

**DIALOGUE**  
**QUARTERLY**

Volume-15 No. 1 July-September, 2013

**Subscription Rates :**

*For Individuals (in India)*

Single issue	Rs. 30.00
Annual	Rs. 100.00
For 3 years	Rs. 250.00

*For Institutions:*

Single Issue	Rs. 60.00 in India, Abroad US \$ 15
Annual	Rs. 200.00 in India, Abroad US \$ 50
For 3 years	Rs. 500.00 in India, Abroad US \$ 125

All cheques and Bank Drafts (Account Payee) are to be made in the name of "ASTHA BHARATI", Delhi.

*Advertisement Rates :*

Outside back-cover	Rs. 25, 000.00	Per issue
Inside Covers	Rs. 20, 000.00	„
Inner page coloured	Rs. 15, 000.00	„
Inner full page	Rs. 10, 000.00	„

Financial Assistance for publication received from Indian Council of Social Science Research.

# **DIALOGUE**

**QUARTERLY**

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*Printed and Published by*

**Shri Rajesh Bhargava,**  
Acting Secretary, Astha Bharati

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27/201 East End Apartments,  
Mayur Vihar, Phase-I Extension,  
Delhi-110096.

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*Printed at :* Nagri Printers, Naveen Shahdara, Delhi-32

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## Editorial Perspective

### **Culture of Work Recognition: the Problem lies with our Scholarship**

A hitherto unknown, twenty-six year old, clerk in the Swiss patent office published a famous paper in 1905. It pointed out that the whole idea of an ether as medium was unnecessary, provided one was willing to abandon the idea of absolute time. He propounded the fundamental postulate of the theory of relativity. As Hawking points out: “fundamental postulate of the theory of relativity, as it was called, was that the laws of science should be the same for all freely moving observers, no matter what their speed.” The unknown young person got immediate recognition for his work He was Albert Einstein.

Another person, about whom again Hawking writes, “had been born into a poor blacksmith’s family near London and left school at age thirteen to work as an errand boy and book binder in a bookshop. There over the years, he learned science by reading the books he was supposed to care for, and by performing simple and cheap experiments in his spare time. Eventually he obtained work as an assistant in the laboratory of the great chemist Sir Humphry Davy.” He was Faraday, who “would stay on for the remaining forty-five years of his life and, after Davy’s death, succeeded him. A man with little formal education, he “had trouble with mathematics and never learned much of it, so it was a struggle for him to conceive a theoretical picture of the odd electromagnetic phenomenon he observed in his laboratory. Nevertheless, he did.” One of his “greatest intellectual innovations was the idea of force fields.” (Ibid, pp. 113-14)

Boas, was one of the greatest anthropologists of America. He was geographer by his study and training, but got recognized as an anthropologist. Such examples may be multiplied, when instant

recognition came due to the originality of their work. The humble background, as in the case of Einstein and Faraday, and lack of training in the discipline, as in the case of Boas, did not come in the way of their success.

What about India? Here, in this country, there is no culture of work recognition, especially in the fields of humanities and social sciences. We have Indian scholars who follow the approved norms of academic writing; have done the original work, but their works are almost tabooed.. Dharam Pal, as for example, may be counted among the most original historians of India. He countered, by his original work, the myths created about India. The others continued to submit to the same forgetting the fact that submitting to others' myths about us is a sign of loss of history, and the resultant powerlessness. The understanding of Ram Swarup about communism, Christianity and Islam is superb. Sita Ram Goel, among Indian scholars, has done more work about Islam and Islamic history. Romila Thapar, rather than dialoguing and answering his queries, insultingly asked him to read his particular pamphlet. R.S. Sharma was unhappy with Ambedkar, as he endorsed traditional view on social mobility not fitting in his rigid ideological frame. Obviously, the ideology of those who dominate brings work recognition and not the work.

Reading the writings of many prominent Indian scholars, including 'eminent historians' (the term 'eminent' has become a joke after the reality about them has been exposed), one is irked by encountering unrelated thousand quotes. Of course, it is not difficult to understand their handicap. They are incapable of performing the original work, and unless original work is undertaken, freeing Indian scholarship from the culture of thousands unrelated (often contradictory also) quotes is not possible.

Our historians, being ignorant about their tradition and original source, Sanskrit, rely mostly on the writings of the biased and motivated Western historiographers. But in reality, it is their ideology-driven scholarship also which makes them averse to their culture and tradition. Overall effect is the narrowing the focus of the study; most Indian achievers hardly find their mention. Our science students hardly know about Kanada, Aryabhata, Brahmagupta, Varahamihira, what to say of



Bhrigu and others, whereas one of the topmost scientists of the world, Stephen Hawking in his book *A Brief History of Time* covering most sophisticated theme remembers Aristotle and Plato on ten and one pages respectively. He brings to reference and discussion Aristotle at least on 12 pages and Plato on 3. He also discusses God and Pope in his book. Obviously, this enlarges the range of discourse. At the same time, unlike Indian scholars, he is not cut-off from the soil.

Lastly, it needs mention that delinking Indian scholarly discourse from political and ideological strings, and end of collaborative character of scholarship is overdue. It is time now to shift the focus of discourse from persons to the works. Polemics must end now.

**–B.B. Kumar**



## North-East Scan

# The dynamics of division

**D. N. Bezboruah\***

Ever since the UPA government conceded in June the demand for a separate Telengana State to be carved out of Andhra Pradesh, the demands for separate States in Assam have become shriller by the day. During the days immediately after the announcement conceding the Telengana demand, the different groups demanding separate States in Assam resorted to a quick show of violence. This was probably no more than an attempt to demonstrate their ability to swing into action at very short notice as also the importance of the element of surprise that could catch flat-footed State governments napping. In any case, most of these agitating groups got instant assurances of talks both from the State government and the Centre that promptly defused the incipient violence. Among the agitating groups of this plural society of ours were the Bodos who had already been given a separate territory within Assam, the Karbis, the Dimasas, the Koch-Rajbongshis, the Rabhas and the Garos of Meghalaya demanding a separate State within Meghalaya. At the moment of writing this, the Centre had tentatively lined up talks with all the groups including the Joint Action Committee for Autonomous State on September 2, the All Koch-Rajbongshi Students Union (AKRSU) on September 3, the All Bodo Students Union (ABSU) on September 4 and the Bodo National Council (BNC) on September 5. At the same time, the Sanmilita Janagosthiya Sangram Parishad (SJSS) that is strongly opposed to any further division of Assam, has warned of a vigorous mass movement if the Centre fails to invite for talks the organizations opposed to the further division of Assam. Also opposed to any further division of Assam is the Asom Pradeshik Yogi

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\* The writer is the founding editor of the Sentinel, Guwahati and a former president of the Editor Guild of India.

Sanmilani (APYS), an organization representing the Nath-Yogi community of Assam, scattered all over the State. "Our community is worried because of the demand for separate States raised by different ethnic groups. In case separate States are carved out in future, the Nath-Yogis will be the most affected. We do not want any further division of Assam. Rather, we strongly advocate equitable development of all communities in the State," said Dhiren Nath, General Secretary of APYS. The Governor and the Chief Minister of Assam are both strongly opposed to any further division of the State. The Union Home Minister too has categorically stated that the Centre wants no further division of Assam. However, there is a certain *déjà vu* about such statements that people who have seen the repeated division of Assam even after similar pious promises from the Centre cannot be expected to forget.

One only has to take a look at what Assam was at the time of India's independence and what it is today. Since 1874, almost half-a-century after the Treaty of Yandaboo of 1826 that had brought to an end six centuries of Ahom rule, colonial Assam grew with an area of 255,000 sq. km. comprising the entire Northeast except the two princely States of Manipur and Tripura. The old Assam of the British days also included a part of what was with East Pakistan and what is part of Bangladesh today. The dynamics of division got under way soon after Independence. The Naga National Council (NNC) started an armed rebellion for an independent Nagaland in 1955. The Government of India separated the Naga-inhabited areas comprising the Naga Hills district of Assam and the Tuensang district of the North East Frontier Agency (NEFA) in 1957 and created the State of Nagaland in 1957. The new State then had a population of around 400,000 and a GDP of around Rs 1.7 million. In 1966, the Mizo National Front (MNF) revolted against India to achieve independence. This resulted in the creation of a Union Territory out of the Lushai Hill district of Assam in 1972. This became the State of Mizoram in 1978. This was not what Assam wanted, but this was the mandate of the Indian government. Meanwhile, the areas comprising present Arunachal Pradesh had been separated from Assam without any rebellion or popular demand. In 1954, the External Affairs Ministry took over the administration of this territory and named it the North East Frontier Agency (NEFA). The Home Ministry took

over the administration of NEFA in 1965. In 1972 it was made a Union Territory. Till then, though it was administered by the Home Ministry, it had remained under the Governor of Assam. With the creation of a Union Territory, the teaching of Assamese in the schools of NEFA came to an end even though Assamese was the lingua franca for the different tribes of NEFA. The year 1972 also saw the creation of Meghalaya as a separate state by combining the Khasi & Jaintia Hills district and the Garo Hills. This was in response to the demand for a hill State within Assam by the All Party Hill Leaders Conference (APHLC). New Delhi first created an autonomous State in 1970 and followed this up by the creation of Meghalaya in 1972 even though there had been no movement for a separate State. All that the APHLC had demanded was more autonomy on the Scottish pattern. As a consequence of the Centre's moves, Assam not only lost Shillong as its capital but also had its area reduced to just 78,438 sq. km.—to just 30.76 per cent or less than a third of its former size. And yet, after every division of Assam, New Delhi made pious statements about not allowing any further division of the State.

This attitude of actually being enthusiastic about the division of Assam is not surprising for the Assamese observer. After all, regardless of our having a plural society with diverse ethnic groups, there was this greater Assamese society that had been forged largely through the efforts of the great saint Sankaradeva and his disciples, and the *sattras* that they had created. Many of these ethnic groups were bound by the ties of an egalitarian variation of Hinduism that stressed community prayer and used music, dance and drama to put across our scriptures and epics to the common people. So we had a larger Assamese society that subsumed many ethnic groups that followed the unifying *naam-dharma* tradition of Sankaradeva and spoke the same language. At home, they followed their own customs and spoke their own language.

It was this unity in diversity that disturbed New Delhi. In order to rule over what New Delhi regarded as India's hinterland with its wealth of natural and mineral resources, it had to have a well-divided society totally bereft of the kind of wholesome leadership that a larger society generally throws up. It had to have the diversity of a plural society without any unifying factor. It wanted small, non-viable States that would perpetually have to run to Delhi with the begging bowl because

the Centre was determined to ensure that they never acquired the ability to create the surplus (through industry, agriculture and trade) needed to make any government viable. What New Delhi has been able to do to the Assam government by making it totally dependent on the Centre in every respect, it can do with far greater ease with smaller non-viable States. And who better suited to achieve this than the politician totally under the thumb of the ruling party or coalition?

We talk about Guwahati being the gateway to the entire Northeast. Literal implications apart, the metaphor itself is interesting. In other words, Guwahati, or our little Assam is the means of cerebral access to the entire Northeast. Much of the intellectual talent of the Northeast—whether one is talking of creative writers, journalists, teachers, engineers, doctors, architects etcetera of the region—comprises Assamese men and women. Many of them are smarting under the indignity of having to live in a non-viable State that has to be propped up by the Centre to survive even for a month. What many of the smaller ethnic groups are demanding are States that are going to be far less viable than Assam is today. New Delhi will keep saying that it will not permit any further division of Assam, but when the time comes, it will quietly agree to the creation of a few more States carved out of Assam as it did in the case of Nagaland, Mizoram and Meghalaya. This will trigger off demands for further division of the State. And if the Centre can agree to the creation of a Telengana out of Andhra Pradesh, by what logic will it reject similar demands in this part of the country? As a consequence, we shall probably end up having as many States as we have districts now. Each of these States will prevent the carriage of essential commodities to neighbouring States as the Nagas have been doing to the Manipuris and the Bodos to all the north-eastern States. We shall end up making conflict King. Its natural outcome of violence will finish off all the emerging States much faster than their political leaders even dreamt of. Is this what we are looking for? Certainly not the people, but the politicians who have no means of making a living without conflict and without doles from New Delhi would like nothing better. *Development* is a word that is just used for convenience. Its true semantic value for most politicians is money for so-called development that can be diverted to personal coffers. If petty politicians cannot carve out smaller States for themselves, they will just have to watch other politicians playing the development game. No wonder they want smaller States that they know will be non-viable from Day One.

# Meghalaya's economic growth since statehood

**Patricia Mukhim\***

Meghalaya which came into being in 1972 started out as an agrarian economy whose rural populace depended on a few agricultural crops for their livelihoods. Potato, cabbage, cauliflower and seasonal fruits such as pineapples, plums, pears, peaches etc sustained the rural economy. Livestock rearing too is a major occupation in villages. By the late 1970's Meghalaya suddenly became known for its coal-mining activities. Coal became a major revenue and foreign exchange earner since the Bangladesh became a major buyer of Meghalaya coal. Although coal was mined much earlier in coalfields around Laitryngew the scale was small and insignificant. Coal mining introduced an economic trajectory of its own. Carried out in the private sector with Government only as a supervisory tax collector earning a pittance from royalty, private mine owners became an affluent lot with almost no corporate social responsibility towards the areas surrounding the mines. In the absence of a mining policy there was also no responsibility imposed on mine owners about reclaiming abandoned mines and greening them for future use.

All coal mines are located in forest and catchment areas. How the mine owners were able to obtain clearances from the Union Ministry of Environment and Forests (MoEF) and the State Pollution Control Board or even the State Forest Department is a grey area that merits a serious study. Coal mining activities have resulted in large scale pollution of water sources and rivers. They have destroyed aquifers and the plight of those residing around the mining areas must be seen to be believed. They have to trudge several kilometers to get a pitcher of potable drinking water. That this wanton destruction of the natural environment has not even been discussed in the State Assembly shows how poor we are in terms of environmental consciousness. This degradation has resulted in tremendous climate change which has affected Meghalaya

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\* The writer is editor, The Shillong Times and an eminent social activist, journalist and member of National Security Advisory Board.

in recent times by way of unseasonal rains, rise in temperatures and the loss of biodiversity.

It is ironic that coal and limestone occur along the same belt in Jaintia Hills, East and West Khasi Hills and Garo Hills. Global cement giant, Lafarge is carrying out large scale mining of limestone for its captive cement plant at Chatak in Bangladesh. Whether this makes good economic sense is debatable. Both coal and limestone have been sold in their unprocessed forms at values much below what they would have fetched if value addition were to have been done. Limestone converted to clinker would fetch a much higher value at the international market. Sadly, our successive governments represented by an unthinking leadership have failed to realise the bad economics of selling raw products. In fact they have shown a complete lack of business sense in bartering away the mineral wealth from the State without creating an engine of progress whereby the value addition process would have created local employment apart from raising the value of the mineral.

Until the early eighties, Meghalaya had only one cement factory which had already been created by the erstwhile Government of Assam – the Mawmluh Cherra Cements Limited (MCCL). Production was not satisfactory as all public sector undertakings are. Efforts to pump in more funds and modernise the plant have met with little success. Then Jaintia Cements, a private sector enterprise came up. In the last decade several cement plants have come up in Jaintia Hills and Garo Hills and now there is a flood of cement companies wanting to come and set up shop in Meghalaya. Whether that economy is benefiting the local people or adding to the revenue generation of the State is the moot point. Many of these companies have a vested interest in setting up plants in Meghalaya. They have been promised tax holidays and several subsidies in capital investment, power, transportation etc under the North East Industrial Investment Promotion Policy (NEIIPP) 2007 which is a bounty showered by Government of India to promote outside investment in a region that has complained of lack of development.

The NEIIPP has however created its own detriment. Meghalaya today faces major environmental challenges which pose serious threats to human survival since sources of potable drinking water are destroyed and forests have turned into barren wasteland abandoned by coal mine owners who have not been brought into the corporate social responsibility net. Power generation has remained at the 182 KW range since the creation of the State whereas the consumption levels have gone up twenty-fold. Industries such as the ferro-alloy variety guzzle



power and charcoal. The intensive use of charcoal has resulted in a rampant felling of trees and rapid deforestation.

The economy of Meghalaya has shown a very haphazard growth since it has never been planned taking peoples' needs into consideration. The setting up of the Economic Development Council was supposed to usher in an intelligent economic planning set-up for Meghalaya. It was intended to provide a framework for focused and comprehensive economic growth and not merely of industrial growth. The MEDC if purposefully used would have resulted in proper planning, development and utilization of human resources depending upon the needs of the State. Education would not have mindlessly produced unskilled and unemployable graduates who become potential rebels.

Some sporadic growth has been witnessed in the area of horticulture in recent years. Innovative farming practices and the introduction of floriculture and horticulture in mission mode has generated some hope among farming communities in some districts. But the experiment has not been largely replicated. This has in fact created a certain amount of anxiety in other districts which are equally fertile but which have not been taken up by Government for experimental farming practices. Income generation from strawberry cultivation and large scale export of roses, anthurium and liliium and of exotic vegetables like broccoli, bell peppers and cherry tomatoes etc have added to the economy of a section of farmers. But there is still a long way to go to make farmers not just economically independent but flourishing in their trade.

Livestock rearing has improved but we are still a long way away from being self sufficient in eggs, fish, beef, pork and chicken. The rate of growth has been slow mainly because the concerned departments have not been geared to take up innovative programmes. The veterinary department has been engaged more with paper work than with ground level implementation of fresh ideas. The fisheries department for instance has everything worked out on paper but has shown no visible results. Hence, Meghalaya despite having the potentials for fishery particular in the low lying areas of Ri Bhoi district and Garo Hills has not succeeded to show any spectacular growth. Besides the lack of convergence between the State Agriculture Department and the Indian Council for Agricultural Research and Training (ICAR) which is based in Meghalaya has slowed the growth of agriculture and allied activities.

But to say that no economic growth has taken place would be a misnomer. The per capita income in Meghalaya today is in the range

of Rs 9000 which is fairly high when compared to states like Bihar. But this is only a figure and whether the income levels are fairly distributed is questionable. Recent statistics of the Government of Meghalaya show the population of those living below poverty line at 49%. If almost half of the population of the state lives below poverty the situation is grim enough to call for a re-survey. Surprisingly this does not seem to affect those at the helm of affairs. It was shocking to hear a responsible politician stating that unless we show such dismal figures we are not likely to get what we demand from the Planning Commission. If this is how states are to get money from Delhi, which is by fudging figures then there are serious anomalies both in the function of the Planning Commission and of the responses by the states. This requires a serious course correction.

There are some things that require urgent attention if we are to improve the economic status of Meghalaya. They include in the main: (a) A land use policy so that agricultural land is not diverted for industrial purposes. (b) A comprehensive economic policy that takes into account all sectors of the economy as opposed to an industrial policy which can be very myopic and could upset the other sectors since we tend to give undue importance to industries at this point through the North East Industrial Investment Promotion Policy (NEIIPP) 2007. This will result in lop-sided growth and exploitation of the State by outside investors who are attracted to the huge tax exemptions and subsidies. (c) Development must be planned at the lowest rung which is at the village level and livelihoods created in rural areas to reduce urban migration (d) Transportation bottlenecks have to be overcome through better connectivity (e) The region needs a market direction. For Meghalaya, Tripura and Assam, Bangladesh is the natural market but currently there are unresolved issues such as the Teesta Water Sharing one between India and Bangladesh which is hindering economic ties between the two, As a result the North East trade is stagnated.

To facilitate the above there is an urgency to do a manpower planning where education is imparted for specific sectors of the economy and not general education that has produced unemployable graduates by the thousands. We need more professional institutes within the state and this is already visible through the coming of the IIM, the NIFT and very soon the NIT. The Post Graduate College of Agriculture is also coming up at Barapani. Meghalaya needs to have its own medical college since each of the above institutions creates their own growth path.

Last but not least Meghalaya has a huge potential to become the information technology hub of the North East. The huge English speaking human resource that is leaving the state for occupation outside and for adding value elsewhere is a cause of concern. This trend needs to be reversed. This can happen with a little commitment and interest from the Government to invite major IT players to Shillong.

To sum up it would be correct to say that Meghalaya has no business to be poor. It has all what it takes to become a super power what with high grade uranium being available here. What we need is a committed political leadership with a focus on serving the state before serving themselves.

## Inner Line Demand: The Horseman Must Think Faster than the Horse

**Pradip Phanjoubam\***

The periodic revival of the agitation to demand the reintroduction of the Inner Line Permit system in Manipur needs a much more serious debate than has been accorded to it so far. On the one hand are the agitators, so totally presumptuous that their xenophobic views are shared by one and all, and what they demand is unconditionally for the good of state and its people, an authoritarian hysteria of street politicians so prevalent in today's Manipur. On the other hand are those whose opinion are dictated by what they think may please or annoy their Big Brother in New Delhi, therefore rejecting the proposal outright, a situation which can only heighten the tension and add fuel and complications to the already raging, tragic conflicts in the land.

A relook at the history of the Inner Line system, would inform any serious observers of the many unexpected consequences it has had on the Northeast, some desirable and some with extremely dangerous implications not just in domestic affairs but in international relations as well. But before I touch on these issues, let me first remind readers that there are other states where, although the Inner Line system is not in vogue, special

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\*Editor, Imphal Free Press, Imphal, Manipur.

and less anachronistic laws still manage to address many of the deep seated issues of identity and demographic balances that those demanding the introduction of the Inner Line system in Manipur have brought to the fore yet again. One of these states is Himachal Pradesh where I am currently based and where I have been for the last one year. No non-Himachali can acquire landed property in this state but all are welcome to come and work here at will. I cannot think of a better way of protecting the identity concerns of the small and economically weak communities as in this hill state, without missing out on the varieties of skills and entrepreneurial spirits fresh minds and experiences from the outside can bring into any closeted society, introducing them and preparing them for the competitive global world of today. Indeed, most of the advanced countries and progressive communities in the world have all been a product of variants of this approach.

Take Singapore for instance, which half a century ago would probably have been worse off than Northeast India in general, but now stands at a par, indeed ranks within the top circle of even the advanced countries of the West, in terms of per capita income and living standards of its citizens. Its foreign exchange reserve of nearly 260 billion USD is also 11th in the world, just behind gigantic India. When it became independent from Malaysia in 1965, this tiny island country did not even have enough drinking water and had to import this essential commodity. Singapore welcomes talent and skill from anywhere in the world, and if you have a unique skill and have a unique entrepreneurial idea how to make business of it, you will be welcomed to establish an enterprise in the country. However should you want to acquire landed assets or become its citizen, you cannot be seriously hopeful your dream would ever fructify. The other South East Asian countries are now emulating this model and one after the other all of them are beginning to qualify to be called the new Asian Tigers. Predictions are, Myanmar may become the latest entrant into this exclusive club of Asian Tigers, and if the country, long in the shadow of the military and xenophobic self exile, opens up enough and wisely, it is predicted that by 2030 its economy could more than quadruple from its current 45 billion USD to about 300 billion USD. The combined economy of the ASEAN today is worth 2 trillion USD in GDP, and who can say this is not a miracle, considering these countries were almost all in abject impoverishment at about the time of what may now be called the end of the colonisation era, at about the conclusion of the Second World War. This has not resulted out of any xenophobic approach to political

economy. Let this be a lesson for Manipur and the Northeast as a whole too. Let it also be remembered, this openness to inflow of skills and enterprise from outside was also what made the 20<sup>th</sup> Century, what is often acknowledged as the “American Century”. By the same logic, it is also often predicted the 21<sup>st</sup> Century is set to be the “Asian Century”.

This said, it would not be prudent to dismiss the concerns of small communities of the danger of being marginalised into total insignificance because of influx of alien populations and cultures into their lands at a rate and magnitude their societies cannot organically absorb. Population fluxes are a fact of the living world, not just of the humans, but what is noteworthy here is, when these demographic changes happen in manners that threaten the survival of host communities, social frictions and conflicts are only to be expected. Alibis to give credence to this concern of a demographic genocide are plenty. The cases of the Kok Borok in Tripura, the Lepcha in Sikkim, Chakma in the Chittagong Hill Tracts in Bangladesh, the Uighur in Xinjiang in China, the Tibetan in TAR China, the Native American in North America, the Saami in Europe, the list can go on. Many self-ordained high priests of democracy have been attempting to paint this grim picture of silent genocide as a natural and just dispensation of democratic ways, and therefore justice. Democracy by this definition becomes a tool of the privileged and powerful sections of the world population to obliterate concerns of survival of the marginalised. What is often ignored, sometimes out of intellectual short-sightedness, but more often than not with deliberate, insensitive and mala fide policy intents, is that democracy, not purely as a mechanical system but as a value to ensure universal justice based on equity, is also about protecting the interests of the weak, and magnifying the voices of the unheard. The brief and arrogant answer of the late Sheik Mujibur Rehman, the then President of Bangladesh, sometime not long after Bangladesh was liberated, to a plea by tribal peoples of the Chittagong Hill Tracts, (collectively known as the Jhuma in Bangladesh) is often quoted in the literature of indigenous people’s struggle as a grim reminder of this silent aggression. When a delegation of the political wing of the Shanti Bahini, who incidentally fought with the freedom fighters of Bangladesh in the liberation struggle of the country in 1971, approached him for a policy for protecting the Jhumas, they were told, on record, that the only viable solution is for them all to become Bengalis (quoted in Subir Bhaumik’s “Troubled Peripheries”). When the rebellion in these hills was not quelled, the Bangladesh government even had a stated policy of opening up

settlements of Bengali farmers in these hill tracts to outnumber the Jhumas, a policy which was executed without much of a whimper of protest from the world human rights workers' fraternity, but one which should have been condemned as genocide.

I would therefore say a system of demographic protection is needed for Manipur, for there is legitimacy in the apprehension of local communities here becoming marginalised in the future. This is especially so because democracy is in its practice, even if not in spirit, is a ruthless number game. In the struggle for state power, ultimately, when it comes to the crux, it will be numbers which will decide the issue, unless there are legislations which will ensure this transfer of power out of the hands of local communities by default, is not easy. Such a legislation should not only seek to ensure there are no such easy usurpations of state power in the name of unrestrained democracy, but also that no internationally accepted rights of other communities are hurt unjustly. As for instance, such a legislation could have provisions by which members of any non-indigenous community who have resided in the state for a generation, or may be two, would be entitled to be treated as locals. It would be heartless and unjust to insist somebody born in Manipur cannot be a bona fide citizen or domicile, just as it would also be unjust to say somebody married into a local woman or man, would still not to be accepted as legitimate domicile. Perhaps it would be wise on the part of the government to set up a committee to research the issue and how it is handled in other not strictly 'mainland' states of India, such as Himachal Pradesh and Uttaranchal, to see what best can be recommended and applied to the Manipur situation.

Even if it is conceded that demographic protection is needed for Manipur, this protection does not have to be by the antiquated Inner Line System, originally conceived as a means of administration by the colonial government of the then British India. A similar system of protection already exist in the hill districts of Manipur, what is being sought now is for such a provision to be extended into the valley districts as well. The question is, should it be a one-size-fit all approach to such a law, or whether it should be modelled, calibrated and designed contextually, accepting variations to suit the purpose and time in the best and just way possible. I would argue there is no option to the latter approach.

A brief history of the Inner Line system should illuminate. This system of segregated administration was introduced by the British India administration in 1873 by The Bengal Eastern Frontier Regulation which

was promulgated in that year. This regulation created an 'Inner Line' beyond which no British subject could cross without a pass. In the words of Alastair Lamb, who has done a two volume work on the McMohan Line among others, it was a device to create a buffer zone, as it were, between the international boundary and the regularly administered territory, a tract which marked the transition between the tribal hills and the Assamese plains. By limiting access from the south to this area it was hoped to minimise the risk of trouble with the tribes, Lamb notes.

Another authoritative historian of the period, Edward Gait, echoes the same argument saying the unrestricted intercourse which formerly existed between British subjects in Assam and the wild tribes living across the frontier frequently led to quarrels and, sometimes, to serious disturbances. In a nutshell, this line was meant to keep apart two other administrative categories the British administration came up with — the “administered” and the “un-administered” areas. The inner line was indeed roughly the dividing line between the two categories of British territories. In a later year, 1936 to be precise, another category of administrative segregation was also to be introduced – that of the “excluded” and “partially excluded” territory. This had essentially to do with representations given to local governance mechanisms to natives, but also echoed the same approach to colonial administration as the Inner Line system.

But it should be noted, all these writers and observers were prescient of trouble potential this line system could bring in the future, and indeed their apprehensions are becoming quite real now. They had predicted future misinterpretation of the Inner Line, deliberate or otherwise, and this is exactly what China is doing now. China now claims Arunachal Pradesh, and one of its arguments is that the Inner Line in actuality is the international boundary. British India administered its territories to a certain limit and beyond this limit, left the territory “un-administered” so claiming sovereignty over the “un-administered” region is unjust is the charge. This argument of course is double-edged, and it can equally be said China did not “administered” this and adjoining areas now within its own territory, and just as the British had done, left such territories as no-man lands.

Without digressing too much into the issue to the border dispute between India and China, one other point needs to be said on the Inner Line. The Bengal Eastern Frontier Regulation, 1873, was a law made by another ingenious British colonial administration’s innovation that

skirted the usual democratic law making process of putting a proposal for a new law (Bill) through the rigours of a legislative debate. In 1873, Assam was still a part of the Bengal province of British India and it was only in 1874 that Assam was separated from Bengal and made a chief commissioner's province. Gait mentions the making of this law that brought the Inner Line system into existence as such: 'The Inner Line Regulation was the first law promulgated in Assam under the authority conferred by the Statute 33 Vict., Chapter 3, which gives to the executive government of India a power of summary legislation for backward tracts. Such laws are called Regulations to distinguish them from Acts, or laws passed after discussion in a legislature.'

The arbitrary and colonial nature of the law that brought the Inner Line system into existence is clear from this. It also did not originally have the purpose of protecting the indigenous hill tribes of Assam, but it is happy serendipity that in recent times this too has become a fringe benefit. But just as we should not throw away the baby with the bathwater as the adage goes, we should also be careful not to retain or reintroduce the dirty bathwater with the baby.

There is also often the tendency of commentators to confuse between the Protected Area Permit, PAP, and the Inner Line system, as if the two can be justifiably measured by the same yardstick. This can easily amount to a subterfuge to dilute the issue and deprive it of its genuine gravity. Let it not be forgotten, the Inner Line issue is akin to a debate on citizenship acquisition and the PAP is like visa matters for tourists. Surely one cannot cancel out the other under any sane logic.

