarat*

There now remain the Universities of Bombay, Poona, Baroda, Anand<sup>1</sup>, and Gujarat. These cover the linguistic provinces of Maharashtra and Gujarat. Both present a varied geological and topographical features. The former is predominantly hilly, the latter a flat, alluvial plain. The climatic conditions and the earliest Stone Age Cultures, however, seem to be similar. But was it really so? Gujarat then—much later—came under a series of arid spells and become sandy. And a microlithic culture

<sup>1</sup>Anand has not yet had its own University.

existed almost all over Northern and Central Gujarat and Saurashtra. From where did it come? What was its relation to the long past palæolithic? The area is so vast that unless many more scholars come forward, from different institutions, these questions will long remain unsolved.

Important too is the listing of monuments and the survey of mounds. The work of Burgess and Cousens in Saurashtra has not been resumed for over 50 years now. The splendid work of the Baroda Archæological Department in this line has also been suspended owing to its merger with the Bombay State. So no new work is being done in Gujarat as well except for the little that is started by the Anand and Baroda Universities. Our small but systematic dig at Rangpur showed that its pottery was different from that of the Harappa ware. Similar pottery was found at a nearby site at Amreli in December last surveyed by the Baroda University. This suggests that many more sites of Rangpur Chalcolithic culture exist in Saurashtra. The State is also rich in Roman and imitation Roman ware and antiquities of the Ksatrapa and Gupta period. Recent work at Itwa near Junagadh brought to light structures of the Maurya-Ksatrapa period, thus suggesting that many more might be found, if explorations and excavations are undertaken. But what is much more important is the possibility of finding evidence which would afford links with the cultures of Western Asia, particularly of Sumer, Assyria, and Babylon. For Saurashtra was in contact with these and other countries, long before the Roman discovery of the monsoon or the Indo-Greek invasions. These and other problems should be tackled, even on a small scale, by the Universities of Gujarat.

#### XX. *W. Asia.*

In this context, it may be mentioned that it is necessary for a few Indian scholars to have training in Western Asian archæology and organize an Indian expedition to Iran, Iraq, and Turkey. Hitherto these countries, which are believed to have influenced Indian culture in prehistoric times and have indeed in the historic by the migration of several people, have been explored by European and American institutions. Of late Turks, Iraqis and Iranians are also participating in unravelling their country's history. But if we wish to establish or controvert the theory of

these Western Asian influences we should have some experts who not only know our data but also the data available from Western Asia.

### *XXI. Maharashtra*

The method of work followed at the Deccan College has already been referred to. The Bombay and Poona Universities have been supporting our schemes of fieldwork. One should like to see them become a regular feature of university activity.

So far reference has been made only to the regional and local aspects of work to be undertaken by the Universities. That is primarily due to economic reasons. But Indian Culture is made up of many diverse currents and archæology need not confine itself to any particular linguistic or provincial limits. It transcends all such natural or artificial limitations. When, therefore, a problem requires an inter-provincial or All-India attention, there is no reason why an university should restrict its activities to the locality in which it is situated. It may work in an adjacent or a distant province, co-operating with the Government or the University of the region. In fact, this is the next step in the development of Indian archæology that one expects when sufficient interest in the work is created.

### *XXII. Museums*

Today, I have mainly confined my remarks to the development of archæological study and fieldwork in our Universities. But I may say, without going into much detail, that our museums can and should also join in this activity. The work of museum-curators is so far restricted to ordinary collection and classification of antiquities. But now they should come forward and organize or participate in archæological expeditions. Moreover their museums should display the various exhibits in their full cultural environments. At present the exhibits are fossils, without any living interest. But what is so far practised in the Natural History Section, Prince of Wales Museum, Bombay, should also be attempted in the archæological museums. Dioramas, models or reconstructions of houses, city plans, and tombs, etc. should be made. And the material for this can best be had from stratified and well conducted excavations.

The teaching of archæology in our Universities may also be improved, if museum curators and members of the Archæological Department lecture in Universities at the post-graduate stage.

### *XXIII. Training Centres*

Earlier, at the outset, I spoke about the necessity of having three or four training centres, where new students can be trained and where all technological aspects of archæological work and problems can be studied first-hand. Our museums e.g. at Bombay, Madras, Delhi have been doing cleaning and preservation of antiquities and there is also the laboratory at Dehra Dun. But their activities should be very much enlarged, so as to include besides sponsoring or participation in archæological fieldwork and teaching to University students, analysis of soil-samples for archæological purposes, identification of animal bones and pollen analysis and making of casts and dioramas. If it is not possible for leading universities to found such centres immediately or in the near future, efforts must be made to enlist co-operation of several institutions, such as chemical laboratories, zoological and agricultural departments, etc. But sooner or later we must have such centres. For the needs of archæology are different and a lot of comparative material is necessary for proper identification of bones or study of soils. When such centres, where full significance of archæological objects can be brought out or their preservation assured, and students can be given training, then alone shall we be doing full justice to our archæological material. Specialist departments of the Government of India are widely separated from each other, and they are not well-equipped for effective integrated work and suffer from administrative routine. Hence it appears that such training centres instead of being started under the auspices of Government departments could be better developed at some of the leading universities, adequately financed by the State and the Central Governments in the interest of Archæology.

### *XXIV. Academic Life and Archæology*

There is one more aspect—the last—about purely academic institutions, and why archæology can grow up better

under a university. A university or a research institute has certain advantages over a Government Department. Since the staff of the former is required to guide pupils in post-graduate research, as well do research by themselves, it has necessarily to remain in contact with the latest studies and developments in the subject. A Government officer need not be so well informed and is generally not so, owing to manifold administrative duties. Moreover a teacher has help from his pupils. So instead of one field-worker there may be three or more, all doing research in various branches of the subject, and in different parts of the region. There is also less of red-tape and less establishment cost and above all a spirit of comradeship between the teacher and the taught. All these foster the true spirit of research.

#### *XXV. Summary*

What we, therefore, need is University Departments of Archæology. These should be manned by persons trained in field as well as table archæology, having a real aptitude for and independent experience of this kind of work. These university departments should not replace Government Departments. On the contrary, the former should serve as so many branches of one central organization, carrying on purely local or regional surveys or operating in Joint Expeditions as suits their needs and capacities.

India will have to enlist the sympathy and co-operation from the enlightened rich who would not expect archæology to give them gold, which vanishes, but who should care for a true and everlasting thirst for knowledge which is real gold. So far, the public which include some well-known and even cultured millionaires, has not paid much heed to what archæology has done and could do in unravelling India's past civilizations, and their place in world history

#### *XXVI. Archæology and Tradition.*

Unless there is an early development of archæological activity in which our universities and wealthy patrons of learning participate, the archæological departments, in spite of possessing some of the best talent in the country, cannot do

much. The major problems such as whether the Aryans are foreign or indigenous to India, whence and how did the Indus Civilization grow up, whether hundreds of kings and numerous dynasties mentioned in our Puranas are all mythical, will ever remain matters of speculation. Every year expeditions, foreign and native, are able to push back the antiquity of Iraq (Mesopotamia) or the ancient Sumer and bring to light some facts of history referred to by the Biblical, Hebrew, Assyrian and even Sumerian traditions. India is rich in historical traditions. How far they are true can be proved by archæological digging alone.

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