I am reminded a memorable line by David Bohm, a physicist of renown, in his book "On Creativity". He used the analogy of a horseman to illustrate what creativity entails. For the horseman, he said creativity is about thinking faster than the horse and therefore deciding and controlling where the horse should take him. If this creativity is absent, it would be the horse which decides where the horseman is taken. Manipur seems to be caught in such a bind with the horseman unable to think ahead of the horse. This being the case, it is either the horse taking the horseman along wherever it wants to take him, or else the horseman and the horse becoming locked in a bitter and paralysing conflicts. Seriously, the Manipur government must exercise its thinking faculty to see and predict issues that are in the making, or are likely to come up in the future, so that it is always ahead of the horse and thus ensure peace and justice. Such administrative and political visions, alas, have become such rare commodities in Manipur in the present times.



# India's Antiquity and the Colonial Ideological Offensive

**B.B. Kumar\***

Indian sages (rsis) from the earliest days of our history confronted the problems related to the search of truth. The Veda beautifully puts the eternal question: "Which god shall we adore with our offerings? (Kasmai devây havi]sâ vidhem; कस्मे देवाय हविषा विधेम)". The answer, it gives, is: "To the god of Truth we offer adorations. (Satyây devây havi]sâ vidhema; सत्याय देवाय हविषा विधेम)". But the search and expression of truth became difficult when it confronted the Colonial interest and Biblical dogma, as it is still the case, especially in India. In the changed situation, the untruth became beneficial during the colonial dominance of the world by the West. The knowledge became means for furthering the colonial cause (Burnard S. Cone (*Colonization and its Forms of Knowledge*)). It got linked up with power, as Edward Said rightly asserted. Knowledge got de-linked from truth. A dominant section of Western scholars had no scruple and resorted even to forgery for achieving their objectives. Norman Davis (*Europe: A History*, pp. 215, 229, 232) mentions about the forged documents propagating that Rome became Christian in 4<sup>th</sup> century. In reality, the spread of Christianity started in France during 6<sup>th</sup> century. Rome, France and Germany were not Christian in 4<sup>th</sup> century.

## **Encounter with the West**

India's encounter with the West produced two streams of scholars based on their diverse perceptions and attitudes towards truth and dogma. A section, like Voltaire, Will Durant, etc., had all appreciation, approval and praise for India. Voltaire considered India famous for its laws and sciences. He was conscious of the Europeans' pre-occupation

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and quest for fortune in India with amassing of 'immense fortune, and the resultant intensified struggles, plunder', etc. He said: "If the Indians had remained unknown to the Tartars and to us, they would have been the happiest people in the world. (*Voltaire; Collected works*, Vol. 38, pp. 83-84; 87.). The other section got immensely worried when they found that Indian historical antiquity crossed the Biblical time-frame of creation. It was natural for the latter section to be so, because for over a millennium and a half, Europe accepted the Mosaic chronology of Old Testament as the final statement of the human history. Thomas Maurice, bitterly upset over acceptance and appreciation of India's past, its philosophy, etc. wrote in 1812 about "the daring assumptions of certain skeptical French philosophers with respect to the Age of the world... argument principally founded on high assumptions of the Bramins... (which) have a direct tendency to overturn the Mosaic system, and, with it Christianity. (Thomas Maurice (1812), *Indian Antiquities*, Reprint, ; New Delhi, 1984)

### **Colonial Ideological offensive against India**

Earlier, external aggressions against India between 12-17<sup>th</sup> centuries brought political and military weaknesses; intellectual and spiritual links between various sections of the society and the regions within the country weakened. The country's linkages outside its borders and the India-centric cultural continuum got snapped. Over-exploitation by the British brought unprecedented poverty; illiteracy increased manifold. Traditional educational institutions got starved and died out. (Dharampal 1/34; V/34-38) The situation changed further. As Ram Swarup writes: "A new triumphant Europe was both our exploiter and also our teacher." Its products and creations were everywhere; its power and presence was felt in everything. It could not but impress our best people' "But a self-conscious imperialism was not satisfied with making merely psychological impression. It waged a regular ideological offensive in which Missionary Christianity was already engaged. A new colonial Missionary view emerged which taught superiority of Europe." (Ram Swarup, *Hinduism and Monotheistic Religions*, p. 58).

He further writes: "With some modifications here and there, this view became specially attractive in its Marxist garb. Marx said about same things, though he put it in a radical and even in anti-colonial and anti-religious language. Marxism attracted many intellectuals, for it seemed to explain every nook and corner of the world, every notch and fold of history. It attracted many young men because they could now be

radical without taking a part in the great national struggle of the day and even by opposing it. It was attractive to the self-alienated section, which was quite extensive, for it helped to justify their alienation from their country, people and religion.” (Ibid)

Colonial administration, as desired by Macaulay, took steps to bring changes in the system of Education with the objective of producing “a class of persons Indian in blood and colour but English in tastes, morals and in intellect.” The British Colonial authorities sponsored studies to mis-explain the society and culture, religion and history of India. Macaulay and his powerful precursors William Wilberforce and James Mill gave shape and direction to the colonial policies in India. For William Wilberforce and his numerous followers, known as saints or Clapham sect, it was not all to conceive that India has any virtue ... Rather, it was axiomatic for them that India was sunk in superstition, ignorance, misery and wretchedness. Of course, the use of these terms – superstition ignorance, misery, wretchedness, etc. – was done according to the prevailing British Christian terminology. For James Mill, the highest form of civilization was a successful military civilization, which India lacked, according to him.

The complete denunciation and rejection of Indian culture and civilization was, however, left to the powerful pen of James Mill. This he did in his monumental three-volume *History of British India*, first published in 1817. Thenceforth, Mill’s History became an essential reading and reference book for those entrusted with administering the British Indian Empire. From the time of its publication till recently, the History in fact provided the framework for the writing of most histories of India. For this reason, the impact of his judgement on India and its people should never be underestimated.” (Dharampal, *The Beautiful Tree: Indigenous Indian education in the Eighteenth Century*, New Delhi, 1983; p. 83)

How harmful the Mill’s *History of British India* was may be judged from the fact that even Max Muller criticized it severely. Max Muller wrote: “The book which I consider most mischievous, any which I hold most responsible for some of the greatest misfortunes that have happened in India, is Mill’s History of British India, even with the antidote against its poison, which is supplied by Professor Wilson’s notes”. He further wrote: “Mill’s history, no doubt, you all know, particularly the candidates for Indian Civil Service, who, I am sorry to say, are recommended to read it and are examined in it. Still, in order to substantiate my condemnation of the book, I shall have to give a few proofs:

“Mill in his estimate of Hindu character is chiefly guided by Dubois, a French Missionary, and by Orme and Buchanan, Tennant, and Ward, all of them neither very competent nor very un-prejudiced judges. Mill, however, picks out most unfavourable from their works, and omits the qualifications, which even these writers felt bound to give to their wholesale condemnation of the Hindus. He quotes as serious, for instance, what was said in joke, namely, that ‘a Brahman is an ant’s nest of lies and impostures, Next to the charge of untruthfulness, Mill upbraids the Hindus for what he calls their litigiousness.” (Max Muller, *India: What Can It Teach Us*; New Delhi, 1991 edition; pp. 28-29)

Next to Macaulay and William Wilberforce, it was Karl Marx, who followed Mill after few decades and who was the greatest supporter of British empire in India. The following statement of Marx makes his stand on imperialism clear. He wrote: “The question, therefore, is not whether the England had a right to conquer India, but whether we are to prefer India conquered by the Turk, by the Persian, by the Russian, to India conquered by the Briton”.

He further wrote: “England has to fulfil double Mission in India – one destructive and the other regenerating – the annihilation of old Asiatic society, and laying of the material foundations of Western society in Asia.”

Thus, in Marxist frame of things, British colonization was a positive step.

Although, initially Marx agreed that nature and intensity of exploitation during British Raj was such that it brought total and overwhelming breakdown in India. However, he changed his stand soon. Needless to say that in Marxist frame of things India was not to remain what it is even today. Marxist scholars in India continue to be most reactionary scholars today; they are the most ardent supporters of colonial myths.

### **Speculativeness and Euro-centrism**

Speculativeness and Euro-centrism were the dominant intellectual trend during the colonial period. The late 19<sup>th</sup> century dictum, ‘Except the blind forces of nature, nothing moves in this world which is not Greek in its origin’ enunciated by Maine (one time Law Member of the Governor General’s Council in India) was merely an intellectual and scholarly expression of the mounting Eurocentric character of this speculativeness. (Dharampal, *Complete Works, SIDH, Mussoorie, Vol; I, p. 12*) Alexander was a fringe phenomenon of Indian history. But he

dominates colonial history-writing. Vincent Smith, a British colonial functionary, an ICS, in his History of India has covered almost one-third of the book on his expedition to India.

### **Squeezing of Indian Chronology to save short Biblical Chronology**

Max Muller and William Jones both believed in the historicity of Biblical/Mosaic chronology and thus arbitrarily fixed chronology of Indian history in that framework. Max Muller in his letter to the Duke of Argyll wrote: "I look upon the creation given in the Genesis as simply historical." William Jones also believed in Biblical Genesis chronology, and to prove the correctness of the same, corroborated by the Brahmanical sources, resorted to narration of Biblical and Pauranic narratives as parallel happenings leading to distortions

According to Jones's Mosaic reading to Indian chronology, Adam and Manu were the same, placed in the beginning of kṛta yuga in 4004 BC; Noah and Manu II, were the same in 2948 BC; the Flood, and the fish, tortoise and boar *avatars* of Vishnu were placed in 2349 BC; Nimrod and Narasimha were identical, and placed in Tretâ Yuga in 2217 BC; Bel and Bali were the same, placed in Dwâpar Yuga in 2105 BC. For him, Raamah and King Rama in Dwâpar Yuga in 2028 BC were identical persons; the Buddha in Kali Yuga was placed in 1026 BC. (Thomas Trautman, *Aryans and British India*, New Delhi, 1997; pp. 58-59.) Contemporariness of Alexander and Chandragupta Maurya, rather than Chandragupta II, and mixing of Maurya and Gupta dynasties, as propounded by him, resulted in drastic shortening of Pauranic chronology.

Jones expressed his belief in Biblical chronology, thus: "either the first eleven chapters of Genesis ...are true or the whole fabric of our national religion is false, a conclusion with none of us, I trust, would wish to be drawn." (William Jones on the Gods of Greece, Italy and India, in *Asiatic Researches*, Vol. I; 1788; p. 225) Jones further wrote: "I am obliged of course to believe the sanctity of venerable books (of Genesis)". (William Jones, on the Chronology of Hindu, in *Asiatic Researches*, Vol. 2; 1790; p.111)

Jones further asserted: "I propose to lay before you a concise history of Indian chronology extracted from Sanskrit books, and as much disposed to reject Mosaic history, if it be proved erroneous, as to believe

it, if it be confirmed by sound reason from indubitable evidence.” (William Jones, *On the Chronology of Hindu, Asiatic Researches*, Vol. 2; p. 111.)

Thus, both Jones and Max Muller (1500-1200 BC; chronology of Sanskrit literature) put Indian chronology within the safe limits of Ussher’s Biblical, especially the Great Flood, chronology. Trautmann wrote “Jones in effect showed that Sanskrit literature was not enemy, but an ally of the Bible, supplying independent corroboration of Bible’s version of History. Jones’ Chronological researches did manage to calm the waters somewhat and effectively guaranteed that the new admiration for Hinduism would reinforce Christianity and would not work for its overthrow.” (TR Trautmann, *Aryans and British India*, London, 1997; p. 74)

Jones in his analysis was thoroughly Euro-centric. For him, Lord Rama became Dionysos, son of Cus, a Greek God of wine and worldly pleasure. (Jones, *On Gods of Greece Italy and India*, p. 221)

Max Muller, based on Biblical chronology given by Bishop Ussher, arbitrarily fixed the date of Rig Veda 1200 B.C. and gave 200 years for the Brahmanas. Of course, he was severally criticized for the same by M.A. Winternitz, T. Goldstrucker, H.H. Wilson and W.D. Whitney and Jacoby, and finally conceded to give an earlier date. He wrote: “If we now ask we can fix the dates of these periods, it is quite clear that we can not hope to fix a *terminum a qua*, whether the Vedic hymns were composed (in) 1000 or 2000 or 3000 B.C., no power on earth will ever determine.” Of course, later in life he accepted 3000 B.C. as the date of Rig Veda. The change in his attitude, of course, came after the discovery of two Babylonian ideographs, which had to be pronounced *Sindhu*. Winternitz was for 2000 or 2500 B.C. Eroneously, Romila Thapar still sticks to 1200 B.C.

They squeezed the Indian chronology to fit in their pre-conceived notions of time-frame. We find a rigid tendency among a dominant section of Indian historians and archaeologists also who accept their findings; re-enforce the colonial myths through their studies, and exhibit a dogmatic resistance against any attempt to revise the views on Aryan Aggression/Migration Theory’, Racist interpretation of Indian Society, Euro-centric bias in history writing and raising the status of discourse on various colonial myths, In cases the findings based on latest archaeological researches, including scientific dating and DNA

techniques based studies, vast data on 'Saraswati River Civilization', etc., are ignored. It is, perhaps, difficult for the Euro-American scholars to accept that Indian civilization may be older than that of Mesopotamia and to reverse the direction of migration of Indian population. But why the Indian scholars should do so? Anyway, let us accept the fact that the dominant section of Indian historians take the most illiberal view of ourselves and feed the students and public with wrong information.

Here, it needs mention that the discovery of Indus valley or the Harappan civilization gave time-depth (3100-1900 BC) to Indian chronology. More recent excavations have further deepened it and extended the limit to 7000 BC and possibly beyond. The decipherment of the Indus script by Natwar Jha proved that civilization to be Vedic (N.S. Rajaram, *A Hindu View of the World*, New Delhi, 2003; pp. 63-76). The latest discoveries have attested the fact that the Saraswati civilization, more extensive. It was the most prominent river of India during Vedic age. It was drying near Vinasan during Mahabharat war. Balaram conducted pilgrimage on the river banks of Saraswati.

### **Sponsored Scholarship**

Macaulay proposed to pay ten thousand pound (equivalent to Rupees one lakh; a heavy sum in 1854) to 32 year old Sanskrit scholar Frederick Max Muller for translating Rig Veda in such a manner that it would destroy the belief of the Hindus in the Vedic religion. (Navaratna S. Rajaram, *Aryan Invasion of India, the Myth and the Truth*, p. 27). Max Muller accepted the proposal for the sake of his religion and money. It needs mention that the same proposal was made earlier to Wilson, who declined, being away from India; Max Muller accepted, though he never came to India.

Boden Professorship of Sanskrit in the University of Oxford was established by a foundation created as per the Will of Colonel Boden. The special object of the same was to promote the *translation of Scriptures into Sanskrit*, so as to enable his countrymen to proceed in the conversion of the natives of India to the Christian religion. W.W. Wilson was the first to occupy the Boden chair; the second person was Sir Willium Monier, who wrote *Vedic Grammar* and a *Sanskrit Grammar*.

John Muir, a Sanskrit scholar, donated fund for a prize for the best refutation of the Hindu religious system. Wilson wrote a book, *The Religious and Philosophical Systems of the Hindus* in order to help candidates for that prize.

## Biased Scholarship

The Western Sanskritists, with few exceptions, deliberately misinterpreted Indian scriptures. Some opinions expressed by the Western Sanskritists, such as Max Muller, Monier Williams, Rudolf Roth, William Dwight Whitney, given below, will make the point clear (Kumar, B.B.; *Caste: The Colonial Theories*, New Delhi, 2004; pp. 15-23).

Max Muller did not hide his belief in proselytization. He wrote to Dr. Milman, Dean of St. Paul – “I have myself the strongest belief in the Growth of Christianity in India. There is no country so ripe for Christianity as India...” (Letter dated February 28, 1867.)

Max Muller wrote to his wife in 1866 about his translation of Rig Veda and its impact on Hindu religion: “...this edition of mine and the translation of the Veda, will hereafter tell to a great extent of the fate of India and on the growth of millions of souls in that country. It (Veda) is the root of their religion and to show them what the root is, I feel sure, is the only way of uprooting all that has sprung from it during the last three thousand years.”

Max Muller, in a letter to the Duke of Argyll, Under Secretary of State for India dated December 16, 1868 wrote: “The ancient religion of India is doomed and if Christianity does not step in, whose fault will it be?”

He further wrote to him:

“India had been conquered once, but India must be conquered again, and that second conquest should be a conquest by education.”

Max Muller was responsible for the usage of the term Aryan; he invented the myth of Aryan race. Julien Huxley writes about the same: “In 1848 the young German scholar Friederick Max Muller (1823-1900) settled on Oxford. ... About 1853 he introduced into English usage the unlucky term Aryan as applied to a large group of languages.” He further wrote: Moreover, Max Muller threw another apple of discord. *He introduced a proposition that is demonstrably false.* He spoke not only of a definite Aryan language and its descendants, but also of a corresponding ‘Aryan race’. The idea was rapidly taken up both in Germany and in England. (Emphasis added; Huxley; *Race in Europe*, Oxford Pamphlet No. 5; p. 9). His formulations, practically, gave birth to a new confident aggressive German nation. In the atmosphere of hostility between England and Germany, Max Muller, living in England felt threatened and dramatically switched from Aryan race to Aryan languages.

About the spread of Christianity replacing Buddhism, Max Muller wrote:



“History seems to teach us that the whole human race required gradual education before, in the fullness of time, it could be admitted to the truths of Christianity ... The religion of the Buddha has spread, far beyond the limits of the Aryan world, and, to our limited vision, it may seem to have retarded the advent of Christianity among a large portion of the human race. But in the sight of Him with whom a thousand years are but as one day, that religion, like the ancient religions of the world may have but served to prepare the way of Christ, by helping through its very errors to strengthen and to deepen the ineradicable yearning of the human heart after the truth of God.”

Max Muller also believed in the conversion of Parsis to Christianity. He wrote: “In spite of all this, many people most competent to judge, look forward with confidence to the conversion of the Parsis, it is because, in most essential points, they have already, though unconsciously, approached as near as possible, to the pure doctrine of Christianity. ...”

Dr. Spiegel once expressed the view that, perhaps, the Biblical account of creation of the universe had been borrowed from the Iranian sources. Such just and innocent remark was too much for Max Muller. The poor Spiegel had to bear the virulent attack of the bigot, who wrote: “A writer like Dr. Spiegel should know that he can expect no mercy; nay, he should himself wish for no mercy, but invite the heaviest artillery against the floating battery which he has launched in the troubled waters of Biblical criticism.” Obviously Max Muller was troubled when the holy Bible was touched, but thought it to be his birth right to make peaceful and sacred waters of the Vedas, Tripitakas and Zend-Avesta dirty. About Vedas, he wrote: “A large number of the Vedic hymns are childish in the extreme, low common-place.” Thus for Max Muller, any similarity with Christianity meant the borrowing from the former and not otherwise.

Winternitz, the author of the History of the Indian Literature was equally biased in favour of the Semetic theology. He wrote: “It is true, the authors of these hymns rise but extremely seldom to the exalted flights and deep fervor of, say, the religious poetry of the Hebrews.”

Sir Monier Williams, author of the Sanskrit Grammar, was well-known Sanskrit scholar. The following statements reveal his motives and biases:

“Brahmanism, therefore, must die out, in point of fact, false ideas on the ordinary scientific subjects are so mixed up with its doctrines that the commonest education, the simplest lessons in geography without the aid of Christianity must inevitably in the end sap its foundations.”

He further wrote: “When the walls of the mighty fortress of Brahmanism are encircled, undermined, and finally stormed by the soldiers of the Cross, the victory of Christianity must be signal and complete.”

Rudolf Roth and Otto Bothlingk were the joint editors of the *St. Petersburg Sanskrit German Dictionary*. Roth was boastful of his ability to interpret the hymns of Vedas and wrote that with the aid of the ‘German Science of Comparative Philology, he could interpret much better than Yask, the humns of the Veda. William Dwight Whitney, a Sanskrit scholar of American origin, whose *Sanskrit Grammar* was published in 1879, was also of the same view that “principles of the German school are the only ones which can ever guide us to a true understanding of the Veda.” Obviously, these scholars were boastful of their scholarship and that of the German School of Philology. The emptiness of their claims were, however, exposed by Professor Theodore Goldstucker, who severely criticized the shortcomings of the *Sanskrit German Dictionary*. A. Weber was angry at Goldstucker for his criticism and used abusive and extremely undignified language against him and thereby forced the latter to expose the weaknesses of the ‘Saturnalia of Sanskrit Philology’, such as Bothlingk, Roth, Weber and Kuhn. He wrote:

“It will of course be my duty to show, at the earliest opportunity, that Dr. Bothlingk is incapable of understanding even easy rules of Panini, much less those of Katyayana and still less capable of making use of them in the understanding of the classical texts. The errors in his department of the dictionary are so numerous ... that it will fill every serious Sanskritist with dismay, when he calculates the mischievous influence which they must exercise on the study of Sanskrit Philology.”

He further wrote about the shortcomings of the dictionary (Worterbuch): “Questions, which, in my mind, ought to be decided with very utmost circumspection, and which could not be decided without every laborious research have been trifled with in his Worterbuch in the most unwarranted manner.”

Professor Goldstucker did not like the mischievous act of mutilation of sacred texts in Print, the propagandist scholarship of western Sanskrit scholars and the unjustified attack on Vedic tradition. He wrote:

“When I see that the most-distinguished and the most learned Hindu scholars and divines – the most valuable and some times the only source of all our knowledge of ancient India are scorned in theory, mutilated in print, and as a consequences, set aside in the interpretation

of the Vaidic texts; ... When a clique of Sanskritists of this description vapours about giving us the sense of the Veda as it existed at the commencement of the Hindu antiquity; — when I consider that this method studying Sanskrit philology is pursued by those whose words apparently derive weight and influence from the professional position they hold; ... then I hold that it would be want of courage and a dereliction of duty, if I did not make a stand against these Saturnalia of Sanskrit philology.”

It is clear from the above that the Western scholars and Sanskritists were not only biased, but had their agenda driven by motives of running down the ancient Indian texts and promoting Christianity and its spread. They also lacked sound knowledge of Sanskrit. Unfortunately Indian scholar, like Romila Thapar; having no access to Sanskrit, rely heavily on their writings.

### **Obstinate Support of Mosaic Chronology challenging Scientific Discoveries**

Supporters of Mosaic chronology remained obstinate in spite of geology, palaeo-biology, astrophysics, paleontology revealing the contrary facts. The stiffening hold of the Biblical dogma remained great in Europe for centuries and wherever it was tried to loosen it, the price had to be paid. Galileo paid the price; he had been convicted of heresy. Newton compromised with his ideas. Stephen Hawking has written in his latest book:

“...the Bible tells the story of Joshua praying for the sun and moon to stop in their trajectories so he would have extra daylight to finish fighting the Amorites in Canaan. According to the book of Joshua, the sun stood still for about a day. Today we know that that would have meant that the earth stopped rotating. If the earth stopped, according to Newton’s laws anything not tied down would have remained in motion at the earth’s original speed (1,100 miles per hour at the equator) – a high price to pay for a delayed sunset. None of this bothered Newton himself, for as we’ve said, Newton believed that God could and did intervene in the workings of the universe.” ((Stephen Hawking & Leonard Mlodinov, *The Grand Design* (2011), p. 112):

As stated earlier, based on the Old Testament, Bishop, Ussher, primate of all Ireland from 1625 to 1656, placed the origin of the world precisely at nine in the morning on October 27, 4004 B.C. Challenges to that chronology started in the West after the growth of the discipline of geology. However, the nascent discipline was incapable

of freeing itself from the tutelage of scriptural authority. James Hutton, founder of the Vulcanist school, published *Theory of the Earth* (1788), which, unlike Robert Jameson of the Neptunist school delinked the discourse with the creation myths. Buffon, in his *Epochs of Nature* (1778), in deference to the scriptural account, deliberately restrained himself from longer estimate and limited the age of earth to a minimum of 75,000 years. However, even, up to the publication of Lamark's *Hydrogeology* (1802), the short chronology remained almost unchallenged, the defenders of Biblical story still had upper hand; geology maintained extraordinarily conservative outlook. To salvage the Biblical chronology, the defenders, under Georges Cuvier (1811) and William Buckland (1823), brought in the doctrine of "catastrophism" – the evidence of not one "flood" but of dozens, the series of miraculous destructions and creations. The publication of Charles Lyell's *Principles of Geology* (1830), however, marked the turning point. Despite his remaining highly conservative, Lyell influenced Darwin and Spencer both in their formative years.

### **West also accepts India's antiquity and achievements**

India's range of perception of time and space was very vast. *Sankalpa* is a part of Hindu worship (*Puja*), during which he locates himself in space and time; moves from greater to small parameters of the same and ultimately pronounces his name, *varna* (Using Sharma, Varma, Gupta and Das to denote the varna) and *gotra*. He mentions the day, *tithi* (date of the lunar month), month, year in Vikram era in first stage of *Kaliyuga*, Vaivaswat Manu's period during *Shrishwet Varah Kalpa* during second part of Brahma's day (*Adya, Shri Bramano dvitiya parardhe ShishvetaVarah kalpeVaivasvat manvantare* to locate the time of his worship. For his location, he mentions the name of the region (*kshetre*) and in the "country of Aryavarta in Bharatkhande in Bharatvarsha in Jambudvipa on the earth (*bhurloke Jambudvipe Bh"aratvar]se Bharatkhande 'Ary'avartaikde«s"antargate*). The *Mantra*, he utters is "अद्य श्रीब्रह्मणो द्वितिय परार्धे श्रीश्वेतवाराहकल्पे, वैवस्वतमन्न्तरे, कलियुगे, कलिप्रथमचरणे, भूर्लोकं, जम्बुद्वीपे, भारतवर्षे, भरतखण्डे, आर्यावर्तकदेशान्तर्गते, ... क्षेत्रे, ... विक्रमाब्दे, ... सम्वत्सरे मासानम्, मासोत्तमेमासे ... मासे, ... पक्षे ... तिथौ ... वर्षे ... गोत्रोत्पन्नः... नामोहम्" Anyway, As short chronology was linked up to the European belief system, not only the Western Missionary scholars, but even others continued to criticize Indian antiquity and squeeze its chronology. James Mill's remark (*The History of British India*), in this case, is worth quoting:

“Rude nations seem a peculiar gratification from pretensions to remote antiquity. As a boastful and turgid vanity distinguishes remarkably the oriental nations, they have in most instances carried their claims extravagantly high”

As expected Indian Marxist historian, Romila Thapar initiates her discourse in her *Time as a metaphor of History: Early India* by approvingly quoting the above statement. The range of time reckoning is vast in India, which Mill finds difficult to conceive. Time taken in twinkling of eye, called *nime]s*, is the unit. The smallest unit, called *a]nu*, is 1/3600 part of a *nime]s*. The entire debate of linear and cyclic time is ill-conceived. After all, the day, months, seasons and the year continue to repeat; the same happen in the case of Yugas and the cycle of creation and destruction (Brahma’s day). Romila Thapar shares the perceptual poverty of the western scholars, which comes in the way of recognizing the time depth of Indian history, and thereby, dividing it into historical and mythological periods. Here it needs mention that all the Western scholars, as given below, unlike James Mill and Romila Thapar, were not so biased and dogmatic.

Dr. Arthur Holmes, Regius Professor of Geology at the University of Edinburgh, in his famous paper on the “Age of the Universe” appreciated “India’s generous concept of past”. He wrote: “Long before it became a scientific aspiration to estimate the age of the earth, many elaborate systems of the world chronology had been devised by the sages of the antiquity. The most remarkable of these occult time scales is that of the ancient Hindus, whose astonishing concept of the earth’s duration has been traces back to the Manusmriti, a sacred book that was probably completed in its present form about 159-120 B.C. According to this venerable compilation of law and wisdom, the whole past and future of the world is put a “day” in the eternal life of Brahma – a day of 4,320 million years, throughout of which finite things are being created out of the infinite. The day of Brahma is divided into 14 great cycles, each lasting 308,448,000 years, together with a final “twilight” period of 1,728,000 years, at the close of which, when Brahma’s night begins, the finite is destined to merge into the Infinite. At present the world is in the seventh of these cycles and, according to the Hindu calendar recorded in the Visnu Purâna, it is now (A.D. 1974) 1,972,949,048 years since the earth came into existence. By a curious coincidence this characteristically precise assessment is of the same order as the 2,000 million years which has recently been the most widely favoured estimate for the age of the expanding universe.”

Dr. Holmes concludes: “If geological concepts had developed in a community endowed in advance with so generous a concept of the past, much confusion and bitter controversy might have been avoided. But in Western Europe, the age of the earth had long been identified – to within a few days – with a few thousand years of mankind’s history as recorded in the narratives of the Old Testament. On the interpretation of Archbishop Ussher (1581-1656) the creation of the world took place in the year 4004 B.C., and pioneer geologists whose observation suggested that the Mosaic traditions might not be scientifically reliable were branded as dangerous heretics.” (quoted by Professor Raghu Vira(1) (Prof. Dr. Raghu Vira, *India and Asia: A cultural Sympathy*; International Academy of Indian Culture, New Delhi, 1978; p. 275)

The others, who were not blind to the India’s intellectual achievements, included Dick Teresi. He writes: “Twenty-four centuries before Isaac Newton, the Hindu Rig-Veda asserted that gravitation held the Universe together.... The Sanskrit speaking Aryans subscribed to the idea of a spherical earth in an era when Greeks believed in a flat one. The Indians of fifth century A.D. somehow calculated the age of earth as 4.3 billion years; scientists in nineteenth century England were convinced it was 100 million years; the modern estimate is 4.6 billion years. (Dick Teresi, *The Lost Discoveries: The Ancient Roots of Modern Science – from the Babylonians to the Maya*; New York, 2002, pp. 7-8)

He further writes: “The concept of infinite numbers was grasped by Indian thinkers in 6<sup>th</sup> century B.C. and by Alhazen in 10<sup>th</sup> century A.D... It entered Europe nearly a thousand years later, when the nineteenth century German mathematician George Cantor refined and categorized infinite sets. (Ibid, p. 22)

Oppenheimer, the well-known scientist had following remarks about Insight of the Indians: “The general notions about human understanding ... which are illustrated by discoveries in atomic physics are not in the nature of things wholly unfamiliar, wholly unheard of, or new. Even in our own culture they have a history, and in Buddhism and Hindu thought a more considerable and central place. *What we shall find* (in modern physics) *is an exemplification, an encouragement, and a refinement of old wisdom.* Oppenheimer, J. Robert, *Science and the Common Understanding*; Oxford University Press, New York, 1954; pp. 8-9; emphasis added.

In this connection, it needs mention that the Europeans did not have the terms for higher numerals, which the Indians had. The Indians, contrary to the Greeks and Romans, had mathematical knowledge of a higher order even during the remote past. They not only discovered

zero, developed decimal system, but had the highest terminology of the numerals. The *Yajurveda Samhita* has names of the numerals even up to thirteen digits, namely: eka (1), dasa (10), sahasra (1000), ayuta (10000), nuyuta (100000), prayuta (1000000), arbuda (10000000), nyarbuda (100000000), samudra (1000000000), Madhya (10000000000), anta (100000000000), parardha (1000000000000). The Indians, during the classical period, developed terminology to express numbers even as large as of twenty-five and fifty-four digits. On the other hand the highest numerals expressed by the Greeks and Romans used to be myriad (10000) and mille (1000) respectively. The benefits of the Indian decimal place-value notation and naming of higher numerals may be realized only if we observe the difficulty in expressing the same in English. Stephen Hawking, in *A Brief History of Time* (Bantam Books; 1989) uses clumsy expressions even for the shorter numerals. for which Indians had the terms. Some of the same are given below:

“...the number of visible stars in our galaxy, which totals about *a thousand million* in our galaxy alone” (Ibid, p. 100).

“...the earth is a medium-sized planet orbiting around an average star in the outer suburbs of an ordinary spiral galaxy, which is itself only one of about *a million million* galaxies in the observable universe. (Ibid, p. 133)

“...it would take about *a million million million million million million million million million million* years (1 with sixtysix zeros after it) to evaporate completely. This is much longer than the age of the universe, which is about *ten or twenty thousand million years* (one or two with ten zeros). (Ibid, p. 114)

“...it will take about *a thousand million million million million* years for the earth to run into the sun ... (Ibid, p.95)

Unfortunately, the lack of original research and scholarship in India compounded by equal ignorance of ancient languages like Prakrit, Sanskrit etc, has made our historians, dependent on the biased and motivated historiography of the west. Our archaeological studies, and projects which can shed light on our past, is also influenced, to a large extent, by the western scholars/archaeologists, and it is even alleged, hijacked by them. The system, unfortunately does not nourish, encourage and sustain original work/research in our languages and history. Real scholarship has become victim of contentiousness, bias and prejudice. The problem also lies due to the fact that Indian scholarship in humanities and social sciences continue to be colonial by its training, inertia and collaborative nature. It makes them incapable to visualise positives of Indian wisdom and scholarship.

# No Dark Age in Indian History: Archaeological Evidence

**B.R. Mani\***

Indian history has remained enigmatic to many historians who have put certain time span under 'dark age'. This has been mainly due to non-availability of archaeological, epigraphic or numismatic data or confusion of chronology and genealogy in literary accounts. During the last two decades a paradigm shift has taken place in understanding the missing links of Indian history which is mainly because of the new archaeological material recovered throughout the country through excavations and discoveries. Although the period after the downfall of the Kushans and the rise of Guptas or the period at the beginning of the Harappan age or the period of the Vedic era have also been considered as dark age, but the most prominent dark age has been considered to be the period after the late Harappans (c. 16<sup>th</sup> century BCE) to the time of Buddha and Mahavira (c. 6<sup>th</sup> century BCE) which has a time span of no less than one thousand years. It has been called dark age as the *Pauranik* genealogy of dynasties have mainly confusing informations, probably due to copying of manuscripts at different points of time and also due to non-availability of archaeological data till recent past from the sites.

Recent archaeological investigations suggest that in early years during the above period (c. 16<sup>th</sup> century BCE to c. 6<sup>th</sup> century BCE), the iron technology was evolved which revolutionized the material culture distinctly visible in the levels of the later half of the second millennium BCE in the northern South Asia where 16 Great States emerged. The date of the beginning of iron smelting in India on the basis of the evidence from Gufkral, Dadupur, Malhar, Raja Nal Ka Tila and also from sites of Ahar culture may well be placed as early as 16<sup>th</sup>

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century BCE and by about the early decades of the 13<sup>th</sup> century BCE iron smelting was done on a bigger scale. This is the period when Painted Grey Ware and Northern Black Polished Ware emerged as main ceramics in the northern India, again suggesting a technological change in development and urban growth. In peninsular India archaeological data from excavations at Hallur (Karnataka), Adichannallur (Tamil Nadu) suggest the beginning of iron age around 1000 BCE. The evidence from Komaranhalli (Karnataka) show that smiths produced large iron objects, implying that they had already been experimenting the technology for centuries. The literary evidence throughout the world including Sanskrit Vedic literature, Chinese literature, Avestan *gathas* and Hebrew Bible indicate that everywhere iron age followed the bronze age. The same happened in India also and before the advent of iron technology every part of the country had undergone into Chalcolithic and copper-bronze age phase including the Harappan phase in Saraswati, Indus, Baluchistan upto Gujarat and Maharashtra in the southern area of its extent. This is evident in the spread of Chalcolithic cultures in Central india, Gujarat and Deccan at Ahar, Navdatoli, Kayatha, Prabhas culture, Rangpur, Banas Cultures, Malwa cultures, Savalda, Daimabad, Prakash, Nevasa Inamgaon etc; in Ganga valley and Vindhyan region at Ambkhedi, Bargaon, Ochre Colour Pottery culture related sites, sites such as Chirand, Lahuradeva, Narhan, Imlidih, Jhusi, Sonpur, Pandu Rajar Dhibi, Mahisdal, Koldihwa, Kakoria etc and in south at Maski, Piklihal, Brahmagiri, Sanganakallu, Tekkalakotta, Hallur, T. Narsipur having Chalcolithic affinity in ceramics.

With the passage of time chalcolithic cultures merged into iron age cultures as visible in late phase of Malwa and Jorwe cultures with representations at Nagda, Eran, Chichli and Ahar in the latter half of the second millennium BCE. Megalithic sites in central India, Deccan and south also represent the iron age culture while Painted Grey Ware and Northern Black Polished Ware are the predominant ceramics of iron age whose evolution around 12<sup>th</sup> century BCE has been suggested on a large number of evidence from radiometric dates from many sites. The PGW levels at Noh and Atranjikhhera had already established the early beginning of the culture in 11<sup>th</sup> and 12<sup>th</sup> century BCE and after excavations at Ayodhya followed by evidence from many sites in middle Ganga Valley the same origin has been ascribed to the NBP Ware culture which has common shapes and overlaps at many sites with PGW.

The early association of NBPW was suggested by Marshall after his excavations at Bhita (800 BCE) and later around 500 BCE after his

excavations at Taxila. Many early historical sites were excavated afterwards in the middle and latter half of the 20<sup>th</sup> century and some of them yielded samples which were dated and others where samples were not collected, the NBPW levels were dated on relative dating and comparative studies. In this process for nearly half a century a generally accepted date of NBPW was considered by most of the scholars to be about 600 BCE to 200 BCE. However, the dates from Mathura, Noh, Sohgaure, Jhusi and Korkai etc. still suggested dates of NBPW before 600 BCE.

- |                  |      |                         |
|------------------|------|-------------------------|
| 1. Mathura       | (i)  | 730 BCE (730 ± 150 BCE) |
|                  | (ii) | 660 BCE (660 ± 100 BCE) |
| 2. Noh           |      | 685 BCE (685 ± 115 BCE) |
| 3. Sohgaure      | (i)  | 756 BCE                 |
|                  | (ii) | 692 BCE                 |
| 4. Jhusi         |      | 680 BCE (680 ± 90 BCE)  |
| 5. Korkai (T.N.) |      | 805 BCE (755 ± 95 BCE)  |

The excavations at Ayodhya (2002-03) provided definite and elaborate evidence of early introduction and continuity of NBPW which could be placed at least 500 years earlier than what was considered. The consistent 7 dates of NBPW are significant which provide a time span of about 1250 to 200 BCE.

Trench	Depth	Ayodhya	
		Dates in BP	Calibrated Dates (in BC)
<b>J3</b>	(i) 620-622 cm	2660 ± 90 (710 BC)	900-790 BC
	(ii) 622-625 cm	2270 ± 80 (320 BC)	400-200 BC
	(iii) 680 cm	2480 ± 70 (530 BC)	790-410 BC
	(iv) 680 cm	2730 ± 80 (780 BC)	970-810 BC
<b>G7</b>	(i) 9.15 cm	2830 ± 100 (880 BC)	1190-840 BC
	(ii) 11.0 cm	2860 ± 100 (910 BC)	1210-900 BC
	(iii) 11.53	3200 ± 130 (1250 BC)	1680-1320 BC

Following the Ayodhya evidence, at least seven more sites provided early dates of NBPW levels in the beginning of the present century. The early dates from such levels are mentioned below :

- |    |         |      |                        |
|----|---------|------|------------------------|
| 1. | Jhusi   | (i)  | 799 BCE (2590 ± 90 BP) |
|    |         | (ii) | 763 BCE (2500 ± 90 BP) |
| 2. | Charada |      | 764 BCE                |

- |    |                      |       |  |
|----|----------------------|-------|--|
| 3. | Agiabir              | (i)   | 696 BCE  |
|    |                      | (ii)  | 797 BCE  |
|    |                      | (iii) | 889 BCE  |
| 4. | Juafardih            | (i)   | 1259 BCE (3010 ± 90 BP)                          |
|    |                      | (ii)  | 1562 BCE (3280 ± 90 BP)                          |
|    |                      | (iii) | 1002 BCE (2850 ± 80 BP)                          |
|    |                      | (iv)  | 857 BCE (2740 ± 100 BP)                          |
| 5. | Gotihwa<br>(Nepal)   |       | 1310 ± 930 BCE                                   |
| 6. | Rajdhani             | (i)   | 997-805 BCE                                      |
|    |                      | (ii)  | 812 BCE  |
|    |                      | (iii) | 885 BCE  |
| 7. | Kolhua<br>(Vaishali) |       | 3060 ± 140 BP (Cal. 3250 ± 160 BP or<br>1300 BC) |

G. Verardi's excavations at Gotihwa in Nepal yielded seven more samples dating between 900-400 BCE and the same were determined using AMS by Beta Analytic Inc. (USA).

Fresh investigative studies in recent times indicate the evolution and developments of early settlements in northern South Asia and provide evidence on rise of civilizations emerging from the Neolithic farming communities through chalcolithic cultures. In this process the settlements in groups can be indentified located within pockets of geo-political boundaries which are comparable to the Vedic janas which definitely came into existence in the third millennium BCE and were transformed into janapadas and mahajanapadas towards the end of the second millennium BCE or the beginning of the first millennium BCE, much before their normally accepted period of the sixth century BCE by which time they had been fully established with various urban centres.

Archaeological investigations at the ancient city sites in northern South Asia indicate their early settlements going back to the second millennium BCE in most of the cases. Most of them can be identified with the city sites mentioned in the later Vedic Sanskrit literature of *Aranyakas* and *Brahmanas* and fall in the early Pali and Prakrit Buddhist and Jaina texts in the context of Sixteen Great States (*shodasha - mahajanapadas*). These early settlements of the second millennium BCE became significant urban centres in the beginning of the first millennium BCE, much before the time of compilation of Buddhist and Jaina texts. The prominent city sites became the capital of the mahajanapadas. The process of developments of the janapadas and mahajanapadas continued in the early historical age when finally they

were merged and unified under the Magadha empire around fourth century BCE. In this context, the evidence of settlements at these city sites of the great mahajanapadas going back to the second millennium BCE from Sarai Khola (Taxila) and Pushkalavati (Charsadda) in Gandhara; BMAC and Gandhara Grave Culture sites in Kamboja; Bairat, Gilund and Ojiana in Matsya; Mathura, Sonkh and Noh in Surasena; Hastinapura, Hulas and Alamgirpur in Kuru; Ahichchhatra, Atranjikhera, Kanno, Sankisa and Kampilya in Panchala; Ujjain, Kayatha, Nagda, Ahar in Avanti; Eran and Tripuri in Chedi; Kaushambi and Jhusi in Vatsa; Rajghat-Sarai Mohana in Kasi; Ayodhya, Ssravasti, Lahuradewa, Siswania in Kosala; Rajdhani, Narhan, Sohgaora in Malla; Rajgir, Chirand and Juafardih (Nalanda) in Magadha; Vaisali and Lauriya Nandangarh in Vrijli, Champa and Oriup in Anga and Adam and Inamgaon in Asmaka provide valuable data. In view of the archaeological evidence from the sites of the mahajanapadas it could be authentically concluded that these political principalities and states were well established during the second millennium BCE, though the settlements started at many of these sites even much earlier with transformation from chalcolithic age to iron age cultures.

The recent scientific dating of samples have enriched our knowledge and have been successfully changing the earlier concept of association of certain ceramics limited to certain period. The results of new data show the antiquity of some sites go back from sixth-seventh century BC to fifteenth-sixteenth century BC. The new dates from NBPW levels at Ayodhya, Agiabir, Jhusi, Rajdhani in Uttar Pradesh and Gotihwa (Nepal) and Juafardih and Kolhua (Bihar) have added a new chapter in understanding the origin and development of early historic archaeology of the region. Thus early dates from Ganwaria, Prahladpur, Siswania, Khairadih, Takiaper, Dadupur and Mathura should not be just ignored which may not be accidental and caused due to wildfire, but may be due to human activity. Similarly the early evidence of neolithic and chalcolithic phases in the region require special attention for understanding their origin, development and material culture.

The new evidence give sufficient material to fill the gap between the time of the disappearance of the Harappan Civilization and the beginning of early historical period when the so called second urbanization took place which is expected to remove the myth of any dark age in the history of India. Even the age of the Vedic civilization and the beginning of the Harappan civilization is considered sometimes as dark age for want of enough evidence. But in recent times that era

has also been studied with more careful approach. The C14 dates from excavations at Bhirrana (district Hissar, Haryana) readily agree with the accepted known chronology of the Harappan Civilization starting from Early Harappan to Late Harappan. But for the first time, on the basis of radio-metric dates from Bhirrana the cultural remains of pre-Early Harappan horizon go back to the time bracket of 7380 BC to 6201 BC representing the Hakra Ware Culture. However, the significance of this early dating cannot be denied keeping in view a consistency which was not noticed earlier from any other excavated Harappan site from this region/ or elsewhere.

The archaeological material of such an early date noticed from Bhirrana appears to be an adaptation of the Neolithic tradition from the region which are still not satisfactorily explored or interpreted because Haryana, Rajasthan and adjoining Gujarat in India and Cholistan in Pakistan continued for a longer time in hunter-gatherer stage of Mesolithic period and evolved in the later period with food production. It has been found by Mani that the clay 'Mother Goddess' figurines from the levels dating back to c.6000 BC from both Mehrgarh and Bhirrana have marked similarity.

It has been noticed that except in Hakra/Saraswati valley where settled life started from subterranean dwellings providing structural stages of development, all other regions have their own cultural traits which could not produce any such evidence whose origins are obscure till they reached to the point of urbanization in their own region. The radio-metric dates from Bhirrana, Rakhigarhi and Kalibangan show the clear developmental stages of Harappa culture in Indo-Pak sub-continent, thereby suggesting Haryana and Rajasthan as the epi-centre of pre-Harappan cultures. Thus the 'Lost' Saraswati/Hakra valley laid a new foundation for urban life and set in motion one way or another, the status of Indus-Saraswati region as the cradle of South Asian civilization.

When the site of Mehrgarh was excavated by a joint team of Pak and French archaeologists in Baluchistan from 1974 to 1985 and the C14 dates of 8<sup>th</sup>-7<sup>th</sup> millennium BCE were found, the archaeologists were taken aback as civilization of the sub-continent was pushed back to almost 3000 years earlier than what was considered then. But later from 2004 to 2006, excavations conducted by the Nagpur Excavation Branch of the ASI brought amazing results and scientific dates contemporary to Mehrgarh. The study conducted now suggests that while the earliest levels at Mehrgarh were of Neolithic age and separate from the subsequent levels, the earliest levels at Bhirrana yielded

ceramics having some of the types continuing in the later periods and thus suggesting a continuity in culture, right from the middle of the 8<sup>th</sup> millennium BCE onwards which continued at the site till about 1800 BCE. This is well attested by radiocarbon dates.

More archaeological excavations are required in Haryana, Cholistan and other regions of Baluchistan, Sindh and Punjab for clear understanding of the beginning of civilization in this region. Study of climatic conditions may also be essential in understanding erosions of habitational deposits of Hakra ware culture in Rajasthan and area around as per palynological data from lakes which suggest that around 7500 BCE the rainfall was too much. The evidence from Mehrgarh, Cholistan and Saraswati valley clearly suggest that the region was under the neolithic-chalcolithic cultural activities between the 7<sup>th</sup> – 4<sup>th</sup> millennium BCE, with a limited use of copper. The Hakra river basin in Cholistan, which is a continuation of 'Lost' Saraswati valley has yielded a set of pottery in exploration known as 'Hakra ware' whose stratigraphic position has now been assigned at Bhirrana in excavation, thereby confirming that the cultural level achieved in the valley of 'Lost' Saraswati river is the cradle of Indian civilization. This factual position could be further confirmed from the excavations at Ganweriwala near Derawar Fort or some other suitable site in Cholistan area of Bahawalpur State in Pakistan so that the antiquity of Hakra ware including settlement pattern could be placed in a wider context.

# The Origin of Indian Civilization buried under the sands of 'Lost' River Saraswati

**K.N. Dikshit\* and B.R. Mani<sup>+</sup>**

The Indus Civilization since the excavations at Harappa and Mohenjodaro in the early 20<sup>th</sup> century was considered as one of the most ancient civilizations at par with the Egyptian and Mesopotamian civilizations. The regional dynamics of this culture were further brought to light and its distribution was found in a larger area with more sites explored on the banks of dried river Saraswati, now known as Ghaggar/Hakra and its tributaries. In the post-partition period, a large number of sites were explored and some of them excavated on both sides of the border. Harappa was again put to excavations by Mortimer Wheeler in 1946-47 where a painted red ware pottery was found from the pre-defence level and was compared to other pre-Harappan cultures in Pakistan. It may be added that the excavations at Kot-diji in 1958 entirely changed the stratigraphical position of Harappan culture by the discovery of a pre-Harappan level known as Kot-dijian where a ceramic different from the Harappan repertoire was noticed (Khan 1965). In 1960-61 in India, Kalibangan, a site in the 'lost' Saraswati plain was excavated which confirmed the Kot-dijian sequence (Lal *et al.* 2003).

In a recent study jointly made by the authors, the preliminary results of their investigation of data from early sites of Indo-Pak sub-continent such as Mehrgarh in Baluchistan (Jarrige *et al.* 1995), Rehman Dheri in Gomal plains (Durrani 1988), Jalilpur (Mughal 1974) and Harappa (**Kenoyer 2011**) in Punjab and Bhirrana, Kunal (Khatri and

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Acharya 1994-95), Baror (Sant *et al.* 2004-2005), Sothi, Nohar, Siswal, Banawali (Bisht 1999), Kalibangan (Lal *et al.* 2003), Girawad (Shinde *et al.* 2008) and Rakhigarhi (Nath 2001) in India besides many others suggests that Indian Civilization emerged in the 8<sup>th</sup> millennium BCE in Ghaggar-Hakra and Baluchistan area. These pre-Harappan cultures were thoroughly studied and M.R. Mughal proposed that instead of calling them pre-Harappan, these cultures should be called as Early Harappan. He further outlined that the brick sizes of 1:2:4 were also present in pre-Harappan levels and a few of the ceramics of these levels were also responsible for the makeup of the mature Harappan civilization.

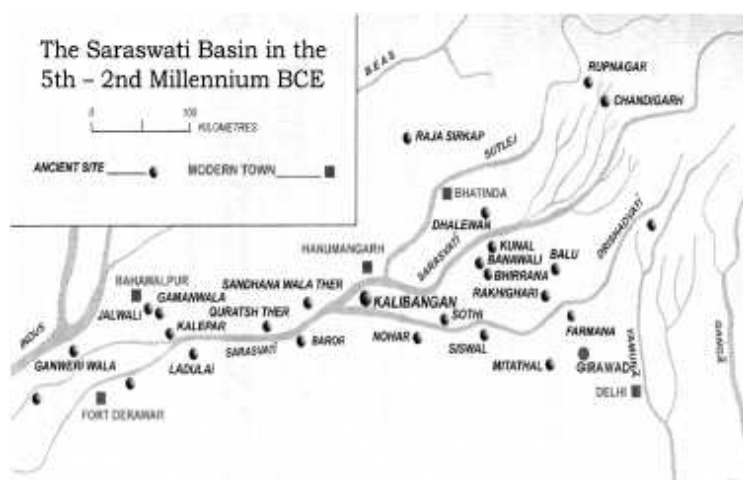


Fig. 1: The Saraswati Basin in the 5<sup>th</sup> – 2<sup>nd</sup> Millennium BCE showing Hakra ware and Early Harappan sites in India and Pakistan

Excavations were carried out at Mehrgarh, Jalilpur and Harappa in Pakistan and Bhirrana, Kunal, Rakhigarhi and Baror in India which changed the entire scenario by getting entirely a separate horizon below the early Harappan levels. Mughal has called this pottery complex as Hakra ware culture, but could not ascertain their stratigraphical position from any site especially in the Hakra valley or other adjoining sites in the Cholistan region (Plate 1-5). In excavations at Harappa, Hakra ware has been called as Ravi ware (Plate 6) and for a long time in



India, it was assigned as Sothi-Siswal ware which coexisted with Early Harappa.

The chronological position of Hakra ware in relation to radiometric dates recently received, are compelling enough to revise the whole issue in a stratigraphical framework. To go further, a detailed examination of these sites also from the angle of study of their material culture including pottery, clay figurines, household objects, living patterns etc. was taken up.

In northern Pakistan except at Mehrgarh, the cultural stages are not so demarcated and neolithic way of life continued amidst a cluster of smaller settlements till the early/mature Harappans did not completely occupy the scene by constructing monumental buildings, grid pattern planning, granaries, script, various crafts and ritual. Indo-Pak sub-continent has other sites belonging to the next period such as Rakhigarhi, Siswal, Banawali, Balu, Girawad, Kunal, Kalibangan or Baror in India and Harappa Jalilpur, Gumla, Nausharo, Rehmandheri or Kotdiji in Pakistan which show the continuity of traditions with regional variations till we reach the stage of mature Harappan Culture (Dikshit 1980, 1984, 2010, 2012, Mani 2005).

From the survey of the excavated data it is noticed that these pre-Early Harappan sites in Sindh-Baluchistan region are identified by a culture complex present at Mehrgarh in the first half of 4<sup>th</sup> millennium BCE (Period III), whereas in northern Punjab by a neolithic-chalcolithic assemblage in Gomal plains (Gumla period II, Rehman Dheri period I) and at Harappa and Jalilpur by Ravi culture. In Cholistan and Saraswati valley, it is Hakra ware which dominates the pre-Harappan horizon.

The C14 dates from excavations at Bhirrana (district Hissar, Haryana) readily agree with the accepted known chronology of the Harappan Civilization starting from Pre Harappan to Mature Harappan. But for the first time, on the basis of radio-metric dates from Bhirrana the cultural remains of pre-Early Harappan horizon go back to the time bracket of 7380 BCE to 6201 BCE representing the Hakra Ware Culture (Plate 7). However, the significance of this early dating cannot be denied keeping in view a consistency which was not noticed earlier from any other excavated Harappan site from this region/ or elsewhere (Table 1). The samples from the earliest levels at Bhirrana have C14 dates determined in the Birbal Sahni Institute of Paleobotany which are 7570 – 7180 BCE (8350 ± 140 BP), 6689 – 6201 BCE (7590 ± 240 BP), 6200 – 5850 BCE (7150 ± 130 BP), 5316 – 4775 BCE (6120 ± 250 BP), 4714 – 4360 BCE (5700 ± 170 BP) and 3970 – 3640 BCE

(4990 ± 180 BP). The early C14 dates are also available from Kalibangan. The sample TF – 439 which was rerun has provided a time bracket between c. 5600 – 5224 BCE. The earliest dates from Rakhigarhi and Girawad have been determined by C14 method as belonging to the late 5<sup>th</sup> and early 4<sup>th</sup> millennium BCE.

**Proposed Chronology of Bhiranna (after Dikshit and Mani 2012)**

<b>Classification of dates</b>	<b>Relative Chronology</b>	<b>Time Bracket</b>
I 7570-7180 BCE 6689-6201 BCE	Period I (Neolithic)	C. 7500-6000 BCE
II 6200-5850 BCE 5316-4775 BCE	Period IIA (Transitional Period)	C. 6000-4500 BCE
III 4714-4360 BCE 3970-3640 BCE 3370-2890 BCE 3100-2880 BCE 3020-2700 BCE	Period IIB (Early-Harappan)	C. 4500-3000 BCE
IV 2920-2640 BCE 2880-2580 BCE 2856-2414 BCE 2471-2273 BCE 2310-1980 BCE	Period III (Mature-Harappan)	C. 3000-1900 BCE
V 1950-1640 BCE 1878-1839 BCE 1641-1287 BCE	Period IV (Late-Harappan)	C. 1900-1600 BCE

The above relative chronology goes in order if we accept the beginning of Harappa culture to c. 3200-3000 BCE, advanced by Marshall but was shortened by Wheeler who compared this civilization at par with Mesopotamian and Egyptian civilizations. The C 14 laboratories at TIFR, Bombay and PRL at Ahmedabad also provided late dates which were later on pushed back by calibrations.

From the above dates it appears that the site was under continued occupation, although it is difficult to explain the cultural developments between c. 6000 BCE to 4500 BCE which is a transitional phase of the agro-pastoral communities from neolithic to chalcolithic heralding the incoming of early Harappan groups. The radio-metric dates which are from different trenches and levels clearly suggest that people occupy the spots and leave them according to their requirements, in some cases

immediately after occupying and in others they continue. These possibilities are inherent in human character.

**Table 2: Radiometric dates from Rakhigarhi**

SIM	BSIP Ref	Ref No.		Radiocarbon Calibrated	
				Age (Yrs BP)	Age (Yrs BP)
S-4168	BS-3313	No.86, RGR-2, 1080	CM	5410+-100	6180+-50
S-4169	BS-3314	No.43, RGR-1, 3.2-3.3	CM	5230+-90	6030+-40
S-4179	BS-3323	No.223, RGR-2, 8.45	m	3910+-100	5350+-100
S-4180	BS-3324	No.213, RGR-2, 8.45	m	5200+-100	5910+-130
S-4181	BS-3325	No.155, RGR-2, 0.74	CM	4690+-120	5450+-80
S-4186	BS-3340	No.59, RGR-1, 2.70	M	3740+-70	4090+-80
S-4188	BS-3342	No.51, RGR-6, 4.32	M	4950+-310	5680+-340
S-4190	BS-3344	No.46, RGR-1,		4570+-100	5230+-60
S-4191	BS-3345	No.37, RGR-1, 2.55-2.70	M	4430+-80	5060+-40
S-4197	BS-3350	No.28A, RGR-1, 200-205	CM	4650+-90	5410+-90
S-4199	BS-3352	No.35, RGR-1, 240-250	CM	3840+-70	4270+-60
S-4200	BS-3353	No.43, RGR-1, 320-330	CM	3810+-70	4200+-100

(Courtesy: Archaeological Survey of India)

The archaeological material of such an early date noticed from Bhirrana appears to be an adaptation of the Neolithic tradition from the region which is still not satisfactorily explored or interpreted because Haryana, Rajasthan and adjoining Gujarat in India and Cholistan in Pakistan continued for a longer time in hunter-gatherer stage of Mesolithic period and evolved in the later period with food production. It has been found that the clay 'Mother Goddess' figurines from the levels dating back to c.6000 BCE from both Mehrgarh and Bhirrana have marked similarity (Plate 8).

On the basis of study of material from Bhirrana it has been noticed that except in Hakra/ Saraswati valley where settled life started from subterranean dwellings providing structural stages of development, all other regions have their own cultural traits which could not produce any such evidence whose origins are obscure till they reached to the point of urbanization in their own region. The radio-metric dates from Bhirrana, Rakhigarhi and Kalibangan show the clear developmental stages of Harappa culture in Indo-Pak sub-continent, thereby suggesting Haryana and Rajasthan as the epi-centre of pre-Harappan cultures. Thus

the 'Lost' Saraswati/ Hakra valley laid a new foundation for urban life and set in motion one way or another, this region as the cradle of Indian civilization.

When the site of Mehrgarh was excavated by a joint team of Pak and French archaeologists in Baluchistan from 1974 to 1985 and the C14 dates of 8<sup>th</sup> – 7<sup>th</sup> century BCE were found, the archaeologists were taken aback as civilization of the sub-continent was pushed almost 3000 years back than what was considered then. But later from 2004 to 2006, excavations conducted by the Nagpur Excavation Branch of the ASI brought amazing results and scientific dates contemporary to Mehrgarh. The study conducted now suggests that while the earliest levels at Mehrgarh were of Neolithic age and separate from the subsequent levels, the earliest levels at Bhirrana and Kunal yielded ceramics and antiquities having some of the types continuing in the later periods and thus suggesting a continuity in culture, right from the middle of the 8<sup>th</sup> millennium BCE onwards (Plate 9, 10 & 11) which continued at the site till about 1800 BCE. This is well attested by radiocarbon dates.

More archaeological excavations are required in Haryana, Cholistan and other regions of Baluchistan, Sindh and Punjab for clear understanding of the beginning of civilization in this region. Study of climatic conditions may also be essential in understanding erosions of habitational deposits of Hakra ware culture in Rajasthan and area around as per palynological data from lakes which suggest that around 7500 BCE the rainfall was too much. The evidence from Mehrgarh, Cholistan and Saraswati valley clearly suggest that the region was under the neolithic-chalcolithic cultural activities between the 7<sup>th</sup> - 4<sup>th</sup> millennium BCE, with a limited use of copper. The Hakra river basin in Cholistan, which is a continuation of 'Lost' Saraswati valley has yielded a set of pottery in exploration known as 'Hakra ware' whose stratigraphic position has now been assigned at Bhirrana in excavation, thereby confirming that the cultural level achieved in the valley of 'Lost' Saraswati river is the cradle of Indian civilization. This factual position could be further confirmed from the excavations at Ganweriwala near Derawar Fort or some other suitable site in Cholistan area of Bahawalpur State in Pakistan so that the antiquity of Hakra ware including settlement pattern could be placed in a wider context.

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Plate 1: Jalilpur 1971: lowest Hakra Ware (Period- I) and Kot Dijian (Period-II, above) in the trench (courtesy M.R. Mughal)



Plate 2: Mud Appliqué and Multiple Incised lines of the Hakra Ware (courtesy M.R. Mughal)



Plate 3: Jalilpur – I & II Pottery painted with white and black on red, black and brown on red or white slip (courtesy M.R. Mughal)



Plate 4: The Hakra Mud Appliqué Ware from Jalilpur (courtesy M.R. Mughal)



Plate 5: The Hakra Mud Appliqué ware from Cholistan  
(courtesy M.R. Mughal)



Plate 6: Hakra Mud Appliqué Ware from Harappa (Ravi Culture)  
(courtesy R.H. Meadow and J.M. Kenoyer)





Plate 7: Structures of period I, Bhirrana (after L.S. Rao)



Plate 8: Comparison of Mother Goddess figurines from Bhirrana and Mehrgarh



Plate 9: Mud Appliqué Ware, Bicrome Ware and Incised Pottery from Bhirrana, Period I (after L.S. Rao)



Plate 10: Bhirrana – Antiquities from period I (after L.S. Rao)



Plate 11: Pottery from Kunal (after J.S. Khatri and M. Acharya)

# The Sarasvatî and the Civilization She Watered

Michel Danino\*

## Explorations

When in the early 1920s, archaeologists discovered at Harappa and Mohenjo-daro the first urban growth of the Indian subcontinent, they named it “Indus Valley” or “Indus” civilization. The reason was simple: it was thought to extend no farther than the Indus basin, with a few minor sites in Baluchistan. The name stuck, although with an alternative: the “Harappan” civilization, in accordance with the archaeological tradition of naming a culture after the first type site to come to light.

But for a strange twist of fate, we might be using a very differently term today: the “Ghaggar Valley,” or “Ghaggar-Hakra,” or perhaps “Kalibangan civilization.” Thereby hangs a tale, grippingly told by historian Nayanjot Lahiri.<sup>1</sup> A few years before the existence of an Indus civilization was understood, a young Italian scholar, Luigi Tessitori, was busy collecting the rich bardic lore of Rajasthan, moving from village to village on camel back. John Marshall, who then directed the Archaeological Survey of India (and later the excavations at Mohenjo-daro), asked him to conduct a few excavations for the Survey as he moved about. At the end of 1917, Tessitori stopped at the twin mounds near the village of Kalibangan in the then State of Bikaner. The prominent mounds, on the southern bank of a dry river known locally as the Ghaggar, arrested his attention: he wrote in his report that they contained “vestiges of a very remote, if not prehistorical antiquity”<sup>2</sup>—

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a remarkably prescient observation, at a time when almost nothing was known of India's prehistory. Inexplicably, Tessitori omitted from his report the three seals he had found at Kalibangan (and tragically died of illness in 1919, at the age of 32); had he published them, they would certainly have drawn Marshall's attention to the site, and it might have been the first "Harappan" site to be properly explored.

Much later, Marshall suspected that the Harappan civilization extended eastward beyond the Indus river and its tributaries. However, the task of proving this conjecture was left to the famous and indefatigable explorer, Mark Aurel Stein. At the age of 78, he led an expedition to the States of Bikaner and Bahawalpur (the former now part of Rajasthan, the latter now part of Pakistan's Cholistan desert). Stein's fascination for inhospitable regions is probably what drew him to the Great Indian Desert's desolate landscape of endless sand dunes, and to the wide valley of the Ghaggar (and its continuation, generally known as "Hakra"). But as a Sanskritist, he was also intrigued by the legend of the lost Sarasvatî; the title of his 1942 paper, which gave a brief account of his findings, makes that clear: "A Survey of Ancient Sites along the 'Lost' Sarasvatî River."<sup>3</sup> (He wrote a more detailed report the next year, which remained unpublished until 1989.<sup>4</sup>)

Like most nineteenth-century explorers of the region, Stein was struck by "the width of its dry bed within Bikaner territory [i.e., downstream of Hanumangarh]; over more than 100 miles [160 km], it is nowhere less than 2 miles [3.2 km] and in places 4 miles [6.4 km] or more." He also recorded numerous mounds along the bed of the Ghaggar-Hakra: "The large number of these ancient sites contrasts strikingly with the very few small villages still on the same ground."<sup>5</sup> The region had clearly supported a much larger population in the past, an observation already made a century earlier by British topographers and geologists.

Yet, in Bikaner, hurriedly moving from mound to mound, Stein failed to understand their epoch and culture. It is only in Bahawalpur, along the dry course of the Hakra, that he established for the first time the existence of sites related to Harappan culture. Taking all periods together, he identified some eighty new sites—a rich harvest, and the last of his considerable contributions to the archaeology of the subcontinent.

### **The Sarasvatî Riddle**

Before we proceed with archaeological discoveries in the region, we must pause and ask why, in the first place, explorers and archaeologists had come to identify the Ghaggar-Hakra's dry bed with

the Sarasvatî. There are two simple reasons for this, perfectly summarized by Aurel Stein himself:

In at least three passages of the *Rigveda* mentioning the Sarasvatî, a river corresponding to the present Sarsuti and Ghaggar is meant. For this we have conclusive evidence in the famous hymn, the “Praise of the rivers” (*Nadistuti* [10.75.]) which, with a precision unfortunately quite exceptional in Vedic texts, enumerates the *Sarasvati* correctly between the *Yamuna* (Jumna) in the east and the *Sutudri* or *Sutlej* in the west.<sup>6</sup>

This mention of a “mighty” Sarasvatî between the Yamunâ and the Sutlej is what had led nineteenth-century Indologists—long before the discovery of Harappan sites—to accept the Ghaggar-Hakra’s identification with the Vedic Sarasvatî. The map shown in fig. 1, taken from a French book published in 1881, reflects the consensus among scholars like H. H. Wilson (1840), Louis Vivien de Saint-Martin (1855), Max Müller (1859), C. F. Oldham (1874), Monier Williams (1875), A. Weber (1878), Julius Eggeling (1882), R. D. Oldham (1887), among many others.

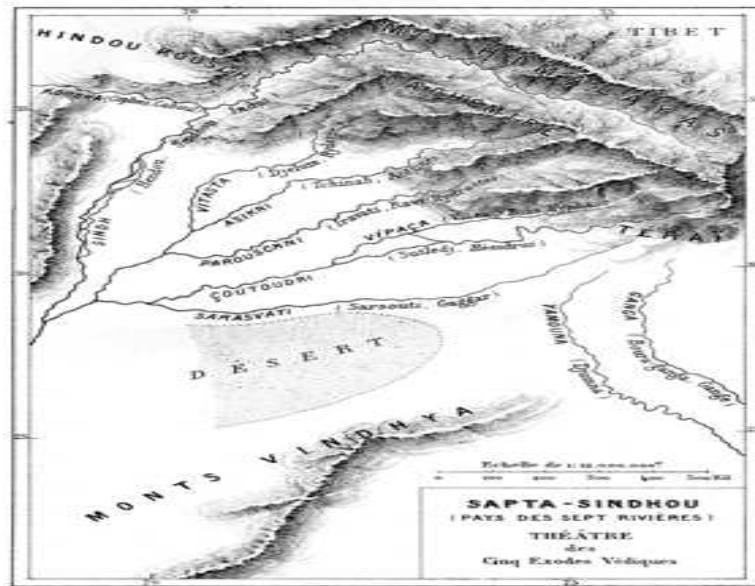


Fig. 1. Map of the “Sapta Sindhu (Land of the Seven Rivers)” published in a 1881 French book on Vedic India, with the Sarasvatî identified with the Ghaggar and located between the Yamunâ and the Sutlej. (The map adds the rivers’ Sanskrit and Greek names.)

The second reason is, in Haryana and Punjab, a persistent tradition that remembers the lost river. A small stream flowing down from the Shivalik Hills (the “present Sarsuti,” as Stein referred to it), numerous holy sites connected to Sarasvatî in the Kurukshetra region, the mention of the river in this same location across much ancient Sanskrit literature—from the *Brâhmanas* to the *Mahâbhârata* and many *Purânas*—all concur to establish its existence there in some bygone age. (The tradition of an invisible Sarasvatî at the *trivenî sangam* of Allahabad is a much more recent one.) The *Mahâbhârata*, for instance, not only locates the Sarasvatî between the Yamunâ and the Sutlej, but also describes the river as “disappearing into the sands,” which matches its observed desiccation.

### **Further Explorations**

World War II and India’s Partition delayed further search for Harappan sites in what we can now call the Sarasvatî Valley, or, more appropriately, the Sarasvatî basin. It was only in 1950-52 that Indian archaeologist Amalananda Ghosh followed in Stein’s footsteps, making up for the latter’s oversight on what was now the Indian side of the Ghaggar-Hakra’s bed. Ghosh identified 25 sites displaying a “true Harappa culture”—the easternmost being Kalibangan. He rightly suspected that more sites were bound to come to light further east, and concluded in the meantime that “the valleys of the Sarasvatî and the Drishadvatî must be regarded as very rich indeed in archaeological remains.”<sup>7</sup> (The Vedic Drishadvatî river has been identified by most scholars with the Chautang, which flowed south of the Ghaggar, joining it downstream of Kalibangan, near today’s Suratgarh in northern Rajasthan).

While Aurel Stein will be remembered for being the first to identify Harappan sites in what is now Cholistan in Pakistan, A. Ghosh will earn the same honour in northern Rajasthan.

Ghosh’s suspicion that sites would be identified “further east” soon found confirmation: since the 1960s, further explorations of the region (including India’s portion of the Punjab and the Chautang’s course in Haryana) have brought to light hundreds of sites related to various phases of Harappan culture, the best known of which include Kalibangan, Mitathal, Banawali, Rakhigarhi and Bhirrana. From the 1950s, parallel surveys have been taking place in Gujarat by S. R. Rao (who discovered the famous port town of Lothal in 1954), followed by J. P. Joshi (Dholavira in 1966) and others. Harappan sites were later identified as far south as the Tapti in Maharashtra.

On the Pakistani side of the Ghaggar-Hakra valley, Mohammad Rafique Mughal retraced Aurel Stein's explorations and in the 1970s surveyed 363 pre-urban, urban and post-urban sites of the Harappan tradition in Cholistan alone, a rich harvest that changed forever our understanding of this civilization.<sup>8</sup>

### Sarasvatî vs. Indus

As a result of those explorations, its total extent is now thought to be almost one million square kilometres, and a few years ago, U.S. archaeologist Gregory Possehl listed some 2,600 sites.<sup>9</sup> This number includes sites belonging to three distinct phases, generally called "Early" (or pre-urban), "Mature" (or urban) and "Late" (or post-urban),<sup>10</sup> which correspond roughly to the epochs 3500-2700, 2600-1900 and 1900-1300 BCE.

Table 1 summarizes the present count of sites in the Sarasvatî basin, but we should keep in mind that many sites have two or all three phases, so that the actual geographical count will be less than the totals shown in the last column—probably around 1,500.

Sarasvatî basin(east to west)	Early Harappan <b>3500-2700 BCE</b>			
Mature Harappan <b>2600-1900 BCE</b>	Late Harappan <b>1900-1300 BCE</b>			
Total				
Haryana	558	114	1168	<b>1840</b>
Punjab (India's)	24	41	160	<b>225</b>
Rajasthan	18	31	0	<b>49</b>
Cholistan (Pakistan)	40	174	50	<b>264</b>
<b>Total</b>	<b>640</b>	<b>360</b>	<b>1378</b>	<b>2378</b>

Table 1. Distribution of Harappan sites in the Sarasvatî basin, adapted from a list compiled by S. P. Gupta (with inputs from G. Possehl and M. Rafique Mughal).<sup>11</sup>

Let us now look at Table 2, which covers all regions of the now extended Harappan civilization:

Regions of the subcontinent	Early Harappan	Mature Harappan		
Late Harappan	Total			
Sarasvatî basin (see Table 1)	640	360	1378	<b>2378</b>
Uttar Pradesh	2	32	10	<b>44</b>
Himachal, Jammu & Delhi	1	—	4	<b>5</b>
Gujarat	11	310	198	<b>519</b>
Indus basin & western Pakistan	367	416	12	<b>795</b>
<b>Total</b>	<b>1021</b>	<b>1118</b>	<b>1602</b>	<b>3741</b>

Table 2. Overall distribution of Harappan sites.



The same caveat applies: the grand total of 3,741 sites may translate into anything between 2,000 and 2,500 actual settlements. Be that as it may, we notice that the 360 “Sarasvatī sites” of the Mature (i.e., urban) phase account for 32% or nearly a third of all sites belonging to that phase: the region was plainly a major heartland of the Harappan civilization. The proportion rises to 63% for the Early Phase and 86% for the Late Phase, before and after the collapse of the urban order.

If, then, 360 Mature sites were located in the basin of the Sarasvatī, should the Harappan civilization not be renamed “Indus-Sarasvatī civilization”? Such was the designation proposed by the late Indian archaeologist S. P. Gupta in 1989. Although it is imperfect—since it still leaves out most of Gujarat’s 310 Mature Harappan sites, another chunk of 30%—it is nevertheless more precise than the limitative “Indus civilization.”

Recently, British archaeologist Jane McIntosh commented on the discoveries of Mughal and others in these words:

This work revealed an incredibly dense concentration of sites, along the dried-up course of a river that could be identified as the “Saraswati” ... Suddenly it became apparent that the “Indus” Civilization was a misnomer—although the Indus had played a major role in the rise and development of the civilization, the “lost Saraswati” River, judging by the density of settlement along its banks, had contributed an equal or greater part to its prosperity.

Which led her to the following conclusion on the issue of terminology:

Many people today refer to this Early state as the “Indus-Saraswati Civilization” and continuing references [in her book] to the “Indus Civilization” should be seen as an abbreviation in which the “Saraswati” is implied.<sup>12</sup>

It will, however, take time for the final terminology to be fixed, as the Aryan invasion theory has needlessly muddled the Sarasvatī’s waters: the river’s close association with Harappan sites builds a bridge between the *Rig-Veda* and Harappan culture, which has not been to the liking of proponents of a “pre-Aryan” Indus civilization. But that need not concern us here: whatever name we may give it—other proposals include “Sindhu-Sarasvatī” and “Sarasvatī-Sindhu”—its debt to the vanished river is now archaeologically established. As the eminent Indian archaeologist V. N. Misra put it in 1993:

The large number of protohistoric settlements, dating from c. 4000 BC to 1500 BC, could have flourished along this river only if it was flowing perennially.<sup>13</sup>

Let us also be clear that this perspective in no way involves a rivalry with the Indus: contrary to what a few scholars have tried to argue, highlighting the Sarasvatî by no means belittles the Indus: so far, no city comparable to Mohenjo-daro has been dug out in the Sarasvatî's basin. And although we cannot safely define the cultural or political traits of each of the Harappan regions, there is, at least, no evidence that they were ever in conflict with one another. Competition, perhaps; cooperation, surely.

### **The River's Disappearance**

The end of the urban or Mature Harappan phase remains a mystery: what could have caused the collapse of this well-oiled, largely peaceful, extensive urban phenomenon that had been in existence for some seven centuries? Numerous factors have been discussed, ranging from economic decline or political turmoil to drought and ecological degradation. There is no consensus among archaeologists, except on one point: we need more data, and if possible from every region of the Harappan world.

But one overriding environmental factor has become clearer in recent years: the gradual disappearance of the Sarasvatî river system, which drained what is today the Yamunâ-Sutlej watershed. In 1969, German geographer Herbert Wilhelmy, refining theses already put forth in the nineteenth century, proposed that both the Yamunâ and the Sutlej flowed into the Sarasvatî until, in stages, they drifted eastward and northward respectively, in effect leaving the Sarasvatî depleted.<sup>14</sup> (Possible causes for this desertion include simple erosion and a tectonic uplift in this seismically active region.<sup>15</sup>)

Wilhelmy's scenario, refined by satellite imagery, has been accepted by most archaeologists, and with good reason: several paleobeds of the Sutlej and the Yamunâ have been identified between the Ghaggar and their present beds; moreover, the drastic changes in the distribution pattern of Harappan sites in the Sarasvatî region does lend support to a gradual desiccation of the Sarasvatî.<sup>16</sup>

To illustrate this crucial point, I drew maps of Harappan sites for the three phases, adapting Wilhelmy's proposal so as to make it more compatible with the archaeological data. (The location of the sites was scanned from maps published earlier by V. N. Misra<sup>17</sup> for the Indian side and M. Rafique Mughal<sup>18</sup> for the Pakistani side.)

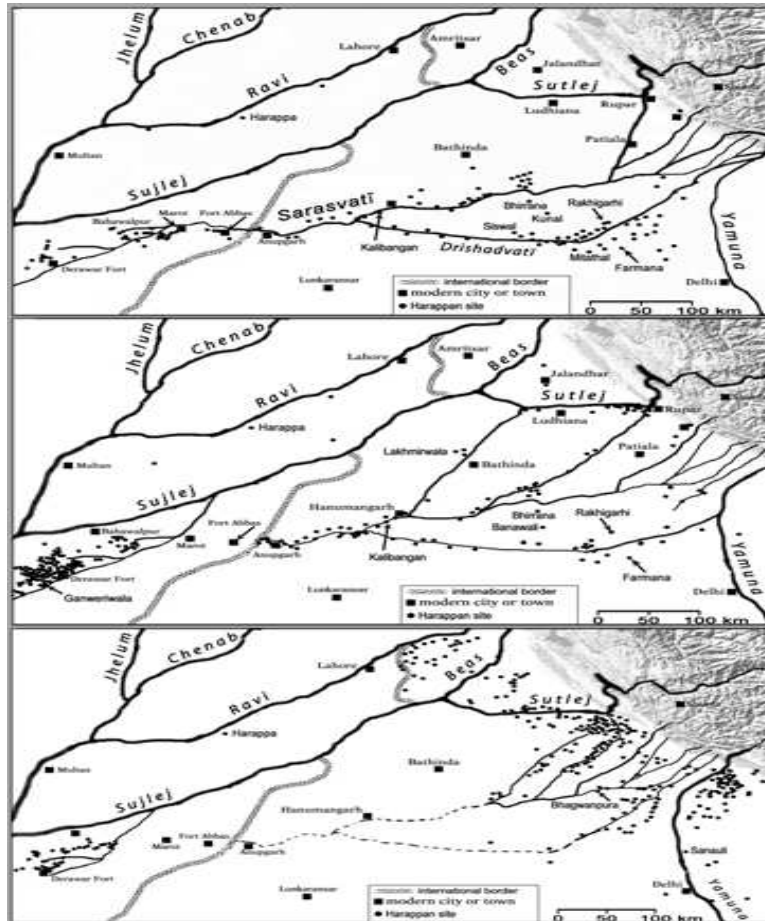


Fig. 2 (top). Proposed reconstruction of the Sarasvatî's first stage, during the Early Harappan phase.

Fig. 3 (centre). Proposed reconstruction of the Sarasvatî's second stage, during the Mature Harappan stage: the Yamunâ is lost, while the Sutlej continues to branch off towards the Sarasvatî.

Fig. 4 (bottom). Proposed reconstruction of the Sarasvatî's third stage, during the Late Harappan stage: the central Sarasvatî has gone dry.

The precise evolution of the river does not matter at this stage—it will be established securely only after many more multidisciplinary

studies. Suffice it to keep in mind that it was a complex one. However, certain conclusions can safely be drawn from the settlement pattern:

- Settlements of the Early phase reflect a fairly even distribution along the Sarasvatî and the Drishadvatî. The near absence of sites along today's Sutlej and Yamunâ is also remarkable, suggesting that neither flowed in their present beds at the time.
- Three new developments take place during the Mature phase: (1) a considerable multiplication of sites, except along the Drishadvatî, with an extraordinary concentration in lower Cholistan; (2) upper Cholistan (west of today's international border) becomes however devoid of sites, which led Rafique Mughal to propose that the Sarasvatî had begun breaking up early in the Mature phase itself; (3) a confirmation comes from the presence of sites on the Sutlej, which suggests that the river has begun to shift its course westward.
- The Late phase sees even more dramatic changes: at the bottom end of the Cholistan region (now a desert), a few sites struggle to survive, while in the east, hundreds of settlements appear to cling to the foothills of the Shivaliks, no doubt dependent on seasonal streams flowing down from the hills. We also note quite a few sites crossing the Yamunâ towards the Ganges, which points to an eastward migration of the Late Harappans. On the other hand, in the central part of the map, not a single Late Harappan site can be spotted: except in its depleted upper course, the Sarasvatî has ceased to exist. The nearly 1,400 Late Harappan settlements counted in the northern and eastern Sarasvatî basin reflect the atomization that followed the collapse of urban structure.

The Sarasvatî's disappearance sometime between 2000 and 1800 BCE could not but have had a huge impact on urban settlements of the region, with a ripple effect elsewhere. As the senior Indian archaeologist B. B. Lal, who directed excavations at Kalibangan, put it:

The obvious result [of the diversion of the Sarasvatî's waters into the Yamunâ system] was the migration of the [Harappan] people towards the north-east where some water was still available in the uppermost reaches of the Sarasvatî and Ghaggar and further east in the upper plains of the Gangâ-Yamunâ *Doâb*.<sup>19</sup>

Or in the words of Dilip Chakrabarti:

To a considerable extent the process [of weakening of the political fabric of the Indus civilization] must have been linked to the hydrographic changes in the Sarasvatî-Drishadvatî system.<sup>20</sup>

More recently, Marco Madella and Dorian Fuller have summed up the impact of the Sarasvatî's disappearance in these terms:

Archaeological research in Cholistan has led to the discovery of a large number of sites along the dry channels of the Ghaggar-Hakra river (often identified with the lost Sarasvati and Drishadvati rivers of Sanskrit traditions). ... The final desiccation of some of these channels may have had major repercussions for the Harappan Civilisation and is considered a major factor in the de-centralisation and de-urbanisation of the Late Harappan period.<sup>21</sup>

Moreover, by joining the Beas in its westward drift, the Sutlej added its waters to the Indus system, which must have increased the severity of floods in Sind, possibly causing the Indus to shift its course, washing away sites and burying others under its abundant alluvium. H. T. Lambrick indeed proposed that the Indus shifted away from Mohenjo-daro in a process of avulsion: "The surrounding country, starved of water, immediately began to deteriorate."<sup>22</sup> Also, the river-based communication that Mohenjo-daro vitally depended on, in Michael Jansen's opinion,<sup>23</sup> would have been seriously disrupted.

### **Gang'a's Turn?**

Natural calamities such as a prolonged drought from 2200 BCE,<sup>24</sup> the depletion of the Sarasvatî or a shift in the course of the Indus, appear to have combined with man-induced environmental degradation to play a major role in the disintegration of the Harappan urban order. For instance, with the disappearance of the Sarasvatî in its central basin, agriculture would have become unviable there, straining economic conditions and telling on the social order. Also, communications between the Sarasvatî and the Indus regions, and between them and Gujarat, might have simply broken down, a process reflected in the term of "Localization Era" proposed a few decades ago by archaeologist Jim Shaffer for the Late Harappan phase.

Four millennia later, the loss of the Sarasvatî may soon find an echo in the impending disappearance of the Himalayan glaciers (predicted for about 2035) and therefore of the Ganges and Brahmaputra systems. But while the former was a natural cataclysm (possibly compounded by human overexploitation of natural resources), the latter

will be largely man-made and may result in the end of the 3,000-year-old Ganges civilization in its mother-region. The scattered Late Harappans were able to adapt themselves to the new situation, fall back on rural settlements or create new ones, relocate themselves when necessary and continue their existence, although in a non-urban context; but how will the tens of millions dependent on the Ganges system survive when Prayag's *trivenî sangam* consists of three invisible, "mythical" rivers?

### Footnotes

- <sup>1</sup> Nayanjot Lahiri, *Finding Forgotten Cities: How the Indus Civilization Was Discovered* (New Delhi: Permanent Black, 2005).
- <sup>2</sup> *Ibid.*, p. 150.
- <sup>3</sup> Aurel Stein, "A Survey of Ancient Sites along the 'Lost' Sarasvatî River," *The Geographical Journal*, vol. 99 (1942), pp. 173-182.
- <sup>4</sup> Marc Aurel Stein, *An Archaeological Tour along the Ghaggar-Hakra River*, ed. S. P. Gupta (Meerut: Kusumanjali Prakashan, 1989).
- <sup>5</sup> Aurel Stein, "A Survey of Ancient Sites along the 'Lost' Sarasvatî River," *op. cit.*, p. 178.
- <sup>6</sup> *Ibid.*, p. 176.
- <sup>7</sup> A. Ghosh, "The Rajputana desert: its archaeological aspect" in *Bulletin of the National Institute of Sciences in India* (1952), vol. I, pp. 37-42, reproduced in *An Archaeological Tour along the Ghaggar-Hakra River*, *op. cit.*, p. 101.
- <sup>8</sup> Mohammad Rafique Mughal, *Ancient Cholistan: Archaeology and Architecture* (Lahore: Ferozsons, 1997), pp. 40 & 47-48.
- <sup>9</sup> Gregory L. Possehl, *Indus Age: The Beginnings* (New Delhi: Oxford & IBH, 1999), p. 26.
- <sup>10</sup> The "American school," represented notably by Jim Shaffer, Jonathan Mark Kenoyer and Gregory Possehl, prefers a more descriptive terminology and speaks, respectively, of "Regionalization Era," "Integration Era" and "Localization Era."
- <sup>11</sup> See the detailed explanation and references for this and following table in my forthcoming book on the Sarasvati river (forthcoming, 2010).
- <sup>12</sup> Jane R. McIntosh, *A Peaceful Realm: The Rise and Fall of The Indus Civilization* (Boulder: Westview Press, 2002), p. 24.
- <sup>13</sup> V. N. Misra, "Indus Civilization and the Rgvedic Sarasvati," *South Asian Archaeology 1993*, eds. Asko Parpola & Petteri Koskikallio (Helsinki: Suomalainen Tiedeakatemia, 1994), vol. II, p. 515.
- <sup>14</sup> Herbert Wilhelmy, "The Ancient River Valley on the Eastern Border of the Indus Plain and the Sarasvati Problem" in *Vedic Sarasvati: Evolutionary History of a Lost River of Northwestern India*, *op. cit.*,

- p. 101 (partial English translation of "Das Urstromtal am Ostrand der Indusebene und das Sarasvati Problem" in *Zeitschrift für Geomorphologie*, N.F. Supplementband 8, 1969, pp. 76-93).
- <sup>15</sup> K. S. Valdiya's *Sarasvati, the River that Disappeared* (Indian Space Research Organization & Hyderabad: Universities Press, 2002) has useful discussions on the processes that led to the loss of the Sarasvati.
- <sup>16</sup> V. N. Misra authored two important papers on this: "Climate, a Factor in the Rise and Fall of the Indus Civilization: Evidence from Rajasthan and Beyond," *op. cit.*; "Indus Civilization and the Rgvedic Sarasvati" in *South Asian Archaeology 1993*, eds. Asko Parpola & Petteri Koskikallio (Helsinki: Suomalainen Tiedekatemia, 1994), vol. II, pp. 511-525.
- <sup>17</sup> See V. N. Misra's map in "Indus Civilization and the Rgvedic Sarasvati," *op. cit.*, p. 515. I used standard methods of digital photography, such as layering and superimposition to separate the three phases in this map.
- <sup>18</sup> See M. R. Mughal's maps in figs. 5 & 6, *Ancient Cholistan: Archaeology and Architecture*, *op. cit.*, pp. 24 & 25. Same remark as above.
- <sup>19</sup> B. B. Lal, *The Sarasvati Flows: The Continuity of Indian Culture* (New Delhi: Aryan Books International, 2002), p. 77.
- <sup>20</sup> Dilip K. Chakrabarti, *The Archaeology of Ancient Indian Cities* (New Delhi: Oxford University Press, 1997), p. 140.
- <sup>21</sup> Marco Madella & Dorian Q. Fuller, "Palaeoecology and the Harappan Civilisation of South Asia: a reconsideration," *Quaternary Science Reviews* 25 (2006), pp. 1285-86.
- <sup>22</sup> H. T. Lambrick, "The Indus Flood Plain and the 'Indus' Civilization," *Geographical Journal*, 1967, 133/4: 483-95, reproduced in Nayanjot Lahiri, *The Decline and Fall of the Indus Civilization* (New Delhi: Permanent Black, 2000), p. 182.
- <sup>23</sup> Michael Jansen argues that the location of Mohenjo-daro is explainable only through boat transport. See his "Settlement Networks of the Indus civilization" in *Indian Archaeology in Retrospect*, vol. 2: Protohistory, *Archaeology of the Harappan Civilization*, *op. cit.*, p. 118.
- <sup>24</sup> See Michel Danino, "Revisiting the Role of Climate in the Collapse of the Indus-Sarasvati Civilization," *Puratattva*, no. 38, 2008, pp. 159-169.

# Chronology in Depth: Science not Superstition

Navaratna S. Rajaram\*

*Chronology of ancient India is seriously flawed due to reliance on Biblical Creationism, faulty linguistic and race theories as well as political influences. Linguists studying Indo-European languages have very greatly underestimated the time scales involved by as much as a factor of ten and also mis-identified the sources. It is time to build a scientifically sound chronology drawing upon advances that have taken place in archaeology, natural history and genetics. On present knowledge, the origins of Indian and world civilization can be taken to 65,000 years BP (before present) when groups of African immigrants settled along the Indian coast and ancestors of Indo-European languages began to evolve. All non-African people living today are descended from this group of a thousand or so individuals.*

## **Introduction: Biblical Creationism and the race myth**

Indian history as found in books today is an offshoot of and in many ways a continuation of the work of scholars of the British colonial period. As often the case, their work tells us more about its creators—their beliefs and mindsets—than the subject they were supposed to be writing about. These were conditioned by the two myths current in the nineteenth century— Euro-racism and the Christian missionary movement. Though discredited by more than a century of progress in science their hold on Indian history and chronology persists. While there has been some progress like the grudging acknowledgement of the existence of the Vedic Sarasvati and the presence of Vedic symbols

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in Harappan archaeology, history taught in Indian schools is still little more than a minor mutation of the colonial-missionary version.

The same holds for the historiography behind it: it may be said with some oversimplification that Indian historiography was based on racist ideas but presented in linguistic garb, while its chronology drew upon Biblical Creation beliefs current in the nineteenth century. While science has dealt a death blow to both, scholars in Western academia and their Indian followers have held on to their dogmas while not disclosing their unseemly origins. So here is a brief recapitulation how it came to pass.

In a lecture in Kolkotta delivered on 2 February 1786 (and published in 1788) Sir William Jones, a forty year-old British jurist in the service of the East India Company observed:

*The Sanskrit language, whatever be its antiquity, is of a wonderful structure; more perfect than the Greek, more copious than the Latin, and more exquisitely refined than either, yet bearing to both of them a stronger affinity, both in the roots of verbs and the forms of grammar, than could possibly have been produced by accident; so strong indeed, that no philologer could examine them all three, without believing them to have sprung from some common source, which, perhaps, no longer exists...*"

This influential statement is well known but not the errors and prejudices that Jones was guilty of like his dating of Indian tradition based on the Biblical Creation Myth that the world was created on Sunday, 23<sup>rd</sup> of October 4004 BCE at 9:00 AM— time zone not specified. The date was first derived by the Irish bishop James Ussher (1581 – 1656) based on a literal reading of the Bible combined with the belief that world would end 2000 years after Christ or some twelve years ago.

While it sounds comical today, it was taught as history through most of the nineteenth century even though both Darwin's theory of evolution and geology had determined the earth had to be millions of years old to support fossils and the enormous diversity of life forms. Even this very greatly underestimated its age. (The current estimate for the age of the earth is about 4.5 billion years.)

Jones was a capable linguist and knew some Sanskrit. His task was to study Indian texts and understand Hindu law and beliefs to help administer British justice in a manner acceptable to them. In his study of Hindu texts like the Puranas he came across dates that went much further back than the Biblical date for Creation. He dismissed them as superstitions (for failing to agree with the Biblical Creation superstition) and imposed

a chronology on Indian history and tradition to fit within the Biblical framework.

This was to have fateful consequences for the study of India over the succeeding two centuries down to the present. To cite an example, Indian tradition going back at least to the mathematician Aryabhata (476 – 540 CE) has held that the Kali Age began with the Mahabharata War in 3102 BCE. This marks the end of the era known as the Vedic Age. Accepting it takes the beginning of the Vedic period as well as several dynasties like the Ikshwakus to 6000 BCE and earlier. This is millennia before the date allowed by Biblical Creationism which a man like Jones could not accept.

Dates based on the Biblical Creationism were accepted as historically valid by most Western scholars of the time including F. Max Müller, the most influential of them. He explicitly stated that he took the Biblical account including the date to be historical. Most of them were classical scholars or students of religion and had no inkling of science. The widely quoted dates of 1500 BCE for the Aryan invasion and the 1200 BCE date for the *Rig Veda* were imposed to make them conform to the Biblical date of 4004 BCE.

The situation has not changed much in the succeeding two centuries. Indologists like Wendy Doniger, Diana Eck, Michael Witzel and their Indian counterparts like Romila Thapar have little comprehension of the revolution in our understanding of the past brought about by science in the past two decades. They continue to quote 1200 BCE for the *Rig Veda* without mentioning that it rests on the authority of a 400 year-old Biblical superstition! (Some 'scholars' like Doniger and Thapar don't know any Sanskrit either, but that is a different story.) The main point is they know no more science than their predecessors did a century and more ago.

### **New approach, momentous conclusions**

As we shall soon see, in trying to explain the undeniable fact that Indian and European languages are related, linguists came up with hypothetical scenarios (which they called theories) using fragments of existing languages from India and Europe to explain their origin and spread. But they retained the chronological framework of the Bible. Based on this hypothetical scenario, they concluded that their speakers—the various branches of Indo-Europeans—must have followed the languages as they spread. That is to say, in this scenario the people spread following the language spread.

*We however reverse the procedure:* we first trace the spread of modern humans going back to their origins in Africa, and then look at the languages that must have evolved with them as the speakers spread; i.e., we follow *humans as they spread carrying their languages with them*. This will be based not on linguistics, but natural history and genetics. This is based on the elementary fact that their languages are irretrievably lost while their genetic imprint is still with us. Thus the scenario rests on solid scientific grounds with no placing of the language cart before the human horse.

Two momentous conclusions follow from this approach:

1. All non-African humans in the world today can be traced to a small, even miniscule group of humans who left Africa and settled in the Indian subcontinent perhaps 65,000 years ago.
2. The same holds for their languages, the Indo-European languages in particular. This means the origins of the Indian people and their language and culture go back not a few thousand years, but somewhat more than *60,000 years in the Indian subcontinent itself, following their arrival from their homeland in Africa*.

### **Chronological conundrum leads to linguistic conundrum**

To return to the linguistic scene, here was the situation at the end of the nineteenth century going well into the twentieth. A century of scholarship drew upon linguistic theories and racial ideas to conclude that the Vedas and the language(s) associated with them were brought into India by a race of people known as Aryans, later to be called Indo-Europeans, from somewhere in Eurasia or Europe. Germans were the most aggressive and placed the original Indo-European homeland in Germany and called these people Indo-Germanische. This mixing of race with language was to have fateful consequences especially for Europe, but is not germane here with our focus on the chronology.

Well into the twentieth century, scholarly opinion held there was no civilization in India until the invading (or migrating) Aryans brought the ancestor of the Veda and its language in the late ancient age, circa 1500 BCE. The *Rig Veda*, the oldest them was dated quite arbitrarily to 1200 BCE— a date commonly cited by Western as well as Indian scholars while giving no reason, but derived from Biblical Creationism. This was upset by archaeological discoveries in the 1920s of the sophisticated Harappan or the Indus Valley civilization dating back to 3000 BCE and earlier. This meant the Aryans arriving supposedly in 1500 BCE could not possibly be the bringers of civilization to India.

Also, if the invading Aryans brought Veda and its language, what was the language of the Harappans?

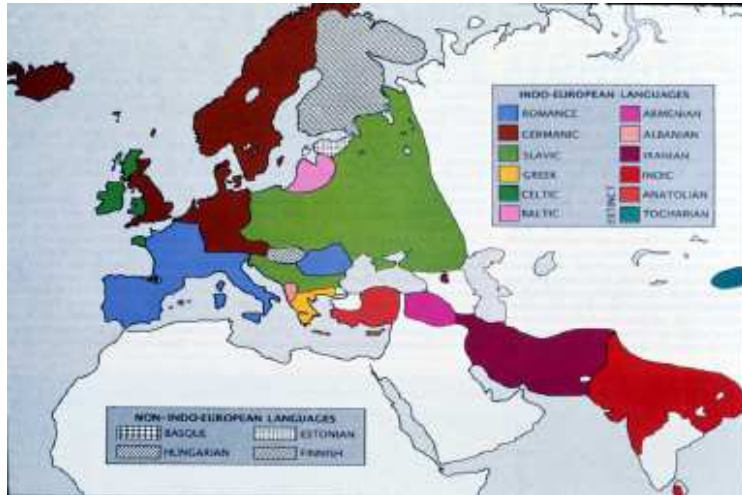
Scholars reacted to this obvious contradiction by changing the character of the Aryans from *bringers* of civilization to *destroyers* of the already existing civilization which they went on to attribute to the Dravidians— again with no evidence. In this new twist to the theory Dravidian inhabitants of the Harappan cities were forced to migrate south taking their languages with them. This suited British colonial policy—they created it—and later, the politics of the Dravidian politicians of Tamil Nadu and Sri Lanka. This position of ‘Harappa is Dravidian’ is upheld by some Western scholars also, notably the Finnish anthropologist Asko Parpola. He has been generously rewarded by Dravidian political leaders like M. Karunanidhi. Whether this legitimizes their ‘scholarly’ findings has to be a matter of conjecture.

With the benefit of hindsight we can see the discovery of the Harappan civilization turned what was mainly a racial-linguistic identity problem into a question of chronology as well. Linguists claimed to have answered the question of Indo-European origins by constructing—or postulating—a hypothetical ancestor language called Proto-Indo-European (PIE) from fragments of existing languages, mainly Sanskrit. Its speakers, also called Indo-Europeans have been located everywhere from Afghanistan to Western Europe, except India where the oldest of the languages, Sanskrit is found.

Science has demolished all these theories as well as chronologies associated with them. More importantly it may also have helped answer a historical question of fundamental importance.

### **Two hundred year old question**

To return to Jones and his successors, in their ignorance of science it was natural they should have come up with some speculative theories to account for similarities between Sanskrit and European languages, especially Greek and Latin. Being linguists, they created a field called philology of comparing languages and cultures but it soon got mixed up with crackpot theories on race and language— like the ‘Aryan’ race speaking ‘Aryan’ languages somehow ending up in Nazi Germany! There was even an ‘Aryan’ science movement that demonized Einstein and his ‘Jewish’ physics! It was denounced by scientists, especially in the twentieth century, but politics and prejudice kept it alive for over a century. In addition to the Nazi ideology, British colonial policy used race as a way of classifying and controlling its British Indian subjects.



**Figure 1:** Distribution of Indo-European languages. The blank (white) portion must be included as part of the Gauda-Dravida group greatly antedating the Indo-European family.

Setting aside such aberrations, Jones (and others) did raise a legitimate question: *why do people from India and Sri Lanka to Ireland and Iceland speak languages clearly related to one another, and have done so for more than two thousand years?*

This fact has been widely noted but a few examples help illustrate the point. What is *deva* in Sanskrit becomes *dio* in Latin, *theo* in Greek and *dieu* in French. Similarly, *agni* for fire in Sanskrit becomes *ignis* in Latin from which we get the English words *ignite* and *ignition*. Amusingly, the famous Russian drink *vodka* has its Sanskrit cognate in *udaka* both meaning water. And there are many more, far too many to be seen as coincidence. Prejudice and politics aside this basic question remains.

Over the past two hundred years many theories have been created to account for these similarities. These are based mostly on superficial phonetic similarities but none has proved satisfactory. Even without the confusion due to race theories, these explanations give glaring inconsistencies. To take one example, using the same data and the same methods some scholars have argued that a branch of Indo-

Europeans called ‘Aryans’ invaded India, while some others claim the reverse— that Aryans (or Indo-Europeans) originated in India and migrated to Eurasia and Europe taking their language(s) with them. The AIT of course holds the opposite view—that the invading Aryans were the eastern branch of Indo-Europeans whose original homeland was in Eurasia or Europe. All these are on their way to the dustbin of history thanks to science.

### **New science: natural history and population genetics**

With the benefit of hindsight one can see that the science tools and data needed to unlock the language mystery did not become available until about twenty years ago. It was only in the last few decades with the emergence of molecular biology after World War II and especially gene sequencing and genome research in the past decade and more that we are in a position to trace the origin and spread of Indo-Europeans and their languages.

It is important to recognize however, *we must trace the origin and spread of people (speakers) before we can claim to trace the spread of the languages they spoke*. Linguists reversed this, in effect putting the cart before the horse and came a cropper. But this was not possible until quite recently. (Linguists and philologists continued with their old methods as if nothing has changed, but that is a different matter.)

Two areas of natural history— the distribution of mitochondrial DNA and Y-chromosomes (and haplogroups) in the world’s population groups, and the fate of humans in the face of natural events have helped us understand the spread of Indo-Europeans and their languages from a group of perhaps as few as a thousand 60,000 years ago well over two billion speakers today. It is a qualitative as well as a quantitative change. It has been possible because we have reversed the procedure by tracing the spread of speakers before languages.

What has allowed us to unlock the mysteries of IE origins is science, especially natural history and population genetics. Population genetics was founded by Sir Ronald Fisher, Sewall Wright and J.B.S. Haldane. Fisher, a Cambridge University geneticist as well as statistician had two outstanding students, C. Radhakrishna Rao (C.R. Rao) and Luigi Luca Cavalli-Sforza. Rao became known as the world’s greatest mathematical statistician while Cavalli-Sforza carried forward Fisher’s work in population genetics, combining microbiology with mathematical genetics. If we are able to unlock the secrets of our origins it is thanks to these pioneers. The material presented here, especially in the second

part, draws heavily on the work of Cavalli-Sforza and his colleagues. (This author had the good fortune of working with C.R. Rao while studying in the U.S.)

What is extraordinary in all this is the depth and power of scientific analysis needed to unlock the puzzle. Linguistics, the principal tool used for over two hundred years has proved totally unequal to the task of unlocking the mystery of our origins. The creation of Vedic and Sanskrit languages in India going back perhaps 10,000 years or more was crucial in the evolution of the final phase of Indo-European languages. Sanskrit is to languages what mathematics is to the natural sciences.

Also remarkable is the immense time scales involved— not thousands but tens of thousands of years. Even this is miniscule by evolutionary standards. We Indo-Europeans (and their ancestors Gauda-Dravidas and Afro-Indians) have been on the planet for barely 65 thousand years, while dinosaurs ruled the earth for as many million years. What follows next is a brief account of our origin and spread.

### **Gauda-Dravida before Indo-European**

The usual explanation for similarity of Indian and European languages, at least in India has been the famous, now infamous Aryan invasion theory or the AIT. It claims that bands of invading ‘Aryan’ tribes brought both the ancestor of the Sanskrit language and the Vedic literature from somewhere in Eurasia or even Europe. This was the result of scholars assuming that the ancestors of Indians and Europeans must at one time have lived in a common place speaking a common language before they spread across Asia, Eurasia and Europe carrying their language which later split into different languages. They called these speakers Indo-Europeans and their languages—from North India to Europe—the Indo-European family. They called the original language Proto-Indo-European or PIE, a term sometimes applied to its speakers also.

European linguists soon followed up on these ideas but in their newfound enthusiasm committed two egregious blunders. First, they borrowed the Sanskrit word *Arya* which only means civilized and turned it into a geographical and then a racial term by applying it to the people and languages of North India. (The correct term for North India is *Gauda*, just as *Dravida* refers to the south.) Next, they placed South Indian languages in a totally different category called the Dravidian family excluding them from nearly all discourse about Indo-Europeans.

In reality South Indian languages are much closer to Sanskrit in both grammar and vocabulary, whereas with European languages it is limited to vocabulary. Science now tells us that Indo-Europeans were a later offshoot of Gauda-Dravida speakers.

This point—the closeness of the so-called Dravidian languages to Sanskrit—needs to be emphasized for keeping the two separated continues to be part of a political and academic agenda. In truth, there are no reasons to suppose that Gauda and Dravida languages including Sanskrit had ever remained in separated exclusive domains. Some covert Aryan theorists like Thomas Trautmann go to the extent of claiming that the Dravidian language family was ‘discovered’ by Bishop Robert Caldwell in 1835, just as Sanskrit was ‘discovered’ by Jones in 1786. (And as Bishop Ussher had ‘discovered’ Biblical Creationism in the 1620s.) The truth is by then they had a two thousand year history of coexistence and at no time were the Dravida people ignorant of Sanskrit.

The Aryan myth and the idea of the invasion (AIT) were taught as history for nearly a century until archaeologists discovered the Harappan or the Indus Valley civilization. It continues to be taught in one form or another in spite of the many contradictions highlighted by archaeologists like Jim Shaeffer and B.B. Lal as well as natural scientists like Sir Julian Huxley L. Cavalli-Sforza and others. Politics and entrenched academic interests have succeeded in keeping alive this two hundred year old ad-hoc hypothesis but science has put an end to its survival while at the same time opening a vast new window on the origin and spread of Indo-Europeans.

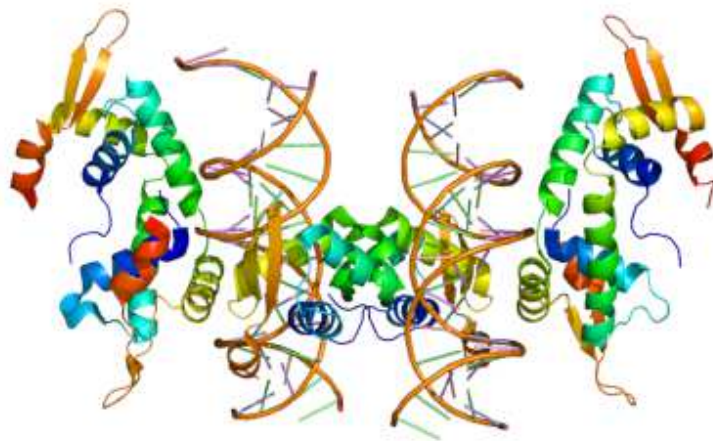
Recent discoveries in natural history and population genetics, especially in the past two decades have changed our understanding of Indo-European origins in ways that were totally unexpected. The picture, still a bit hazy, highlights the fact that theories like the AIT are naïve and simplistic. To begin with, they very greatly underestimate the time scales involved and also ignore the revolutionary impact of natural history on humans in the past hundred thousand years. It is no exaggeration to say that natural history dictates history. It is science, not linguistics that has helped us unlock the mystery of Indo-Europeans. In fact there is no mystery.

### **Volcano and a gene mutation**

Our story takes us to Africa some hundred thousand years ago. Our ancestors, called ‘anatomically modern humans’ have been located in fossils in East Africa dating to about that time or a bit earlier. We were



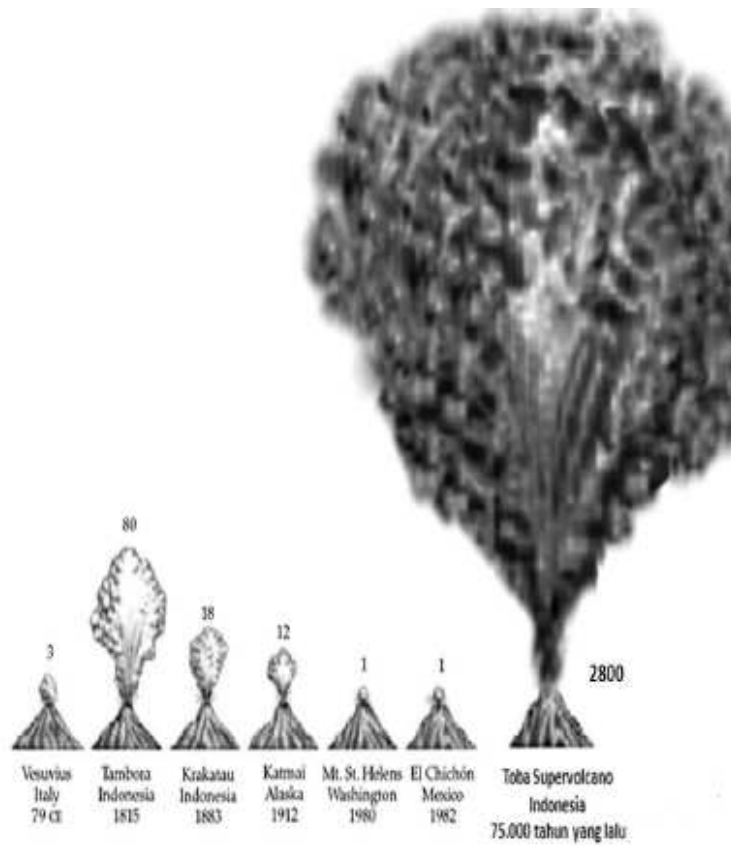
not the only humans then existing: there were several other 'humanoid' species in Asia and Africa among which the now extinct Neanderthals are the best known. What separates us from them is we have survived and they have not. In addition we are a speaking species with language without which civilization as we know it is inconceivable. So, if we want to understand the origin of languages and its speakers, *it is the origin of speech we must look into* and not just phonetic similarities; with some effort we can find phonetic similarities between any two languages.



**Figure 2:** FOX P2 gene whose mutation gave our ancestors speech capability

This means, before speaking of Indo-European, Proto-Indo-European or any other language, we must ask ourselves when did humans begin to speak in the first place? The answer is provided by the discovery of the mutation of a gene known as FOXP2. It is a complex 'transcription' gene that controls both verbalization and grammar. The time when the mutation actually occurred cannot be pinpointed but based on the evidence of the extinction of all other human species following the Toba super-volcanic eruption about 73,000 years ago, we may place it at around 80,000 years before present. The exact date of mutation doesn't matter: what is important is that only our ancestors, endowed with spoken language survived.

Then, around 73,000 years ago, there was a massive volcanic eruption on the island of Sumatra known as the Toba Explosion. *It is the greatest volcanic explosion known, nearly 3000 times the magnitude of the 1980 Mount St. Helen's eruption.* It resulted in a six year-long 'volcanic winter' (like a nuclear winter) followed by a 6,000 year



**Figure 3:** Scale of the Toba Explosion, the greatest volcano on record Indo-Europeans: two ancient waves

long freeze resulting in the extinction of all the human species on the planet except a few thousand of our ancestors in Africa and the Neanderthals. In particular, *all non-speaking humanoids became extinct*. As a result only speech capable humans survived this catastrophe. This means all of us are descended from this small group of speech capable Africans. (Neanderthals became extinct 30,000 years ago.)

This was the situation until about 65,000 years ago when small groups of our African ancestors made their way to South Asia traveling along the Arabian coast. *All non-Africans living today are descended from these one thousand or so original settlers in South Asia*. They flourished in a small area for some ten thousand years in South-Central India. Their small number living in a small area meant a single language would have sufficed. This was the primordial language of our ancestors. My colleagues and I call it Proto-Afro-Indian. No trace of it has survived.

For the next ten thousand years or so they led a precarious existence by hunting and gathering. About 52,000 years ago there was a dramatic warming in climate. This led to increase in both population and territory. It was followed by a mass extinction of animals probably due to over-hunting. Shortly after this, about 45,000 years ago or so, small groups left the Indian subcontinent in search of better hunting territory and made their way to Eurasia and Europe. *These are the first Indo-Europeans*. The language they took with them, possibly more than one was descended from the primordial Afro-Indian and became the first Indo-European. We have no idea what it was like. But the following scenario may be inferred.

African ancestors '! Afro-Indians '! South Asians '! Indo-Europeans (first wave)

All this took place during the last Ice Age or what scientists call the Pleistocene. Towards the end of the Ice Age, about 11,000 years ago, agriculture originating in tropical Asia (India and Southeast Asia) replaced hunting-gathering leading to much larger populations. Important animals including the horse were also domesticated in the region (There is no truth to the claim that horses were unknown in India before the Aryan invaders brought them.) There were now several languages in north and south India which my colleagues and I call Gauda and Dravida languages. (Arya means civilized and inappropriate for region or language.)



Out of Africa: Courtesy Bradshaw Foundation, Oxford and the National Geographic Magazine

There were two major developments during the Holocene or the period after the Ice Age 10,000 years ago. First, there was intense activity leading eventually to the creation of the Vedas and the language that became Sanskrit by incorporating features found in both northern

(Gauda) and southern (Dravida) sources. This accounts for the so-called Dravidian features found in the Vedas as well as the *closeness of Dravidian grammars to Sanskrit grammar*. The other was a second wave of people out of India who took with them both Sanskrit related languages and agricultural skills along with domestic animals including rats and mice! This accounts for the closeness of Sanskrit to European languages, in vocabulary if not grammar.

**South Asians (Gauda-Dravida) - Indo-Europeans (second wave)**

**Afro-Indians - Gauda-Dravida - Indo-Europeans (both waves)**

These flow diagrams in effect encapsulate this tremendous history of 65,000 years from the time our African ancestors settled on the Indian coast and evolved the languages and the people that went on to populate the world. The same is expressed in more detail in Table 1 below. (We recognize that there must be similar story about the people and languages of East Asia and the Native Americans, but we it to be pursued by experts knowledgeable in the areas which the author is not.)

<b>Climate and human activity</b>	<b>Dates</b>	<b>Language development</b>
Toba destroys humans & vegetation in South Asia giving rise to a 6 year 'volcanic winter' and a 6000 year to 10,000 year freeze.	73 K BP	Toba explosion eliminates all humans without speech; only Neanderthals and our speaking African ancestors survive.
Groups of Africans settle in South Asia (India) and along the Arabian coast taking a coastal route. World population down from about 60 million to a few thousand.	65 K BP	Our African ancestors arrive in India bringing their language. It is the ancestor of our languages – the Primordial Afro-Indo-European.
Hunting-gathering: small population in a state of genetic drift. Cold period. Dramatic warming c. 52 K BP allows population and habitation expand. Migration East (East Asia, Australia).	65 K – 52 K BP	Cold phase: population and area small enough for a single language to suffice. More languages evolve over the next 10,000 years and more.

Temporary warming leads to increase in population, area, flora and fauna. Overhunting causes depletion of fauna.	52 K – 40 K BP	Expansion results in the birth of several regional languages and dialects—Gauda (northern) and Dravida (southern).
Depletion of fauna due to over-hunting sends people in search of better hunting grounds to Eurasia and Europe. <b>First Indo-Europeans.</b>	50 K – 35 K BP	<i>Indo-Europeans, First wave with</i> languages from India moves to Eurasia and Europe. No trace of their languages survives.
Late Pleistocene, transition to Holocene. Beginning of agriculture and domestication of animals— pigs, sheep, cattle, and horse.	35 K – 11 K BP	Spread of agriculture and movement north. Beginning of Sarasvati settlements.
Transition to the Holocene. Expansion of agriculture and domesticated stock into West Asia, Eurasia, Europe. <b>Second wave</b> of Indo-Europeans.	11 K BP	Creation of Sanskrit and the Vedic from Gauda and Dravida sources. The second wave takes Sanskritic terms into Eurasia & European languages.

**Table 1:** Summary of Indo-European transitions (K = 1000, BP = Before Present)

This means *there were two major waves of Indo-Europeans in ancient times, both out of India into the north and west.* We know of the first (c. 45,000 BCE) only from genetic studies of modern populations around the world. *We have no idea what their languages were like.* Their migration however is a near certainty: they went on to form what are called *founder groups* that populated Eurasia and Europe. These were the ones that received Sanskritic influences following a second migration many millennia later.

This second migration, and much more recent, took place at the turn of the Pleistocene-Holocene transition some 10,000 years ago. It has left many traces in archaeology, livestock, genetics, culture, and above all in the Sanskritic imprint on the languages of Europe and Eurasia. This is supplemented by genetic and other scientific data relating to animals that accompanied them including of rats and mice!

### **Third wave west: birth of history**

The identification of two major waves— the first around 45,000 years ago and the second near the Pleistocene – Holocene transition about 10,000 years ago helps answer the language question, to wit, the similarity of Indian and European languages. The first wave created what in genetics is known as ‘founder groups’ in Eurasia and Europe, while the second wave carried Sanskritic terms and ideas that became implanted on them. But we have no historical records yet to understand the true nature of the process. All we have are myths and legends that await reexamination under this scenario given by science.

This was followed by a third wave five thousand years after the second or five thousand years ago (c. 3000 BCE). This was more western than northwestern, through Afghanistan, West Asia (Iran-Iraq) to the Levant, Egypt and possibly the Aegean. By then use of writing had become widespread— in Harappan India, Mesopotamia and Egypt, and later in the Levant and Greece. Unlike with the first two waves, we have ample archaeological and literary records of their texts including mathematics and documents attesting to interactions with established kingdoms and states in a vast belt from India to Anatolia to Egypt. A few examples can be cited.

The first and most interesting, to this writer at least, relate to ancient mathematics. The Vedas are replete with mathematical ideas and astronomical references that presume knowledge of mathematics. The American mathematician Abraham Seidenberg showed that the mathematics of Old Babylonia (before 1700 BCE) and the Egyptian Middle kingdom (c. 2000 BCE) were both based on Vedic mathematical texts known as the *Sulbasutras*. (This should not be confused with what goes by the name Vedic Mathematics created by the late Bharati Krishna Tirtha. These are modern works that bear no relationship to the Vedas.)

Following Seidenberg this writer went on to show that the same *Sulbasutras* formed the technical basis that made possible the extraordinary architectural achievements of the Harappan civilization.

There we find for the first time planned cities, public buildings, standardized bricks, drainage systems and other manifestations that demand considerable knowledge of mathematics. The *Sulbasutra*-Harappa solves also a chronological puzzle of fundamental importance: the Harappan civilization was contemporary with the Sutra period that followed the Vedas.

This means the Sutra period overlapped with the Harappan *or the third millennium BCE*. This can be further refined by noting that

Sumerian records from the same period speak of trade in cotton and other commodities like lapis lazuli from a land to the east that may be identified with Harappan India and Afghanistan. This gives us a firm chronological equation relating Harappan India, the Sutra literature and the West Asian country of Sumer-Akkad. This writer summarized it as the Sutra-Harappa-Sumeria equation.

There are many more links but we will not pursue them here. The important thing to note is by the time of this third wave, writing was established in the region and we have the beginnings of history in the modern sense, meaning supported by written records. But in India, we have orally preserved records like Vedas and the Puranas, often as accurate as any written records that go back several millennia. History in the modern sense begins with these records, not Herodotus the so-called Father of History which he was not. A great deal of work remains in interpreting literary, archaeological and other records of the period, but Table 2 summarizes the beginnings of history to the end of Old Civilizations.

<b>Event or development</b>	<b>Dates</b>	<b>Records and sources</b>
End of the creative Vedic Age Battle of Ten Kings	4000 - 3700 BCE	Maritime, astronomical and other references in the Vedas and the Puranas
Kingdoms and dynasties. Purus in the north, Yadus in the west and Ikshwakus in the east	3700 - c. 3000 BCE	Puranas, late Vedic literature (Brahmana - Upanishads). <i>Ramayana</i> and <i>Mahabharata</i>
Rise and decline of Harappan Vedanta and Sutra literature.	c. 3000 – 1200	<i>Sulbasutras</i> , Sumer-Akkad trade records, Inscriptions,
Rise of Sumer-Akkad and Old Babylonians. Egyptian Middle Kingdom. The Third Wave.	BCE	Hittite – Mittani and other records. Horse training manuals. Icons and seals from India to Celtic Europe

**Table 2:** Third wave- transition to the historical period

**Digression 1: on human appearance:** During the period of over 65,000 years following their arrival in India, several phenomena known to genetics would be working on the populations involved producing various populations as found today. First is adaptation to the environment by natural selection. The most noticeable of these is skin color. It gets darker as we get close to the equator while getting lighter as we move



to the poles (Arctic). This is true in the tropics as well as in temperate and cold lands like Europe and Eurasia.

This is because human pigmentation has evolved to be dark enough to prevent sunlight from destroying the nutrient called folate, but light enough to foster the production of vitamin D. The fact that we see wide variation in Europe and India is indication that humans there have lived long enough for this evolutionary process to operate. On the other hand it does not hold for regions where the population consists mainly of recent immigrants like America and Australia. But people whose minds are made up about their beliefs tend to argue from extreme examples— like fair Punjabis and dark Keralites though reverse cases are also known!

Two other demographic phenomena play a role. These are genetic drift, or simply drift, and selective sweep. Drift allows some fortunate but not necessarily fit populations to survive in some environments and go on to form founder groups. (Zoroastrian Parsis of India may be seen as one such group.) Selective sweep is the process by which certain highly advantageous mutations (like of FOX P2) spread through populations over generations, eventually transforming the whole population. The whole thing is quite a complex process and simplistic theories based on superficial observations and short time spans are bound to be wrong.

### **Digression 2: why India and Sanskrit so pivotal?**

The role of Sanskrit or what led up to it played therefore a crucial role. Sanskrit grew along two parallel tracks— Vedic and what became classical. (Strictly speaking ‘Sanskrit’ should not be used to describe the language of the Vedas, especially the *Rig Veda*.) As Sri Aurobindo pointed out a century ago, the *Rig Veda*, the world’s oldest literature, was the culmination of a long effort that must have occupied thousands of years and not the beginning. Everything that followed is a simplification and in some ways a degeneracy— even the later Vedas like the *Yajur*. Its creators must have recognized that they had created something extraordinarily precious because they put in enormous effort into preserving it through hundreds of generations of teachers and pupils as well as devising methods like *ghana-patha*, *pada-patha* and the like to facilitate the preservation.

While less sophisticated than the Vedic, the later classical Sanskrit also was carefully constructed language as the word ‘Sanskrita’ indicates. This explains the extraordinary perfection of its grammar: the grammar used by Kalidasa 2000 years ago is the same as what we

use today. *This is not true of any other language, and it is no accident.* Since the idea that it was brought by invading Aryans has been demolished by science, we must look to indigenous sources. Sanskrit is and will always remain the lynchpin of linguistics, not any PIE or anything else. Sanskrit can do without PIE as it has for thousands of years but Indo-European Studies will collapse without Sanskrit.

India was (and is) pivotal because of its strategic location and climate. Both land and sea routes—east-west as well as north-south—are accessible from India. Also, India enjoys a subtropical climate that allows both tropical and temperate flora and fauna to flourish.

The picture given here is by no means definitive but decidedly in better agreement with scientific data and the fossil record than linguistic theories like the AIT which must now be consigned to the dustbin of history. Many details remain to be filled, but any new theory must account for scientific data, especially from natural history and genetics, and take also into account the vast time scales involved. Such momentous developments as the evolution and spread of languages over half the world cannot be squeezed into a few thousand years like the Biblical dogma of Creation in 4004 BC on which AIT was based.

## Conclusions

The most important conclusion to follow is that guesswork and ad-hock hypotheses-building are not a substitute for science. The shallow chronology of India is the result of faulty historiography and shoddy scholarship created to serve political and religious interests. The basic findings of science so far can be summarized under the following:

1. All non-African humans living in the world today are descended from a small group of individuals, perhaps as few as a thousand in South Asia going back about 65,000 years.
2. There were two major waves of Indo-Europeans from the Indian subcontinent to Eurasia and Europe: the first about 45,000 years ago led to 'founder groups' being formed in Eurasia and Europe. These were the first Indo-Europeans.
3. The second wave, about 10,000 years ago and later carried Sanskrit vocabulary as well as animal husbandry and agriculture that got overlaid on the languages already in use. This accounts for the similarity between Indian and European languages that has been a puzzle to linguists for over 200 years.
4. There was a third wave beginning perhaps 5000 years ago or a bit earlier that spread Indian influence westward into West Asia, Egypt, the Levant and Europe. This has left ample traces

in mathematics and other technical literature as well as in spiritual ideas and iconography.

Finally, unlike Indo-Europeans whose different branches can be identified by their genetic imprints, *Aryans cannot be identified genetically or archaeologically*. Arya is an adjective that is used to describe civilized behavior and cannot be applied to a population group or language, much less race. Aryan theories (and chronologies associated with them) rank among the great aberrations of scholarship. They should not be debated any more but given a decent burial.

**Acknowledgements:** The author gratefully acknowledges valuable suggestions and help from Dr. Stephen Oppenheimer (Oxford), Dr. David Frawley (New Mexico), Dr. Premendra Priyadarshi (New Delhi) and Dr. Rosalie Wolfe (Chicago). The material presented here is a summary only, keeping in mind the fact not all the readers will be familiar with the highly technical details relating to population genetics of humans as well as of the flora and fauna on which it rests. It should be seen only as a framework for future presentations and research. The author is currently working on the book *Genes of Time and the Birth of History* in which the topics presented in the article will be explored. The author would also like to remark that the research and the methodology followed here owe nothing to the so-called Out of India Theory or the OIT, which the author sees as little better than the now discredited AIT.

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# Indian Scholarship and Depth of Indian Prehistory

Bhagwan Singh\*

Society tames the wolf into a dog. And man is the most domesticated animal of all.

*Friedrich Nietzsche : Thus Spoke Zarathustra*

My rash decisions have been more productive than my well considered choices. In one such decision I started learning all the scheduled Indian languages, including south Indian ones. I worked hard but made nominal progress and encountered some problems which defied old explanations. One of them related to absurdity of Aryan and Dravidian family division. I decided to solve it through analysis of nonsense place names. After having made some headway, I thought of discussing the problem with Dr. Suniti Kumar Chatterji whose available books and papers I had gone through and was impressed by his vast learning, specially his Life work '*Origin and Development of Bengali Language*', '*Indo-Aryan and Hindi*' and his papers on Dravidian.

## **The Linguist and the novice**

Way back in 1969, when I sought my appointment with Dr. Chatterji, I had come to some definite conclusions and expected confirmation by a linguist of his stature. He was Emeritus Professor and enjoyed a small staff with an office at National Library Annexe.

To pick up the thread for conversation, I reminded him of his equations of Ganga>Khong>Kiong>Whang etc. and migration of the river-name Ganga to China with ancillary observation, such as the term

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Ganga originally meant 'river', it was a term from Austric dialect. They were pioneers in rice cultivation and regarded rivers as maternal entities, etc.

I had not even completed my statement when Dr. Chatterji intervened to tell me that his thesis was wrong and he had renounced it.'

My blunt response was, 'the thesis was wrong no doubt, but you have done a greater wrong by renouncing it.'

Obstinate it could be and could justly attract a reproach and frown. But to the doyen it was simply amusing. He made some probing queries to satisfy himself with feigned curiosity and after personal satisfaction invited my objections to his changed views. To make short of a long discussion spread over more than an hour, I submitted that :

He was wrong to hold that *gaṅg* meant 'river', as the term is a derivative of *kam/gam* with variations *kan*, *gan* and *nak/nag*. The fact that *kam/kan/gaṅg*; meant water is attested by *kanja*-water born, i.e. lotus, *gaṅg"al* – pot for storage of water, *gagar+i* (*gaṅgari*), *gagar"a* – water pitcher, *gagan* – sky from which rain falls. It is present in place-names on river banks or close to water-bodies including sea, such as Kankhal, Kannauj, Kanpur, Kannanoor, Kanchi, and humble village names on river banks such as Kanaraya, Kanail, Nakail, Nagawa. Hindi *kana+i* (कनई), Punjabi *-kanj+i* – water, *«sikanj+i-* sweet water etc. relate to the same basic concept.

By the time our discussion concluded, Dr. Chatterji had mellowed down almost to accept my position, even though he did not admit it as plainly. He only invited me to meet him at any time without taking any prior appointment.

A guess at the background of his earlier thesis, and subsequent rejection may be interesting. He had uncritically accepted the western thesis of an anthropologically void India populated by waves of Negrito, Austric, Dravidian and Aryan intruders which he repeated in his articles with confidence.

By the time I met him Prof. Needham had published more than five volumes of *Science and Civilization in China* in active collaboration with Chinese historians. One of their claims pertained to initiative in rice cultivation as early as 10,000 B.C. This probably had forced Dr. Chatterji to reverse his previous position which was somewhat conjectural.

There are stronger reasons to hold that agriculture, especially rice cultivation started in India where wild varieties of rice have been as plentiful as to justify the adage 'there is no end to strains of Khastriyas and paddy'. Archaeology (Lahur"adev"a, Sant Kabir Nagar, eastern UP) leads us back to 7<sup>th</sup> millennium BCE, that is round 9000 PB when rice was cultivated in India. The developments prior to that are irrefutably substantiated by linguistic, technological and ritual evidence. Overawed of Western scholarship and benefitting from their ready consent and dissent, our tallest linguist changed his views to adjust to new opinions rather than himself research, compile and examine the data available in our own sources, which were deliberately ignored by western scholars and their protégé. Let us relate some of the pertinent facts available in our sources regarding the antiquity of rice exploitation and cultivation in India. At the outset it must be submitted that humans everywhere, and undoubtedly in India, had mother Nature as their supreme teacher. Most of the developments in the field of medicine, grammar, philosophy, selection of edibles, domestication of plants and animals resulted from minute observation of natural phenomena.

1. At the initial stage man in India learnt about the food value of rice, observing parrots and sparrows picking ripening paddy, removing the husk with their beak and feeding on the kernel. Imitating the action he separated husk of the wild grain with his nails and started consuming the kernel. The practice continued in rituals and on sanctified occasions as, *akÛsat*, unbroken rice. It could be derived from this method alone. Later even mill-turned rice used on special occasions retained the name. The oldest variety exploited appears to be *sokan*, black rice, as it continued in oblations offered to the goddess of calamities (निर्ऋत) and some other deities.<sup>1</sup> The term *akÛsat* (अक्षत), intact, continued to be used for rice on sanctimonious occasions, even after the introduction of improved devices which did not guarantee intactness.
2. Next they discovered that the rice could be parched to make removal of the husk easier. The term *kh+ila* (खील), used for popped rice, again gathered ritual sanctity, surviving in *kh+ila bat"as"a* (खील-बताशा), even though *l"a+i* (लाई), parched rice replaced *kh+ila*. Terms *khily"a* – wasteland with saline whitish crust, *khilan"a* (खिलना), blooming, are its cognates.
3. They were soon to learn that with use of a rubber they could

more easily separate the husk from popped rice, and thereafter powder it to be used more deliciously with addition of water, milk and curd, even honey. This was the stage, the term «s"alic"urŪna (शालिचूर्ण) came into vogue.

4. After these developments had taken place, these hordes from north-east looking for new fertile valleys gradually moved up to KurukŪsetra, the land defined in the RV.III.23.4.<sup>2</sup> The term *kurukŪsetra*, suggests that agriculture in this area, howsoever rewarding, was more labour-intensive than eastern rice cultivation which had simple demand of casting or transplanting and weeding out. Now they had to develop devices for leveling the ground, digging or tilling, irrigation or causing the rain to fall through some tricks, making the *kurukŪsetra*, *dharmkŪsetra* in addition.
5. Experiments and innovations in digging, scratching, and ultimately furrowing start with pointed sticks (तीक्ष्णाग्रदंड) which was later modified as *khanitra* (खनित्र) to pointed end of horn, later on met with an improvement in which sharp pointed stone was fixed to the horn (देवाः क्षुरपवि शिरोऽकुर्वन्, तस्यान्तरा शृंगे शिरो व्यवधाय विष्वच व्यरुजद्), replaced later by sword-like wooded implement (स्वय), followed ultimately by *l"angala* (लांगल), *s+ira* (सीर) and *v\_rkŪna* (वृष्ण).
6. History of this region has archaeologically reached down to 7<sup>th</sup> millennium BCE, vide Bhirrana (Fatehabad, Haryana)<sup>3</sup>. This may help us making some guesses about the antiquity of those who for an unknown period practiced primarily rice cultivation prior to moving to a comparatively dry climate unsuited to their preferred crop. The word *ked"ar* means rice-field and it presupposes existence of strips of land (*kiy"aries/ky"aris* कियारी/क्यारी) which facilitated rice planting and cultivation presumably in sloppy hill-sides. They came down to central Gangetic streams and rivers after they gathered strength to reverse the onslaughts of foragers for their simple crime that they wanted to produce to feed all during the days of scarcity and wanted others to adopt the same method, to become self-reliant. They suffered at the hands of those who had a different philosophy of subsistence. They must have moved to other river basins before they reached *KurukŪsetra* is a simple guess.
7. The terms pertaining to the earliest devices are Indo-Aryan.

What could be the cradle land of those who called themselves *Deva* (देव), understandably signifying the stage of slash-and-burn device, for which they were despised and constantly chased away by the Asuras/R"akŪsasas. Much later they donned "arya to assert their comparative superiority to others having made notable advances. In mythological accounts Devas are tormented by Asuras, but the Aryans dominate the Asuras despite latter's acknowledged numerical superiority and strength. It marks a transitional phase, and calls for patient reading of our texts.

8. Aryanization marked propagation of productive technology (यज्ञविस्तार), i.e. animal husbandry, agriculture, horticulture, mineral exploitation and water-management (RV. 10.65.11). In the course of time they advanced in trade and commerce, extended their cultural hold over the entire area covered by Indo-European languages.

Now coming to the basic issue, i.e. *kan/kam* – water, the term had no definite connection with Negroes or Congo. But this again did not figure in our discussion. In my subsequent data-collection and analysis I came to the following conclusions:

1. All the synonyms of water are imitative.
2. Water with change in volume, speed, obstruction, height of the fall is capable of innumerable sounds, therefore it has innumerable synonyms. Primeval association of Brahm with water has justified the transfer of synonyms of water to Vi]s]nu.
3. Water is capable of cleansing, muddling, purifying, rotting, stinking, shining, obscuring, satisfying, moving, stagnating, reflecting all the colours in nature as such semantically it has generated terms for purity, dirt, decay, light, vision, motion, moving things and animals, all the colours including darkness, almost all the edibles and liquids etc., most of the river names and names of water-bodies, even the names of stone, sand, clay, derive from words signifying water. We can reach back to some synonyms of water tracing the history of any of them. Strangely enough our languages and rituals have preserved the secret code not to be found in any other country.
4. All these words being onomatopoeic, we cannot associate them with definite speech communities even though we can identify their interplay across linguistic barriers. Take for



instance, *kan-* water, *kanj-* water-born, *kan* – shine, *kaŪn* (tamil) – eye, *kan+inika* (Sanskrit) – pupil of the eye, *KaŪnva* – seer, *PraskaŪnva* – exceptionally brilliant, *k"āŪn"a* – handicapped by one eye, *kancan-* that which dazzles. i.e. gold, *k"āñca* – glass, *kaŪn* – shining particle, particle, *kan+i* – particle of diamond. It is generally asserted that *kaŪn* – eye, is basically Dravidian borrowed in Aryan.<sup>4</sup> We neither support nor disclaim such superficial inferences. They ignore even the fact that in no Dravidian language, terms for seeing or viewing are derived from this word, Tamil, *p"ar* ‘to see’, the same that occurs in Hind ‘*k"an p"arn"a*’. What is more interesting is the phonetic proximity between T. *kan* and H. *k"an*, Bhojpuri *akanana* ‘listening attentively a faint sound’, *k"anp"aran"a* to attune the ear to catch the faintest sound. The eye on the joint of sugarcane from which shoots sprout is called *akŪsa*, or eye and thus the term *gann"a* has close association with T. *kaŪn* – eye, while *ikŪsu* is derived from *iŪsa /viŪs* – water. While the terms for eye and seeing in the so-called Aryan or Sanskrit language have a regular string – *Ūtr/dŪr* – water (>*Ūtrpti/ŪtrŪs"a/tarpaŪn*), > *drig*, *dŪr<*, *dŪrŪsŪti*, *darshan*; *iŪsa* – water, juice > +*ikŪsaŪn* > *aksi*, *v+iksan* etc., there is no such regularity in terms attributed to Dravidian.

5. It is tricky to hold any of these as Dravidian, Aryan or Mundari, but they are all Indic and have been derived from some or other sound caused by water action is beyond doubt. The deeper we go the wonderland of Indian languages their intricacy becomes all the more magical.

After the picture crystallized, I tried to convince, Dr. Dayanand Shrivastava, a reader of linguistics in Calcutta University to write a book on the line. He found my arguments strong but had no courage to take it up as a project even though I offered my assistance and intended to place the data collected by me at his disposal. It took time for me to realize that you can transfer information, but cannot transfer your vision and inspiration to anyone to write a poem. A new vision is much like poetic inspiration.

Ultimately I decided to try it out myself with little hope that it would find a publisher because of my limitations as a linguist, and the research conducted on unorthodox lines, that too without the guidance of a competent linguist. Even so the book came out in 1973 as *Arya-Dravid Bhashaaon ki Moolbhot Ekta*, by Lipi and was received warmly.

The book made an impact but did not create the type of sensation I had expected. It was recommended as a reference book by Pune University, of course, headed by one of my teachers. I was not sure if affection prevailed over his discretion or not.

### **Vedic Scholarship**

My Vedic study also did not start with any future plan but to have a clear understanding of the text, which in translations appeared to be incoherent. I had completed *Rigved* and *Atharvaveda* with the help of Ramgovind Trivedi's translations, consulting the original verses and Sayan's commentary, taking elaborate note of the portions that appealed me. I was convinced that these texts are not as hopeless as they appear in translations. I took up *Satapath Brahman* primarily to acquaint myself with Manu episode; *K'am'ayan+i* narrative inciting my interest. I was reading the original and almost making guesses through the little that I understood. Manu episode created not much problem but I was stuck when it came to Videgha Mathavas episode. The magical description confused me. I sought help from Egging's translation. Translation was verbatim yielding no clue to the allegory. A footnote appended cited Weber who had invented a proof of Aryan expansion eastward from Sarasvati Valley with tacit hint that the movement eastward was accompanied by arson.<sup>5</sup>

I did not find the footnote *bona-fide*. Dissatisfied, I tried to check available Indian opinion and encountered D.D. Kosambi and G.C. Pande. To my surprise both had literally taken it to be a case of burning, the former believed that the rainforests of Gangetic plains could neither be cleared before Iron Age, nor the entire Gangetic belt was inhabited prior to that. Kosambi lifted Weber to his logical conclusion. While the latter has envisioned progress of invading Aryans who first settled in Punjab, next spread upto Saraswati, and finally in their third attempt advanced up to Sad'an+i'a, Kosambi imagined it as third invasion of Aryans possessing knowledge of agriculture and iron-technology. According to him they advanced eastward burning forests of Himalayan foot-hills till they reached Sadan+ir'a or Gan#daki.<sup>6</sup> Dr. Pande endorsed the eastward passage of Aryans and sought parallel with Kh"aÛn#davavan episode of *Mahabharat*.<sup>7</sup> Kosambi was followed blindfold by the so-called Marxist historians, while Dr. Pande was as credulously repeated by many others.

I found these readings more amusing than enlightening, despite my

sincere regards for both the scholars. I was at pains to note that western scholarship was deliberately mischievous while our noted scholars did not care to use even commonsense. The text did not allude to any burning, but drying up of all the rivers – स इमा सर्वा नदीरतिददाह – the only exception was Sad"an+ir" as it was fed by Himalyan glacier – सदानीरा इति उत्तरात् गिरेर्निधावति तां हैव नातिददाह – and as such it was a case of one of the severest droughts, in which all the other rivers along with Sarasvati went dry. In his translation Eggeling did not mince word and clearly admitted that the case was of river burning, i.e. drying up.<sup>8</sup> As such the tern *atidaha* translated by Griffith as blazing, had little meaning. It meant parching. And ultimately *vai«sv"anara* did not refer, at least in this case, to Agni, but the Sun (वैश्वानरः यतते सूर्येण). In order to further check my interpretation I examined each word and the context including the Rgvedic verses cited in the episode, which hinted at a prolonged famine. It took more than a decade to find its confirmation in archaeological records. In consequence of this catastrophe fertile Sarasvati Valley turned into desert and was almost depopulated as its habitations shrunk in size, number and prosperity.<sup>9</sup>

### **The Historian**

As I had no premeditated plan to write on language, I had no idea that some day or the other I shall enter the forbidden zone of history. In fact I had no idea as to what was being currently taught or written about ancient India. Having formed my own opinion about the Vedic society and culture, I just tried to check what change had been brought about in recent history books and for that, initially, I picked up the books by Dr R.S. Sharma and Dr Romila Thapar. The two, I was sad to find, were pathetically ill-read as for Vedic literature was concerned. I sought an appointment with Dr. Sharma in 1982 whom I had earlier presented a copy of my book on the Aryan and Dravidian relationship. He gladly spared some of his precious moments at his residence in Cavalry Lane. I was very much impressed by his openness and ready acceptance of what he found irrefutable. My queries arose not from curiosity but from an urge to present the factual position. I showed my disagreement on each and all points covered by him. He held that the Vedic society was pastoral and practiced nominal agriculture while I found nominal references to herding and grazing. They had cattle-wealth no doubt, but agriculture and trade appeared to be primary concerns of the Rgvedic Aryans. References to cattle were in contexts

different from the one envisaged by him. They did not move from pasture to pasture, but on roads, which did not fit with grazing and herding. They had horses, sheep, goats, camels, donkeys besides cattle. I could not understand how could they keep all these animals in cattle-centric pastoral economy? Moreover, the ancestors of the Vedic people called themselves *Devas*. *Deva* much like *Asaura* still survived in surnames and place-names while it had assumed super mundane character by the time the earliest extant verses in the Rigveda were composed. Interestingly, *Devas* had not been able to tame or domesticate cattle. They relied on goat for milk, milk-products besides meat. Initially *ghŪrt* used in oblation was called "*ajya*, i.e. derived from *aj*, goat. The term continued even after cattle domestication, when cow became the main source of diary products? A peculiar situation arises when we find currency of gold chips, silver, copper, semi precious stones, even pearl and *ratna* in Vedic society, a fact ignored by those who attached singular importance to cattle. Again in a reference to repayments of debt fractions, i.e., unit, half, quarter, eighth and sixteenth part of a cow – *go*, *gaw*"*ardh*, *p*"*ada*, «*sapha and kal*"*a* - of *go* come into play. Could the animal be cut into pieces at each transaction? Moreover, the pieces did not justify the fraction. For instance, could half of a hoof be valued at sixteenth part of a cattle? Occurrence of *ratha*, i.e. chariot (648 times), exceeded *go*, despite the fact that according to context 'go' could mean many other things, such as earth, water, ray, speech. Where it stood for cattle, it could as well be a beast of burden like horse/ass, camel etc. This changed the entire scenario. As if to confirm it, the rivers are praised as water-courses, (यातवे पथः), that made transportation of goods fastest (सिन्धुः यत् वाजान् अभि अद्रवः त्वम्), and they run from northern mountain to the sea (शुचिर्यती गिरिभ्यः आसमुद्रात्). All their confrontation with their adversaries took place in the course of their journey and they avoided confrontation, prayed for safe journey, and for aid in case they were attacked. The queries and different interpretations were piling up and the answer from Dr. Sharma's side was pensive brooding followed by confusion and ultimately emerging with queries about my own competence in Vedic literature. I told that fifteen years back I could not follow even *Sâyaṇa*, whereas now I found little problem reading the plain text. The advantage with me was that I kept citing relevant verses in my submission. He plainly conceded that he consulted Geldner and did not have access to the original. I elaborated my point of view *vis-s-vis* Harappa Civilization. My assertion that correspondence between

Rigvedic references and the material culture of Harappa was as unmistakable as a block to its print, did not offend him. He encouraged me with his comment, 'block and print correspondence is not necessary. Even if there is substantial similarity, you may go ahead.' He had spared more than an hour and came out to my jeep continuing his conversation till I touched his feet to leave.

If he reverted to his previous position and stuck to it with tenacity, I was primarily to blame besides many ancillary factors, including his personal hostility to Dr. S.P. Gupta and his ideology who had, in the course of going through the manuscript offered to write introduction, which despite ideological difference I had acceded to. Some votaries of Dr. Sharma convinced him that outright rejection of his views was the mischief of Mr. Gupta. They forced him to withdraw his consent to release *Harapp" a Sabhyat" a aur Vaidik S" ahitya* at the last moment but despite the fact, I had rare personal regard for him and he always showed his affection when I chanced to meet him.

### **The Anthropologist**

K. Suresh Singh, director *Anthropological Survey of India*, enjoyed the rare distinction of having undertaken the gigantic project of *The People of India*, whose volumes cover an entire case of a book-shelf. I had almost been oblivious of his project and its outcome until I chanced to read an introduction *Languages of Tribal and Indigenous peoples of India* by Anvita Abbi (Motilal Banarsidas, 1996). His observation "In a recent survey under 'The People of India project' conducted by the Anthropological Survey of India, 461 tribal communities have been identified all over the country, of which 174 are subgroups. Many of the latter are as good as discrete categories." This sociological scenario appeared to substantiate my hypothesis of Ice Age dislocations. I decided to meet him for further verification.

I met him at his residence in Saket along with Udaya Prakash who was closely related to him. To my dismay, I found that he had not moved even an inch beyond Pre-Aryan and Pre-Dravidian hypothesis. The title of Abbi's book which he had prefaced should have alarmed me but I had missed the hint. He almost fell out the moment I hinted at the long pre-history of the so called Indo-Aryan speakers in India. The very idea to him was blasphemous. He kept disparaging me while all that I could afford was to keep smiling which somehow disconcerted him. After he had emptied his steam-box I made a simple request to

solve my problem and briefly rendered the history of Indian vesture from the days when they moved naked gathering and hunting and totally. Our recorded traditions talk of their forefathers moving naked without abode or shelter, free from all social restrictions. They first covered their private parts, presumably to decorate them with creepers, *lat"ā* (लता), which still survives in reduplicated formation *kapad"ā-latt"ā* (कपड़ा-लता). It took some time to evolve the art of twisting and twining the central petal of *muñja* grass to make something like a rope and wear it as girdle (मौंजी - some one wearing muñja girdle). Later they pinned stems of leaves to the string to securely cover their organs.

The terms *parŪna-c+ira/parŪna-pat* 'leaf covering', *aparŪn"ā* 'not covered even by a leaf', *anapatrap"ā/nirpatrap"ā* (अनपत्रपा/ निरपत्रपा) 'not protected even by a leaf', refer to the same stage and continued even later. The Patu"as remained stuck to that stage of development taking pride in their advancement at some point of history. In fact *papa* signifying cloth is derived from *patta* (पत्ता) Sanskritized as *patra* (पत्र). The *bandanw"āra* (बन्दनवार), the leaf frill, that traditionally surround newly built house before, *gŪrha-prave«sa* (गृहप्रवेश), entry in the house, was ceremonial survival of the *parŪna-paŪta*, covering the nakedness of the house. Somewhat later the same experience lead to making strings from *ku«sa* (कुशा) grass, and soon enough to deftly matting *ku«sa* strands into thin belts which served as *ku«sa-c+ira* (कुशाचौर). Those who excelled in making fine *ku«sa-c+ira* were called *ku«sala* (कुशल) while the art itself was *kau«sala* (कौशल). In reduplicated *ku«sala-kŪsema* or *ku«sala-mangala* (कुशल-क्षेम / कुशल-मंगल) – 'well-being', *ku«sala* originally could have meant 'elegantly covered with *ku«sa-c+ira*.

Matting device made extraction of fibrous barks a source material of clothing, namely *valkala*. In the course of washing and drying the starchy bond of the bark decomposed and exposed the fibers. This invited attention of some genius to evolve the device of decomposing the starchy substance to separate the fiber. This lead to the art of spinning and weaving. *PaŪtu"ā*, *paŪtsan*, «*saŪna*, *sanai* (पटुआ, पटसन, शण, सनई) the plants with fibrous strands became the preferred material for cloth. The term *paŪtu* (पटु), clever or skilled like *ku«sala*, owes its origin to cloth-making. Some other plants with fibers such as wax, *hassis*, *Ūtrp"ā*, and even *khum"ā* 'linum usitatissimum' *alas+i* or *t+is+i*, were also experimented and exploited for some time. In RV *t"arpya* (तार्य) or cloth made of *trip"ā* fiber is mentioned as covering of the dead body. *KŪsauma* (क्षौम) or cloth made of *kŪsum"ā* became obsolete but the name was transferred to silken cloth.

At a later stage it was realised that with similar device softer cloth could be made from wool derived from cotton-plant and cotton-tree. Here came in existence the *karpāŪta* or *k"arp"asa*. It is attested in texts much later but the fact that cotton was found cultivated at Mehargarha Phase I, dated to 7<sup>th</sup> millennium BCE, we may fathom the depth of the entire development prior to it. All these terms are either Sanskrit, are assimilated into Indo-Aryan languages.

Ultimately as I asked ‘How could I reconcile my data in your scheme of Aryan hordes invading India around 1500 BC or any other date chosen by you?’ Kunwar Suresh Singh was puzzled and speechless.

Could he dismiss his life-work with this revelation? He could not even concede that he had worked all along on a wrong line, but his embarrassment as I elaborated was vocal enough to need verbal concession. We were now silently enjoying our *samos"a* and *jalebi*, which he relished despite having added kilos to his weight in his terminal years.

### **The Archaeologist**

I had known Dr Brajbasi Lal since 1975 when I had little interest in archaeology except from the fact that as a pastime I had tried my wits on Harappan script and had miserably failed. In the course I had gone through all the available material in ASI library, mercy B.M. Pande.

Dr Lal has always been very cautious and meticulous scholar and as such I had and still have special regard for him. But his overcautious approach appeared prompted by timidity in the face of academic pressures and as such he hesitated to claim ‘Aryan presence’ in Kalibangan despite finding proof of fire altar. On the contrary he stressed identification of ‘Aryans’ with PGW and this continued till his article in Dani and Masson edited *The Dawn of Civilization: Earliest times to 700 BC*, published in 1992 under sponsorship of UNESCO. I had no idea when exactly the article was written and how many years it took UNESCO to publish it, but as my book had come in 1987 in which I had established identity of Rgvedic culture and Harappan civilization, I expected a change in his stance, or at the worst, refutation of my contentions. In desperation I critically examined his identification of PGW with Vedic literature in *The Vedic Harappans* (1995), and bluntly stated his thesis to be fractured. I do not know when and how the change came in him but after that he published almost half a dozen

books showing Harappan motifs running and surviving in Vedic literature and tradition, with added emphasis. Mean time Jarrige had shown the continuity of Indian tradition from Mehargarh down to Mughal period, which was toughly resisted by Marxist historians at the International Conference held at Delhi in 1994.

### **The Sociologist**

I did not meet him personally, although I attended a lecture delivered by him. It was Nand Bhardwaj, who drew Dr. Syamacharan Dube's attention to my book *Harapp'a Sabhyat'a aur Vaidik S'ahitya* in the course of an interview in 1989. He had heard about the book but had not read it yet. Somehow a great change in his opinion came in the final years of his life and in his presidential lecture at *Hindi S'ahitya Sammelan, Prayag*,<sup>10</sup> he revised his position. It is an irony that his entire writing as and when it touches ancient history and social composition goes haywire in the light of his last days' rethinking and plain admission. This applies to the book which informs us about the change in his stance.

### **Epilogue**

I can hardly cherish the vanity of having reduced any of these giants in stature, small to every one of them as I was and still am. The mistake on their part was that they moved in the opposite direction, misguided by those who knew better. They desperately looked for a solution but the more they read the more confused they were. They were so much awed by the universal acceptance of propagated absurdities that they failed to notice the incoherence inherent in the entire scheme. For example the people who aimed at civilizing the world (*ÜkrÜnvantah vi«sam"aryam*; or, 'Ary"avrt"a vÜiÜsrjantah adhikÜsami and sang of universal peace and calm (occurrence of *svasti* 149 times, «*sam* 534 times) were shown to be bloodthirsty warmongers and yet civilizing the civilized nation that had reached the vortex of civic society and urban planning.

A subject nation under pressure and allurements may be kept under prolonged hypnotism, but in our case the spell of that hypnosis was not only wistfully prolonged but transferred to talents bred under their care and command. Almost everyone who even sipped a drop from that cup, uncritically accepted the suggested absurdities as truism, and discouraged



disagreement as sheer chauvinism. This rebuff reserved for dissenters made it impossible to say what occasionally many of them saw.

Our sociologists do not understand the composition of our society, linguists do not understand the complex interdependence of our languages, the historians, even those dubbed nationalist, could not enlarge their vision to explore the formative millennia of Harappa civilization, looking westward as they were to explain developments avowedly indigenous. The anthropologist divided the entire population into aborigines and the invaders or, at best, immigrants. Archeologists were so sadly under the spell that none closely examined the inconsistencies and dishonesty in Marshall's presentation of non-Aryan content of Indus civilization<sup>11</sup>, nor any one boldly dismissed Wheeler's theory of massacre and arson. They hardly gave any weight even to Dale's scathing refutation<sup>12</sup> which had brought Wheeler in apologetic mode<sup>13</sup>. With our timidity, lack of self confidence, pathological over-reliance on 'masters of minds', lack of courage to say what we saw, reduced us as a nation to the status of pawns in the hands of chess-players in Western academies. It does not end with our understanding of the past. It concerns all the more our present dominant-and-subservient-equation lethargically conceded by us. It is not for nothing that they take so much interest in field work and basic studies all over the world while 'developing' nations of the second and third world remain ignorant about themselves, take hardly any interest in gathering first hand information about the rest of the world. They know, what they know, through western writings cooked to their taste and temper. The dominance-crazy nations discourage others to undertake field-work, encourage only such ventures on their own guided and guarded lines, recognize and award those who serve better. Master provides all that the domesticated needs, except freedom to think and right to judge.

When we talk of the mainstream scholarship, we talk of domesticated scholarship which prospers on the publicised knowledge of the West. It's private understanding and concealed knowledge is much deeper and matter of course than the superficial and cooked knowledge served in platters. When we talk of professional and trained scholars, we mostly talk of burden-bearing brains parading bravely behind western masters rather than critical analysts who see and judge, the latest example is subaltern studies. It is another thing that despite all this lame theories upholstered even by state support crumble down because of their own inconsistencies and this can be done by honest

queries even by a lay man. That was to happen and it happened. These theories were universally discredited within a decade.

Our so called eminent scholars are pent up forces fighting to save themselves instead of history and society. It is these people who lament that the Hindus had no history, disregarding the mischief behind the word, and the fact that no country had anything approximating the abundant material for writing social history as India has. The reason is simple. While all the other religions, decimated or defiled their own past to highlight the glory of their religious founders, it was only the so-called Hindu who assiduously preserved every bit of information right from the dawn of consciousness down to the present. Look at the three most important and least ostentatious festivals – Navanna in which corn-ears or nominally passed over flame just to burn the husk to be rubbed off and eaten as Prasad and the rest symbolically dropped into cooked items. It is reminiscent of the stage when social taboo on exploitation of the wild corn was lifted and gatherers collected sy"am"ak (श्यामाक/साँवा), understandably the oldest edible corn, scorched it on fire and ate it rubbing on their palm. The corn was replaced by barley with winter crop and the Navann associated to it. Next is Satu"an, the festival of eating *satt"u* marking the next stage and the third Khichdi which marks the stage of invention of pottery and cooking devices which was not needed in case of *satt"u*. Holik"a is the fourth, but more complex and multifaceted than any as it preserved the primitive permissiveness and social gathering in affluent regions but later associated with Vritra episode and Agnistom session and still later with Prahlad legend. Both the genius to symbolize transitional phases and determination to pass it to posterity was unimaginable not only in Semitic traditions, but even indigenous religious and sectarian traditions (Buddhist, Jain, ®Saiva, ®Sakta, and even Sikkh, Kabirpanthi ones) other than Sanâtan or Hindu. But this is just one example.

India has more than three hundred speech communities. Most of the languages have been influenced by neighboring dialects, at different stages in different ways and in different proportions, but not in a rational way. This has been a continuous process from time immemorial and it is so intricate as to expose components of three families in a single word, such as Telugu *okati*, 'one' in which Sanskrit *eka* becomes *ok* under Tamil influence which has 'onr' for one and adds Telugu paricle 'u' to become *onru*. *Oka* could more naturally add its own terminal particle '-u' to become *oku*, but in this case it prefers particle -Ûti

possibly a Mundari legacy so common in Bengal+i (*ekŪti, duŪti, etc.*) that changes to 'Ūt''a' as well and is present in Bhojpuri as *Ū tho* and *go* (*ekaŪtho, duŪtho/ ekago, dugo*) the latter recalling Marathi exclamation "'aigo'". Dislocations, displacements, assimilations and discriminations have played a chimerical role disguising the exact nature of the problem. Religious, political and commercial hegemony of one linguistic area made its language acceptable to others. Prolonged contact or concurrent use of one language over different linguistic areas changes the basic character of those languages giving the impression of a common heritage. Because of these very reasons the illusion of language family is created which was advanced by William Jones as truism and was never re-examined seriously because it had mythological support and served their cause better. A close examination of Indian linguistic material implodes the very foundation of language family. It is more reasonable to replace the term 'family' by 'group' to avoid confusion.

It is true that a single language in contact with numerous languages may generate mutually incomprehensible equal number of languages preserving certain features to remind of common parentage, as Bhojpuri from Fiji, Mauritius to Surinam may attest. But it does not result from disintegration or diversification of a proto-language in the course of time, instead due to geographical and sociological factors. Even at home languages undergo change because of this. Therefore taking all the languages of India as descending from three or four proto-types is flawed. The fact is that during the last glaciation India happened to be the safest haven for the refugees from north and that exercised enormous pressure on resources resulting into gruesome conflicts. With warming, as the ice-covered land-mass became life-sustaining this pressure was released. Numerous exoduses from India are symbolically but categorically recounted in Purāṇas and substantiated by their sudden presence in the vast area from Sumer to Anatolia and from Central Asia to Baltic coast. Spread of dialects sparsely over a wide area but with concentration in Finno-Ugric region, having common features with Mundari and Dravidian is also partly because of this. Asurs in India at primitive stage and their appearance in West Asia, Kash/Khas in India (Kashi, Kushinara, Kusumi (Kasmi?) forest, Kosi and Kash+mir (country of Kashas) etc. in India and Kassites in West Asia besides Kashas In Central Asia; Magas in Magadh, (Pramagand the tribal chief of Magas, RV. 3.53.14) and later their presence in Iran and migration beyond (vide Bible), Sakas (Sakyas) in India and their dominance in

Central Asia, sudden appearance of Sumerians with elements of civilization, need re-examination.

In India at no stage of its known and speculated past, there was any large area occupied by a single speech-community. Even the dialect (देववाणी) which gathered importance as the Devas had advanced in agricultural technology, was originally spoken in a small pocket somewhere in north-east (अपराजिता/ऐशानी दिशा) where they established agriculture, i.e. *yajña* without the interference from the *Asuras*. Occupation of a large tract was simply impossible during gathering-hunting days. There was no society as such but human bands (*m"anav-y"uthas*) of a size necessary for self protection, but not over-sized to create food scarcity. The bands moved and camped independently and settled later on, in the neighborhood of any speech community. The first idea of *desa* (देस > देश) or a country belonging exclusively to them pertained to that exclusive preserve in which they foraged for food. This concept has a lurking presence in colloquium of illiterate labourers who talk of going to their *desa* meaning thereby their native village.

It must be submitted that the work done by scholars even where it proved to be wrong does not become a hillock of debris to be totally discarded, or disposed off. Any such folly may render us bankrupt. What is required is caution. There are two sides of the coin, one of the value, the other of stamp, one of sincere quest and compilation of information, the other of interpretation. In interpretation inconvenient data unearthed by them is ignored, which makes the interpretation superficial. The suppressed or concealed information must be given prominence for a deeper understanding. Much of the information used by me to reach back to formative stages came from the books edited, authenticated and published by them. Their keen eyes could not miss those points and facts that reversed their theories. We insist not on rejection but on critical reading, initiative and ground work to sharpen our vision and to restore self-confidence.

I am not satisfied with my studies which have been broadly exploratory. I was deprived of library facilities and learned discourses during my working life, besides humble salary not to allow self possession of books as desired. I remained ever conscious of my limitations, but yet I devoted more than forty years of my life probing the multi-disciplinary issues in all seriousness. I sincerely wait for researchers, who may prove me wrong where I am wrong, improve me where improvement is needed, and substantiate what is sustainable in

my writings but this is possible in the course of their own independent work.

### Footnotes

- <sup>1</sup> स कृष्णानां व्रीहीणां नखैर्निभिद्य तण्डुलान्नैर्ऋतं चरुं श्रपयति ...शतपथ ब्राह्मण 5.3.1.13; कृष्णानां व्रीहीणां नखैर्निभिन्नानां परिवृक्त्या... आग्नेऽष्टाकपालः...मैत्रयणी संहिता 15.4.6; नैर्ऋतचरुर्नखादवपूतानां परिक्र्त्वा गृहे, वहीं., 2.6.5;
- <sup>2</sup> नि त्वा दधे वर आ पृथिव्यां इळायास्पदे सुदिनत्वे अहनाम् ।  
दृषद्वत्यां मानुष आपयायां सरस्वत्यां रेवदग्ने दिदीहि ।। ऋ. 3.23.4
- <sup>3</sup> L.S. Rao, N.B. Sahu, Prabhas Sahu, U.A. Shastry and Samir Diwan, 'Unearthing Harappan Settlement at Bhirrana (2003-4)', *Puratatva*, 34: 20-24.
- <sup>4</sup> R. Caldwell, *A Comparative Grammar of Dravidian Languages*, 1913 edn., p.44
- <sup>5</sup> Egging citing Weber, *Ind. Stud.*, I, 170 seq. commented, "It was pointed out by Weber that the legend distinguishes three successive stages of the eastward migration of the Brahmanical Hindus.... The Agni Vai«sv"anara (or the Agni who is common to all men) of our legend Professor Weber considers a personification of Brahmanical worship and civilization and the destructive effect of their extension." Mark the clever way of vindicating a conjecture which Griffith did not personally support but even so allowed it to circulate. The private knowledge of western Indologists has always been more profound than the public gesture often at variance with the private one. *SBES XII*, F.N. on page 104

## India: Scientific Dating of Ancient Events from 7000 BC to 2000 BC. - Covering Rigvedic and Ramayan Eras

Saroj Bala\*

The beginning of the Holocene (post last ice age) is now universally accepted to be around 12000 BP. Consequently the civilizations of the world naturally and simultaneously started developing near the rivers which initially started flowing due to the melting of glaciers near the Equator e.g. South India, Sri Lanka and Africa. When populations multiplied, these river waters became insufficient. Therefore some people started travelling from south to north. Such northward migration continued for several centuries and finally when these people from south India reached the banks of Himalayan Rivers, they got climatic conditions conducive to long term development of civilization on the banks of these rivers providing security of water, food and shelter for a very long time. Thousands of years later, when some of these Himalayan Rivers became non-perennial or started drying up, some of these people started moving towards Central Asia and Europe. As per ecologists this ecological cycle has been repeating itself and will get repeated after every ice age and during the beginnings of all Holocene cycles. Therefore the history of growth of civilizations in the world, particularly of the Indian sub continent is not 4 to 5 thousand years old but it is more than 10,000 years old.

So far history of the world, particularly of Indian subcontinent, is based on linguistic guesswork and religious beliefs/hearsay. However, during last 30-40 years, several new scientific tools and techniques have been developed, which are capable to determining the dates of any ancient events in scientific and precise manner. For example:

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1. Computer aided extraction of planetary references from ancient books.
2. Planetarium softwares for astronomical dating of such references
3. Satellite based Remote Sensing techniques
4. Underwater explorations and Geospatial Technologies
5. Radiocarbon dating, Thermo Luminescence dating methods
6. Human Genome studies, Biological and Cultural Anthropology
7. Palaeobotanical, Palaeozoological and Palaeoclimatic studies
8. Geographic and Geological research tools.

Institute of Scientific Research on Vedas through I-SERVE Delhi Chapter started working on a Research Project titled: **Scientific Dating of Ancient Events from Rigveda to Aryabhata**: astronomical dating of planetary references in ancient Sanskrit manuscripts by making use of planetarium software & correlation of such astronomical dates with corroborating archaeological, anthropological, paleobotanical, ecological, geological, oceanographic and remote sensing evidences its chief research co-ordinator.

Very credible conclusions were arrived at in respect of first part of research revealing that indigenous civilisation, also revealed through Vedas and Epics, has been developing in India for last more than 9000 years and that India's contribution to world civilisation and culture is much bigger than what is acknowledged at present.

Intensive and extensive use of multi-disciplinary scientific research reports, prepared during last three- four decades by making use of scientific tools and techniques, was done for dating the events narrated in Valmiki Ramayan and results were amazing! Once the astronomical dating was determined around 7000 BP, it appeared that almost all research reports were corroborating such conclusions and opening before us the pages of our true history; shifting many events from the domain of mythology to the realm of reality.

The story of Shri Ram's life was first narrated by Maharishi Valmiki in the 'Ramayan' which was written after Shri Ram was crowned as the king of Ayodhya, Maharishi Valmiki had a great sense of astronomy as he has made sequential astronomical references on important dates related to the life of Shri Ram indicating the location of planets vis-à-vis the zodiac constellations and other visible stars (nakshatras). Needless to add that similar position of planets and nakshatras vis-à-vis zodiac

constellations and the equinoxes is not repeated in 25690 years. By entering the precise details of the planetary configuration of the important events in the life of Shri Ram as given in the Valmiki Ramayan in the software named 'Planetarium Gold' corresponding exact dates of these events according to English calendar can be known.

Sh. Pushkar Bhatnagar (Indian Revenue Service) had acquired from USA the software named 'Planetarium Gold' (of Fogware Publishing) which is used to predict the solar/lunar eclipses and distance and location of other planets from earth by the scientists and astronomers. He entered the relevant detail about the planetary positions vis-à-vis zodiac constellations narrated by Maharishi Valmiki and obtained very interesting and convincing results, which almost determine the important dates starting from the birth of Shri Ram to the date of his coming back to Ayodhya after 14 years of exile. Sh. Pushkar Bhatnagar has given authentic and convincing details of these dates in his book titled 'Dating the Era of Lord Ram' published by Rupa and Co'. Another eminent astronomer, Shri Ashok Bhatnagar, who is Director (technical) of I-SERVE Delhi Chapter also verified these results and dates independently and concluded that sky view narrated by Valmiki at the time of birth of Lord Ram was indeed seen from Ayodhya on 10th January, 5114 BC and subsequent events narrated match sequentially from respective latitudes and longitudes.

### ***Date of Birth of Lord Ram***

Aadikavi Valmiki in 1/18/8-10 of Ramayan has given details that Shri Ram was born on 9th tithi of Chaitra month during day time when the position of different planets vis-à-vis zodiac constellations and nakshatras (visible stars) was as under:

1. Sun in Aries
2. Saturn in Libra
3. Jupiter in Cancer
4. Venus in Pisces
5. Mars in Capricorn
6. Lunar month of Chaitra
7. Ninth day after Amavasya
8. Lagna as Cancer
9. Moon near the star Punar vasu (Pollux) in Gemini Constellation.
10. Moon & Jupiter were shining together in Cancer.

This data was entered into the Planetarium software, the results indicated that this was exactly the location of planets/stars vis-à-vis zodiac constellations on the 10th of January in the year 5114 BC if



viewed from latitude/longitude of Ayodhya (25°N 81°E). By making use of software to convert solar calendar into lunar calendar, it was found that this date also happened to be the 9th day of Shukla Paksha in 'Chaitra' month and the time was around 12 to 1 noontime. This is exactly the time and date when Ramnavmi is celebrated all over India till date. Thus Shri Ram was born on 10th January in 5114 BC. (Fig.1).

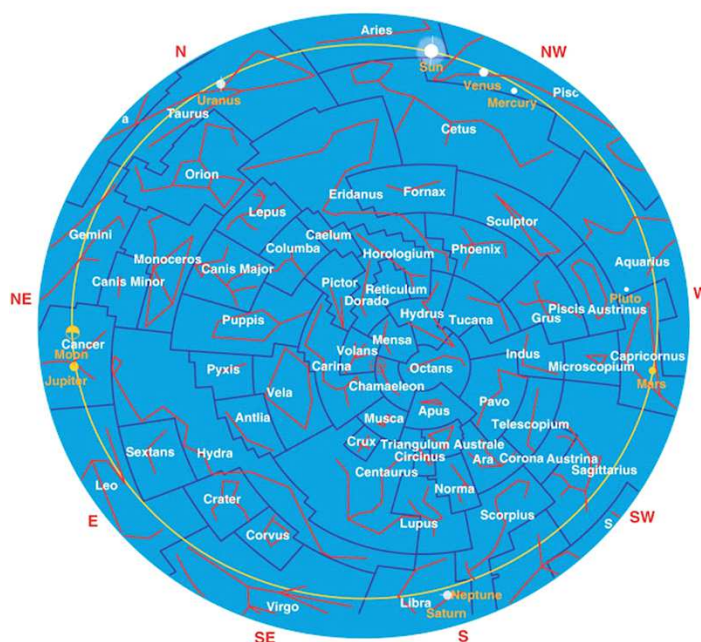


Fig. 1 Showing Planetary position on 10th January, 5114 BC, the date on which Lord Ram was born.

### Date of Exile of Shri Ram

In Valmiki Ramayan it is mentioned in Ayodhya Kaand (2/4/18) that Dashratha wanted to make Shri Ram the king because Sun, Mars and Rahu had surrounded his nakshatra and normally under such planetary positions the king dies or becomes a victim of conspiracies. Zodiac sign of king Dashratha was Pisces and his nakshatra was Rewati. This

planetary position was prevailing on the 5th of January 5089 BC and it was on this day that Shri Ram had to leave Ayodhya for 14 years. Thus he was 25 years old at that time (5114-5089) and there are several shlokas in Valmiki Ramayan which indicate that Shri Ram was 25 years old when he left Ayodhya for his 14 years of exile.

### **Solar Eclipse during War with Khar-Dushan**

Ramayan refers to the solar eclipse at the time of war with Khar-Dushan in later half of 13th year of Shri Ram's stay in the forests. Valmiki has also mentioned that it was Amavasya day and planet Mars was in the middle. When this data was entered, the sky view generated by Planetarium software indicated that there was a solar eclipse on 7th October, 5077 BC which could be seen from Panchvati (20° N; 73° E) On that date planetary configuration was the same as has been described by Valmiki i.e. Mars was in the middle; on one side were Mercury, Venus and Jupiter and on the other side were Sun, Moon and Saturn.

### **Other Eclipses mentioned in Ramayan**

In Kishkindha kaand there is a reference to solar eclipse (4/15/3) on the day Bali was killed. Software shows a solar eclipse on 3rd April 5076 BC which was the only solar eclipse during the entire year.

In Sunder Kaand there is a reference to lunar eclipse when Hanuman spots Sita in Ashok Vatika (5/19/14, 5/29/7, 5/35/87). Sky view reveals lunar eclipse starting from 4.15 pm on 12th September 5076 BC from Colombo (7°N; 80°E)

All these sequentially fully tally with the descriptions in Ramayan.

### **Other Important Dates**

Only six of the twelve constellations remain above the horizon at the same time. Valmiki Ramayan contains graphic and poetic details of eight constellations during Hanuman's return journey from Sri Lanka to Sunaabh Hill in the middle of the sea which apparently took about four and a half hours from 6:30 AM to 11 AM. All these details of planets and nakshtras with reference to eight constellations described in Sarga 57 (1, 2, 3) of chapter five tally exactly with the sky view generated by the software for the morning of 14th September 5076 BC from Lanka.



**Fig. 2:** Showing Planetary position on 7th October, 5077 BC (Amavasya), the day of Solar Eclipse, when Lord Ram fought the battle with Khar.

On the basis of planetary configurations described in various other chapters of Valmiki Ramayan, the date on which Ravana was killed works out to be 4th December 5076 BC and Shri Ram completed 14 years of exile on 2nd January, 5075 BC and that day was also Navami of Shukla Paksha in Chaitra month. Thus Shri Ram had come back to Ayodhya when he was 39 years old (5114-5075).

**Sequential Details of Places visited by Shri Ram during 14 years of exile: Geographic Evidences**

Many researchers, particularly a colleague Dr. Ram Autar, have researched on places visited by Shri Ram during 14 years of exile. They sequentially moved to the places stated as visited by Shri Ram in the Valmiki Ramayan. Starting from Ayodhya, they went right up to Rameshwaram. They found more than 189 (+60 identified later on) places, most of which still have the memorials connected to the events relating to the life of Shri Ram and Sita and also match the description given in Ramayan (see Map).

The locals believe that Shri Ram had actually visited these places. These details have been compiled in his book 'In the Footsteps of Shri Ram'. These details can be broadly divided into five phases.

### **First Phase-Gangetic Belt**

They went to Tamsa Nadi Tal (Mandah), 20 km from Ayodhya, thereafter crossed Gomti river (Point no. 2 to 7 of map 1) and reached on the banks of Saryu river. After crossing the boundary of Kosal Desh, they entered Shringaverapura (Srighaur) which was kingdom of Nishadraj Guh and is famous for Kewat taking them across Ganga in his boat (20 km from Allahabad).

After crossing Yamuna near Sangam they reached Chitrakoot on Uttar Pradesh (UP) and Madhya Pradesh (MP) borders – memorials here include Valmiki Ashram, Mandavya Ashram, Bharat Koop etc which still exist. After Bharat Milap they left Chitrakoot and went to Atri Ashram located in Satna in MP.

### **Second Phase in Dandak Van**

Along with Laxman and Sita, Shri Ram extensively travelled through this land of rivulets, water bodies and dense forests in and around MP and Chhattisgarh. They roamed around in Dandak Aranya area and visited Sharbhang and Sutikshan Muni ashrams in Satna. Thereafter, they visited several Rishi ashrams in Madhya Pradesh and Chhattisgarh area, along Narmada and Mahanadi rivers for 10 years, and then came back to Sutikshan ashram. Several memorials in Panna, Raipur, Bastar and Jagdalpur still exist which include Mandavya ashram, Shringi ashram, Ram Laxman Mandir and Koti Maheshwar etc. After crossing many rivers, lakes, hills and forests they went to Agastya ashram in Nasik. As per Valmiki, weapons made in Agnishala were given to Shri Ram by Agastya Muni in this ashram.

### **Third Phase along Godavari**

Shri Ram, Laxman and Sita travelled along Godavari, From Agastya ashram they went to stay in Panchavati – a place with 5 Vatavriksha located on the banks of Godavari in Nasik. This place is famous for Surpanakha episode and war with Khar and Dushan. There are memorials at the place where Mareech was stated as killed; these include Mrigvyadheshwar and Baneshwar. In fact, Nasik area is full of memorials, e.g. Sita Sarovar, Ram Kund and Triambakeshwar and Janasthan etc. After this incident, Sita was abducted by Ravana, who also killed Jatayu relating to which memorial 'Sar vatiratha' in Taked Village, 56 km from Nasik, is still preserved.

#### Fourth Phase along Tungbhadra and Kaveri

Shri Ram and Laxman extensively travelled through these areas in search of Sita. After meeting Jatayu and Kabandh they moved towards south to reach Rishyamook Parbat. On the way they visited Shabari ashram in Pampasarovar area which is now known as Sureban in Belgaum and is still famous for Ber trees. After crossing forests of Sandalwood, many gardens and water bodies, they went towards Rishyamook. Here they met Hanuman and Sugreev, and were shown Sita's ornaments. Shri Ram killed Bali in this area. Rishyamook and Kishkindha are located in Hampi, Bellary District of Karnataka.



Places visited by Lord Ram during Exile marked as red spots

The location and physical features of areas, covered under Ravana falls, Ravana caves and Ashok Vatika in and around Nuwara Elya Hills in Sri Lanka, will persuade anyone to believe that Valmiki, the author of Ramayan, was fully familiar with all these places. Vibhishan palace is also located almost at the same place as is described in Ramayan.

Most of these places have similar geographic features, flora, fauna and memorials as have been described in Ramayan. If Valmiki had not visited/known about these places, how could he give such precise details in Ramayan which was composed as biography of Shri Ram when he was coronated as the King of Ayodhya in 5075 BC (1/4/1, 2). Originally it was passed on through shruti smriti tradition for hundreds of years but was available in text form by around 1000 BC. References of Ram's story are available in:

- Kautilya's Arthashastra of 4th century BC.
- Buddhist literature in the form of 'Dasharatha Jaraka' ascribable to 3rd century BC.
- Terracotta figures of Ram ascribable to 2nd century BC excavated from Kaushambi.
- Stone panels excavated at Nagarjunakonda in Andhra Pradesh of 3rd century AD showing Ram-Bharat milap at Chitrakoot.
- Terracotta panels of 4th century AD excavated from Nachara Khera in Haryana.
- 'Janaki Haran', a poetic composition of Kumaradasa of Sri Lanka who lived in 7th century AD.

There are hundreds of other evidences found not only from India but from countries like Sri Lanka, Tibet, Thailand, Malayasia, Combodia and Indonesia. In Nepal oldest manuscript of Valmiki Ramayan written in 1041 AD in Newari script is still preserved, probably the oldest preserved manuscript of the world.

### **Ramsethu**

During visit to Rameshwaram, author got an extra-ordinary opportunity to observe the depth at which Ramsethu was found submerged under the sea which measured 9.5 feet on the fisherman's oar. Author had also seen small portion as shown in figure 8 indicating contribution of human hand with marked boundaries and stone filling seen through the mask used for snorkeling.



### **Ram's Bridge – its satellite image and oceanographic evidences:**

Ram-sena first camped in Koddikarai but after surveying the sea area, the location was found unsuitable for constructing the bridge.



Fig. 8: Boundaries looking like ropes & the fillings in between

Therefore, Shri Ram shifted the entire army to Rameshwaram. In Yuddh Kand, sarg 22 (shlokas 45-73) Valmiki has given graphic details of Lord Ram carrying out research and exploration to identify a suitable location for construction of the bridge. After identifying the location, he requested Sugriva to search for an expert Shilpakar who could construct such a bridge. Sugriva recommended the name of Nal, a famous shilpakar, who had the expertise similar to that of Vishwakarma in constructing the bridge. Accordingly Nal was called; he concurred that bridge could indeed be constructed at the location identified by Shri Ram. The construction of this bridge was completed under the supervision of Nal in five days by filling up of the gaps in the existing natural chain of land route consisting of islands, rocks and shoals (6/22/68-73).

The army men of Lord Ram utilized various tools and implements for uprooting trees like saal, taar, coconut, mango, ashoka, arjun, bakul

and bilva etc (6/22/47). With the help of various yantras they transported these stones, trees, creepers, and boulders to the seashore (2/22/60). Shilpakar Nal directed the armymen to stand with long ropes on either side and got the bridge constructed in five days by binding such transported materials together. Even the use of measuring tools has been described (6/22/65).

### **Satellite Image**

A few years back, NASA had put pictures on internet of this bridge, the ruins of which are found submerged in Palk Strait between Rameshwaram (Dhanush Koti) and Mannar (Thalaimannar).



The bridge is composed of a series of islands, rocks, and shoals and it is stated to be 30 kilometers long. It is found exactly at the location narrated in Valmiki Ramayan. See NASA picture of this Bridge (Fig. 9).

### **Sea Level Curve**

The use of this bridge as land route between India and Sri Lanka depended on the fluctuations in sea level for thousands of years as it was sometimes above the sea level and was at other times submerged under the seawater. Dr. Rajiv Nigam, Scientist-G and Head of



Palaeoclimate Project, Geological Oceanography Division, National Institute of Oceanography, Goa, in his paper on “Sea level Fluctuations during last 15000 years and their Impact on Human Settlements”, explained that between 7000 – 7200 BP the water level was about three meters below the present level. Incidentally, the astronomical dating of the Ram era has been placed around 7100 BP (DoB 10th Jan, 5114 BC) and Ramsethu is found submerged at about three meters depth at present, implying thereby that in 5100 BC this Sethu was above the sea level and could be used as a land route between Rameshwaram and Sri Lanka. Thus even fluctuations in sea levels corroborate references to Ramsethu in Ramayan.

### **Report by Department of Earth Sciences**

According to Dr. Badrinarayan, former Director of Geological Survey of India, under whom geological aspects of the Sethusamudram Shipping Channel Project (SSCP) were studied, “Ramsethu is a natural formation, the top portion of which appears to be man-made” because in between marine sands, there is assemblage of corals, sandstones and boulders etc. The report also revealed that on both sides of the Bridge there are some raised Teriformations that supported a rich assemblage of mesolithic – microlithic tools indicating the presence of strong human habitation and activity in these areas as early as 8000 to 9000 BP and as recent as 4000 BP”

### **Other Interesting facts**

All attempts to create shipping route by completing the Sethu Samudram project have so far failed. Shri Subramnian Swamy summarized the report dated January 23, 2007 published in the Asian Age stating that “the Dredging Corporation of India’s (DCI) dredger imported from Holland had broken into two and sunk into the sea when it began work on the Ram Setu. The DCI crane that went to pick up the dredger pieces also broke and sank. The Russian engineer consultant who went to inspect the mishap broke his leg.” As a result all efforts made on behalf of the Government so far to destroy remains of Ram Setu have failed and consequently Sethusamudram Shipping Canal could not become a reality.

Sri Lankan government wanted to construct a land route over this submerged bridge whereas Government of India wanted to blast it for shipping i.e. Sethusamudaram project. Shri Jaisurya, Energy Minister of Sri Lanka had proposed construction of land route between India and Sri Lanka on this submerged Ramsethu. There are several multi-

nationals offering to construct the bridge under BOT (Build-Operate-Transfer) scheme. Can one imagine the number of people from India who will walk over this reconstructed Ram Sethu every year and the kind of profit the builder as well as Indian and Sri Lankan Government would be able to earn!

### **Ancestors of Shri Ram: Co-relation of genealogy with genetic studies**

Indian history has recorded that Shri Ram belonged to Surya Vansh and he was the 64th ruler of this dynasty. Most of the names and other relevant particulars of previous 63 kings are listed in 'Ayodhya Ka Itihas' written about eighty years back by Rai Bahadur Sita Ram. In fact most of the names of these ancestors of Lord Ram have been listed in Valmiki Ramayan itself as narrated by Vashistha Muni to Raja Janak. (1/70 and 71). (all listed below in table 1).

1. Manu	25. Anaranya	49. Ayutayus	73. Ahinagu
2. Iksvaku	26. Trasadsva	50. Rtuparna	74. Paripatra
3. Vikuksi-Sasada	27. Haryasva (II)	51. Sarvakama	75. Bala
4. Kakutstha	28. Vasumata	52. Sudasa	76. Uktha
5. Anenas	29. Tridhanvan	53. Mitrasaha	77. Vajranabha
6. Prithu	30. Trayyaruna	54. Asmaka	78. Sankhan
7. Vistarasva	31. Trishanku	55. Mulaka	79. Vyusitasva
8. Ardra	32. Satyavrata	56. Sataratha	80. Visvasaha (II)
9. Yuvanasva (I)	33. Hariscandra	57. Aidavida	81. Hiranyabha
10. Sravasta	34. Rohita	58. Visvasaha (I)	82. Pუსya
11. Brihadasva	35. Harita, Cancu	59. Dilipa (II)	83. Dhruvansan
12. Kuvalasva	36. Vijaya	60. Dirghabahu	84. Sudarsana
13. Drdhasva	37. Ruruka	61. Raghu	85. Agnivarna
14. Pramoda	38. Vrka	62. Aja	86. Sighra
15. Haryasva (I)	39. Bahu (Asita)	63. Dasaratha	87. Maru
16. Nikumba	40. Sagara	64. Ram	88. Prasusruta
17. Samhatasva	41. Asamanjas	65. Kusa	89. Susandhi
18. Akrsasva	42. Amsumant	66. Atithi	90. Amarsa
19. Prasenajit	43. Dilipa (I)	67. Nisadha	91. Mahashwat
20. Yuvanasva (II)	44. Bhagiratha	68. Nala	92. Visrutavant
21. Mandhatr	45. Sruta	69. Nabhas	93. Brihadbala
22. Purukutsa	46. Nabhaga	70. Pundarika	94. Brihatksaya
23. Trasadsyu	47. Amabarisa	71. Ksemadhan	
24. Sambhuta	48. Sindhuvipa	72. Devanika	

**Table 1: Showing Ancestors and descendants of Shri Ram**

Almost all the major Genome studies carried out so far have revealed an amazing correlation of this genealogy with the genetic profile of humans settled in north, south, east and west of India since the Holocene (about 11000 years BP) to the present. Almost all the important studies in palaeo- anthropology, including those carried out by Kenneth A. R. Kennedy and Cavalli-Sforza, have concluded that genetic profile of people of the Indian subcontinent has remained the same for last more than 55000 years and that for last 11000 years this profile is of culturally developing people who had started speaking a structured language and were taking cooked food.

### **The Essence**

From Kashmir to Kanyakumari and from Bengal to Gujarat, everywhere people of India believe in the reality of Shri Ram's existence and most of our festivals revolve around the events related to the life of Shri Ram. The events and places referred to in Ramayan represent our most ancient heritage, which has developed and got enriched subsequently during the eras of Lord Krishna, Mahatma Buddha, Mahavir Jain, Jesus Christ, Prophet Mohammed and Guru Nanak Dev.

The story of Shri Ram, when appreciated in its true perspective, would emerge as the biggest unifying factor for India and it establishes many ideals which we need to emulate today. He remains unparalleled as an ideal son, an ideal brother, an ideal warrior and an ideal king; that is why he is described as Maryada Purushottam Ram! He was a nationalist par excellence who left his kingdom to help the small kings located all over India to save their kingdoms from being usurped by wicked King Ravana of Sri Lanka and his relatives and devils like Khar, Dushan and Maarich representing him in India.

Shri Ram moved from place to place to spread the message of unity by showing very high level of respect for the people from backward tribes and those considered untouchable. He embraced Guh Nishad who belonged to a lower caste; he gave a strong message against untouchability by eating with great affection jootha berries of Bhilni (Shabri). He sent his wife and children to be brought up and educated by Maharishi Valmiki who is stated to be Shudra but was a great scholar in the ancient world. Shri Ram tried and succeeded in establishing victory of good over evil. He helped rishis and munis in living a life of honor. He got the kingdoms of small noble kings restored to them and acted as the biggest unifying factor.

The astronomical dating of planetary references given in Valmiki

Ramayan with corroborating archaeological, geological, oceanographic, geographic evidences, further supported by genealogical studies duly correlated with genome studies have established with a fair amount of certainty that Shri Ram was actually born more than 7000 year back. Therefore discovering the physical details relating to the life and times of Shri Ram would be much more difficult as destruction caused by floods, droughts, earthquakes, tectonic movements, tsunamis and wars etc is bound to be far greater. But should that stop our quest for learning more and more about our most ancient rich cultural heritage? As Indians, let us all take pride in the fact that Indian civilization is the most ancient civilization surviving on planet earth. It is certainly more than 10,000 years old and has been growing and developing indigenously.

There is need to gather, dig out, search, and analyse all the evidences, which would throw more light on ancient Indian civilization and culture. The Government needs to be persuaded to constitute a multidisciplinary team in order to carry out scientific research pertaining to most ancient events narrated in our ancient books and this team should consist of Sanskrit and other ancient language scholars, astronomers, archaeologists, geologists, oceanographers, palaeobotanists, anthropologists, space scientists etc. This team should be asked to rewrite the history of Indian Subcontinent based on purely scientific evidences. There is need for the print and the electronic media to take note of these facts and create atmosphere which would motivate our young and educated youth to carry out research and unearth true facts about ancient Indian civilization and wisdom and would also encourage them to put across the results of their research before the world fearlessly and with a sense of pride.

Greater details of the subject are available in the Book **‘Historicity of Vedic and Ramayan Eras: Scientific Evidences from the depths of Oceans to the heights of Skies’** published by I-SERVE Its low cost abridged version is also published in Hindi entitled **“वैदिक युग एवं रामायण काल की ऐतिहासिकता: समुद्र की गहराइयों से ऊँचाइयों तक के वैज्ञानिक प्रमाण”** (Can be ordered at [delhichapter@serveveda.org](mailto:delhichapter@serveveda.org) and [www.flipkart.com](http://www.flipkart.com)).

# Antiquity and Western Migration of the Indo-Europeans : Findings based on the Early Holocene pollen studies, Linguistics and Climatology

Premendra Priyadarshi\*

## Introduction

Recent DNA studies have thrown remarkable light on the human migration history over the last 15,000 years. It has revealed that not only man, but animals dependant on man like the domestic mouse, rat, shrew, cow, goat and sheep too have migrated out from India over the last 15,000 years (Priyadarshi 2011, 2012, 2013). No evidence of human arrival into India through the northwest corridor between 13,000 BC and 1,000 BC could be detected from the DNA studies (Sahoo 2006:847).

The Last Glacial Maximum (LGM, 20,000 BC-16,000 BC) was the time when the earth saw a four thousand years long freeze of the northern temperate regions. Human life remained restricted to the tropical regions like India, Southeast Asia and tropical Africa. Beyond this, man survived in the cold refugia in some places. Some population survived in Southeast Tibet, some parts of China, Franco-Cantabrian refugia, the Balkans, north east of the Black Sea and eastern Central

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Asia. Thus most of Europe and Asia had become denuded of human population.

Between 16,000 BC and 14,000 BC, climate started improving and human population increased. Better climate promoted better growth of vegetations which constituted the food for man and herbivores both. Rise in herbivore population had increased availability of pray for hunting, and that too increased the food availability leading to increase in the human population in India just following the LGM (Priyadarshi 2011:137-43).

This population growth of India resulted in a pressure on land resulting in early experiments with food production, ultimately leading to development of farming (Priyadarshi 2011:66-90). However, capturing the animals live and keeping them for future food requirement must have started before the onset of the LGM. In India we get concrete evidence of cattle, goat and sheep rearing since the end of the Last Glacial Maximum (Priyadarshi 2013).

Because of all these factors, Indian population soon got saturated after the LGM and a migration was forced by ecological constraints. The first emigrants out of India through the northwest corridor of India have been identified to have carried with them the Y-Chromosomal haplo group R1a1a and J2b (Underhill 2009; Sahoo 2006; Sengupta 2006; Priyadarshi 2011:91-105; 2012:336-42, 337-Table 1). The J2b seems to have started earlier then the R1a1. It followed a south route and reached Anatolia (Turkey) and from there to Europe. However an important section of these preferred to venture through the sea from the eastern coasts of the Mediterranean Sea. The R1a1 started from the Gujarat region at about 14,000 BC, yet its expansion suddenly ceased because of another short 1000 year long mini-glacial period which we know today as the Teleglacial.

### **Holocene India: Inferences from archaeo-botany, climatology and analysis of the botanical material contained in the Vedas**

The human migrations around the start of Holocene (10,000 years back) taking place out of India also carried with it farming and the Indo-European languages (Priyadarshi 2011:43-65). However no re-examination and re-interpretation of the Vedic texts as well as philological material have so far been done systematically to uncover the history of the early and middle Holocene India.

In the Vedas, particularly the *Rig-Veda*, we get description of the

plants and animals most of which are today characteristically found in the colder regions of the world, particularly Europe. This fact has been considered evidence favouring an Aryan arrival into India from outside (Bhargava). However it has been wrongly assumed by many authors that the climates of India and Europe have remained the same as they are today, and that the same plants have always grown in the two regions throughout the Holocene. We will examine how far such views are correct.

### **Willow (*Salix* sp; Sanskrit *vetasa*)**

We find in the Vedas, a rich description of the willow tree, which was known then by the Vedic/Sanskrit word *vetasa*. The Vedas mention the habitat, the colour (of the golden willow *Salix alba*), the branching and the medicinal properties of the plant. The plant was used mainly to treat fever and pain. Such description confirms that the Vedic plant *vetasa* is nothing other than the willow tree (*Salix*) which contains in it the salicylic acid which is a well-known fever-lowering and pain-relieving drug.

From Mehrgarh sites of the Indus plain, willow pollen has been found in abundance from about the tenth millennium BC up to the fourth millennium BC. Absence of willow pollen beyond that time means that the tree became either extremely rare or extinct from the Indus Valley after the early Harappa period. However the willow species continued to grow in the Himalayan altitudes of places like Nepal, Kashmir and higher reaches of Pakistan and Afghanistan.

Willow, although a temperate region plant, has many species which grow only in the tropics (*e.g. Salix tetraspermia*)<sup>1</sup>. Willows characteristically require wetlands, particularly the alluvial or riparian situations. Such climatic features being absent from the steppes, the willows are not found in the steppe, and were in all likelihood not found there during the Bronze Age or even earlier. This fact gravely frustrates the possibility of the steppe being the homeland of the Indo-European speakers.

Golden willow (*Salix alba*), a plant mentioned in the Vedic literature (*hira]nyamaya vetasa*) and found even today in South Asia (Pakistan) requires a soil of the type “deep, moist loams”, usually located along stream beds and wetlands and cannot tolerate prolonged drought.<sup>2</sup> The loam retains moisture and is a mixture of sand, silt and clay, which is the characteristic soil type of the wetter regions of the Indus-Sarasvati

valley civilisation, not a feature of the steppe or the Central Asia. Moreover, the dry climate of the steppe was thoroughly hostile to the growth of the willow.

The ecological habitat needed for the golden willow matches well that described for the Vedic *vetasa* tree. For example the *Taittiriya Samhita* (*Yajur-Veda*) mentions that the *vetasa* plant grew in the wetlands: *apsujo vetasah* (TS 5.3.12.2). *Atharva-Veda* (10.7.41) too mentions that the golden *vetasa* grows amid floods. It is possible that the Vedic river *Vitastâ* (Kashmiri *Vyeth*, Hindi *Jhelum*) was named after this plant.

There have been recent studies which have noted that the climatic and cultural features described in the *Rig-Veda* do not match the northwest Indian ones from 1500 to 1000 BC period. In the *Rig-Veda*, there is no mention of seals, statues, paintings, writing, burnt brick, potter's wheel, cotton, urban citadel culture etc (Kazanas 2009). In the *Rig-Veda* the Sarasvati river was wide and full, and the whole region was moist and wet (*ibid*). This ecological condition, *i.e.* moist and wet prevailed before 4000 BC as discovered from the palynological studies (Jarrige 2008; Costantini 2000, 2008). Hence a date earlier than 4000 BC is quite reasonable for the period of composition of the *Rig-Veda*.

This date corroborates well with the palynological evidence of presence of abundant pollens of willow (*Salix*) from the soils of the region dating before the 3000 BC. In 1997, an extensive palynological examination of Mehrgarh and Nausharo of the Indus Valley region was conducted by Lorenzo Costantini and Alessandro Lentini (2000). Jarrige citing from them notes:

“The results of the pollen analysis show that, from the beginning of the Mehrgarh occupation till the 4th millennium BC, ‘the region was probably dominated by a semilacustrine or humid environment with a riparian vegetation, characterized by *Populus*, *Salix*, *Fraxinus*, *Ulmus* and *Vitis*, associated in a typical hydrophytic complex, arranged in dense gallery forests’ “ (Jarrige 2008:151).

Other cold climate forest trees which existed before that time included *Populus* (poplar), *Fraxinus* (Ash Tree), *Ulmus* (elm), *Vitis* (grape), *Abies*, *Picea*, *Tsuga*, *Pinus*, *Juniperus*, *Quercus*, *Tilia* and *Corylus*. Hydrophytic plants included *Cyperaceae*, *Phragmites*, *Typha*, *Alisma*, *Myriophyllum*, and *Nymphaea* (Jarrige:139; Costantini 2008:172). Costantini noted evidence for the presence of oak-forests in the region.



There was enough of the evidence for the presence of *Tamarix*, *Palmae*, *Smilax* and *Fumaria* in the Mehrgarh periods I and II (*ibid*).

The Old Indo-Aryan cognate word of 'willow' is *vetasa* (Pokorny:1120-22). However there has been an element of ignorance among the philologists about the Indian willow trees. Pokorny thought Vedic *vetasa* was one of the 'grass-reeds' which are in the family gramineae or Poaceae. Griffith, the translator of many Vedas too has taken the same view. Lexicographer Monier-Williams thought that *vetasa* was the Asian furniture-reed *Calamus rotang* (rattan palm, cane-reed), which is a climber found in Sri Lanka, South India, Assam, Southeast Asia and West Asia, and which belongs to an entirely different family *Arecales*. Witzel adopted the latter view.

Witzel claimed that willow is not found in India, nor was it found there when the Aryans arrived. The Aryans thrust the name *vetasa* on to the 'reeds', after finding no willow tree in northwest India. However, we find that all these claims are wrong. Witzel wrote, (Witzel 2005:373),

"Some of them (names of plants) therefore exhibit a slight change in meaning; a few others possibly are applications of old, temperate zone names to newly encountered plants, such as 'willow' > 'reed, cane'. Again, this change in meaning indicates the path of the migration, from the temperate zone *into* India" (brackets added).

*He again wrote (2009 Fulltext:5 n32),*

"In addition to the birch, the IE word for ... 'willow' (may be found in) in *vetasa* > '*Calamus rotang*' (EWA II 578), if so, then both with change of meaning in the Indian climatic context" (bracket added).

At least 40 species of willow (*Salix*) are native to northwest India (Pakistan), Nepal, Kashmir and many other high altitude regions of north India, in addition to the species present in Afghanistan.<sup>3</sup> Many species such as *Salix tetrasperma* are found exclusively in India. In the pre-history too, willow, particularly the "golden willow" was native to the northwest India. And hence the date of the *Taittiriya Samhita* (*Yajur-veda*) cannot be later than 3000 BC.

### **The Vedic Description of *Vetasa***

The *Taittiriya Samhita* (5.4.4.2-3) mentions the use of *vetasa* in curing pain. Willow (*Salix*) contains salicylic acid, a remedy for fever and pain used in modern medicine too (Jeffreys 2008). This property

of willow was known to the ancient Greek, Egyptian and Indian people. However its rediscovery goes to the credit of Edmund Stone (1763 AD). No such pain relieving property has ever been attributed to the grass-reed or the cane-reed. This fact confirms that the Vedic *vetasa* was nothing else but willow.

Max Muller (p.308) gives details of the charms associated with making of a medicinal drink from the *vetasa*, which was used to treat a thirsty person with high fever (as described in the *Atharva-Veda*). The drink was made in a cup made of *vetasa* (willow), and was stirred by the branches of *vetasa*. This must have caused the salicylic acid in willow to be dissolved in water, leading to the relief in the symptoms of fever and thirst on drinking the syrup. At the same place, Max Muller mentions some other Vedic texts (*viz. TS 5.6.1.2-4; Kaushik 40.1-6; AV 3.13*) wherein the same process has been described (Muller:308).

All the Vedic accounts of the *vetasa* plant match the description of the willow tree and not that of cane-reed or the grass reed. The *Rig-Veda* (RV 4.58.5) mentions *vetasa* (willow) as the 'golden willow' (*hira]ny"ayo vetaso*). The 'golden willow' or *Salix alba* is found in northwest India even today, and its twigs are exactly like pure gold in colour.<sup>4</sup> The Vedic *vetasa* could not have been any reed, whether the *Calamus rotang* or the 'grass-reed'. The 'golden reed' (as in the translation by Griffith; *Phragmites australis aurea*) is a grass-reed native to North America and Australia. The grass-reed species that is found in South Asia *Phragmites karka* (Khagra reed) is different from the 'golden reed' of America, and does not fit with the description of *vetasa* as given in many Vedic texts. Hence the identification of the golden *vetasa* as the "golden reed" as done by Griffith is wrong.

The habitat of the *vetasa* plant, as we get from the Vedic *mantras*, is amidst waters. *Rig-Veda* (4.58.5) mentions that the *hira]nyayao vetaso* (golden willow) lives along the brook. *Taittiriya Samhita* (5.4.4.2) too says the same thing (*ap"am va etad pu\_spam yad vetasas*).<sup>5</sup> The *Atharva Veda* writes that the *vetasa* plant stays within the waters (10.7.41). These descriptions of the *vetasa* are consistent with the description of the morphology and the habitat of the 'golden willow', and not that of a reed.

There are numerous mentions of the 'willow' in the *Yajurveda*. The *K\_r]s]na Yajurveda* (or the *Taittiriya Samhita*, 5.4.4.3) mentions the branches of *vetasa* (willow). We know that the grass-reeds do not

branch, and it is the willow which has numerous branches. The *Taittiriya Samhita* mentions an eagle sitting in the branches of the 'golden willow' (*hira]nyayo vetaso*, TS 4.2.9.6). The eagle prefers to sit in the camouflage of the dense branches of trees like the willow. Hence the reference is to 'willow' not to the grass-reed.

### **Philology of willow: Latin *salix*, English 'willow' and Sanskrit *vetasa***

Witzel relied on the biased Eurocentric philology of *vetasa* given by others, and did not check whether any modern Indo-Aryan language has a cognate word of *vetasa* meaning 'willow'. He, as well as Monier-Williams, gave the meaning 'cane-reed' for Sanskrit *vetasa*, which was wrong because the later Indo-Aryan derivatives of *vetasa* like *bet*, *bed* etc certainly mean 'willow' in languages like Prakrit, Nepali, Kashmiri and Dardic etc. Michael Witzel is also silent about the origin or etymology of the unique Latin word *salix* (willow). We shall now examine the etymology of the same.

### **Salix, sallow**

Lat. *salix* (willow) is a loanword from Germanic (Valpi : 415). The cognates are found only in the Celtic and Germanic branches, and that cannot warrant its inclusion as an Indo-European word. Cognates are: M. Irish *sail*, *sa(i)lech*, Welsh *helyg-en*, O. Brit. name *Salico-d"unon*, Gaul. name *Salicilla*; O.H.G. *sal(a)ha*, M.H.G. *salhe*, Ger. *Salweide*; O.E. *sealh*, O.Ice. *selja* (willow, from *\*salhj"on*). It has been suggested that the source of all these cognates is the Saxon root *\*sal* meaning 'black' (Valpi:415), and at PIE level *\*sal<sup>2</sup>* meaning 'salt', 'grey', 'saliva' etc. These roots have no specific semantic feature which could be associated with the willow tree, and clearly the etymology suggested is wrong. The sound resemblance between the Saxon *sal*, PIE *sal* and the tree *salix* is only superficial, and gives no idea of the etymology of the word *salix*.

If we think laterally, we find that, in all probability, the cognate words of *salix* represent an older linguistic substratum of Europe. The Altaic words like Tungus-Manchu *\*alikta* and Uralic like Finnish *salava*, *jalava* and Hungarian *szilfa* meaning 'elm' are enough evidence to suggest this fact (see Starostin's Database).

### Willow-*vetasa*

The other word which needs discussion is Sanskrit '*vetasa*'. Its cognates mean willow in Indo-Aryan, Iranian, Germanic and Greek branches. However in the Slavic languages of the steppe the cognates do not mean 'willow' but 'branch' and 'twig'.

Lith. Inf. *v"uti*, *vytīs* (acc. *v±yt×i*; willow rod), ablaut. •*il-vītis* (grey willow), Ltv. *v+ite* (branch, tendril), *vītuōls* (willow), O.Pruss. *witwan* (willow), *apewitwo* (willow of the river-banks); Old Church Slavonic *vĀetv<sub>b</sub>* (twig, branch), O.C.S. *viti*, *vit<sub>b</sub>* (a loan word from Lith. *vytīs*), Russ. *vītvina* (twig, branch, rod), Sloven. *vitika* (ring); Avestan *va"eiti* (willow, willow-stick); Gk.  $\square\tau\square\alpha$  (*itea*); O.Ice. *vīðir*, O.E. *wīðig*; M.L.G. *w+ide*, O.H.G. *w+ida* all meaning 'willow' (Pokorny: 1120-1122).

If the Indo-European had originated within Europe in the Ukrainian steppe, how did the cognates of 'willow' like Slavic *vītvina* (twig) and Latin *vītis* (grape-vine) etc lost the meaning 'willow'? Latin *vītis* does not mean 'willow' but *vine*. Contrasting this, Sanskrit *v"eta-*, *v"etas"ā*, *v"etra* etc all are cognates to this group of words, and their derivatives mean 'willow' in northern Indo-Aryan languages even today.

Further than this, although the European willow is black or dark grey, giving it the Latin name *salix* (from *sal*=black, Valpi : 415; dark-grey Pokorny : 879), many cognates of the willow in European languages mean 'gold' or 'golden' which is consistent only with the Vedic tree 'golden willow', and not with the European black or grey coloured willow. Examples are: Old English *w+ir* (copper wire, wavy jewellery), M.L.G. *w+ire* (metal wire), O.H.G. *wiara* (gold-wire) etc (Pokorny : 1120-22). From this has come the English word 'wire' having the flexibility and yellow colour both from the Vedic golden willow.

One can think that a wire may be made of iron too, and the main semantic element of these cognates comes from the 'flexibility' of the willow. Yet it is worth remembering that the older metal was copper, iron came much later; and also that classically wires are made of copper, not of iron.

Clearly the word wire (or its ancestor) was coined in the Copper- / Bronze-age of North and Central Europe owing to the semantic elements "red-yellow colour" and the "flexibility" common to the Vedic golden willow and the copper-wires.

Sanskrit *v+i]nu*, *v+i×lu* (strong) seems to be related with Proto-Indo-Aryan *v"e]nu* (bamboo, willow) and its derivative Kashmiri *v+ir*, *v+irū*

(white willow; CDIAL 12091). Turner gives some other cognate words from the Indo-Aryan branch having the meaning 'willow':

Proto-Indo-Aryan *v"eta* (CDIAL 12097), Pashai-Dardic *vei*, *w"eu* (willow), Dardic *b+ik* (willow), Shina-Dard *b"eu*, *b"ev"e* (willow); Proto-Indo-Aryan *veta-da]n]da* (willow-stem, CDIAL 12098); From Sanskrit *vetasa* (CDIAL 12099), Prakrit *v"edasa*, *v"easa* (willow), Ashkun-Kaffiri *wi±es* (willow), Kashmiri *bisa* (willow), Lahnda *b+is*, Nepali *ba+is* (willow), Dameli-Kafiri-Dardic *bigy"e* (willow), Proto-Indo-Aryan *\*v"e]du—*, *v"etrá—*. *\*v"etuka—* (willow).

Other Indo-Aryan cognates meaning 'willow' and listed by some other authors are: Assamese *bheha* (salix), Punjabi *bed* (willow, *Salix* types; Singh : 110); Nepali *beu* (Turner Nepali:456), *bais*, *biu* (Turner Nepali:458). Persian cognates meaning willow are: *bada*, *b+id*, *bed*, *b+id+i*, *b+ide* (Steingass:165, 217-8).

The examination of the cognate words meaning 'willow' as provided by Turner from the modern and extinct Indo-Aryan languages reveals that the real meaning of the Old Indian or Vedic *vetasa* was 'willow'. We note above that the Prakrit, Northwest Indo-Aryan (Dardic), Kashmiri, Lahnda, Nepali and Assamese cognates of 'willow' do actually mean 'willow'. Hence the Eurocentric stand taken by these scholars, that the meaning 'willow' was lost from the cognate words after the Aryan arrival into India cannot be supported.

We may also conclude that the willow (*Salix sp*) was native to the Indus-Sarasvati region up to the fourth millennium BC. Golden willow (*Salix alba*) described well in the Vedic texts grew along the rivers in moist soil. As described in the *Yajur* and the *Atharva* Vedas, it was used for medicinal purposes for the treatment of pain and fever because of the salicylic acid content of it. However it became extinct from the Indus-Sarasvati plains following the fourth millennium BC, when the region became drier. It fixes the dates for composing the three Vedas discussed here (*Rig*, *Yajur* and *Atharva*) before 3,000 BCE. This view is consistent with other studies done in the field (Kazanas 2009).

### Other Trees

Unlike *vetasa*, where we have philological identification with 'willow', many Sanskrit/ Vedic tree names have not been identified with the modern trees, whether European or Indian, so far—neither philologically nor biologically. This needs to be sorted out if we wish

to understand the Vedic history, and fix its correct chronology.

There is a huge confusion in the names of the European trees, except only a few like the birch. We can note that there is a fluidity and confusion of names in between the three commonest trees of Europe viz. alder, elm and juniper (Pokorny: 302-304). This indicates that the Indo-European speakers did not originate in or near Europe otherwise they should not have confusion in naming the three principal European trees.

### **Birch**

Birch (*Betula*) is known in Sanskrit by the name *bhurja*, and is found in the Himalayan districts of India, wherever annual snowfall occurs. It is said that birch cannot grow in the absence of any annual snowfall. It is possible that the tree was widespread in India during the Last Glacial Maximum and also during the Teleglacial. However after *circa* 7,000 BC, plains of India did not receive regular annual snow fall. Hence the tree must have become extinct from the Central India and the Indus plains during later Holocene. Hence mention of the

Witzel claimed that the birch tree is found all the way from India to Europe (Witzel 2009:51). However this claim is baseless. Although birch grows in the northernmost part of Siberia region, and also in Mongolia, and in the Ukrainian forest lands, it does not grow in the steppe proper and there is a great discontinuity between the Himalayan birch forests and the north European birch forests (Hytteborn:74 Fig 2.22a & b). Yet they are known by the variants of the same ancient name even today in all the regions of Indo-European speech. This favours an older date for Indo-European migration when birch grew in the forests all the way from India to Europe, and then it must have been a very cold period. This fact too fixes the date of IE linguistic migration to before 4000 BC.

### **Oak (*Quercus*)**

There is palynological evidence that *Quercus sp.* (oak) grew in the upper level of the Kachi plain of the Indus Valley region up to 4,000 BC (Costatini:173). It grows in the Himalayas even today. In the Jammu region oak was in abundance since the beginning of Holocene up to 2000 BC, following which it declined owing to aridity (Trivedi and Chauhan 2009). It has not been clarified whether the oak pollens found from Mehrgarh and Nausharo belong to the 'cork-tree' proper or some

related species within the oak (*Quercus*) genus. If the early Holocene *Quercus* was cork-yielding oak (*Quercus suber* or *Q. variabilis* etc), then its likelihood of the bark-yielding *bhoja* becomes greater. There is a folk belief in India that the leaves or the bark of the *bhoja* tree were used for writing texts (books). Whether or not, cork was there one thing is clear palynologically that some oak (*Quercus*) species must have grown in India.

Contrasting beech, which invaded the Central and North Europe only lately (*vide infra*), the oak (*Quercus*) has been present in the North Europe since the beginning of the Holocene. In the Alps region, oak arrived at 10,500 BC, even before the end of the Teleglacial period (Finsinger 2006). At Lago Piccolo site of the Alps, evidence of oak (*Quercus*) has been found from 11,300 BC (*ibid*:615, Table 1).

However it is a mystery why there is no common word for oak tree in the European languages. Crystal (1987:296) notes that there is little evidence of a common word for 'oak' in Europe, which is a common European tree, and even the national tree of many of the European countries.

Crystal's statement can be justified by the following list of words meaning 'oak' in many European languages. There is no cognate relationship even within the same branch, say Italic, of the IE family.

Latin *quercus*, *glans*, *robur*, *s"uber*, *aesculeus*, *ilex* (holm-oak), *ilignum*, French *chne*, Romanian *stejar*, Portugese *carvalho*, Spanish *roble*; Albanian *lis*, *drushk*, *artikuj*; Proto-Celtic *\*dari(k)-*, Irish *dair*, *darach*; German *eichen*, *eiche*; Greek *phegos*, *phagos*, *drys*, *balanidia*, Old. Greek *balano-s*; Croatian *hrasto*; Lithuanian *azuolas*, *azoulinis*.

Application of the generic word *daru* (Sanskrit tree) to 'oak' in several languages of Europe like Irish (*dair*), Albanian (*drushk*) and Greek (*drys*), indicates that this was a common tree at many the places of Europe at the time of IE arrival, yet there were confusions in identification caused by interrupted distribution.

The Old Greek word *balano-s* is a cognate of *baruna* (Hindi) or *varuṅn"ā* (Sanskrit), an Indian tree *Crataeva Roxburghii* (Monier-Williams; Turner CDIAL 11314). The word *balano-s* has no cognate in any European language.

Turner (CDIAL) provides a list of words meaning oak in Indo-Aryan languages. Out of them Sanskrit *karah"ā\_ta* >Hindi *kharhar*;

*karah"ar* (oak; CDIAL 2802) seems to be the cognate of *carvalho* (Portuguese, oak).

On the other hand, the Latin word *quercus* (oak) may be a cognate of Sanskrit *ku\_ta* > Dardic *ka\_rék* (Oak; CDIAL 3228), rather than of Sanskrit *parkam+i*, although the latter has been claimed to be so by Pokorny (p. 822-823). Such possibilities need serious examination.

The reason for this variability of the names of oak is the erratic presence of the oak in many regions of Europe. For example, Oak disappeared from the Iberian Peninsula about 5000 BC and again reappeared about 2,500 BC (Issar:41). If the Indo-European arrival to the Iberian Peninsula took place between these dates, *i.e.* 5,000-2,500 BC there would be no Indo-European cognate for this tree in the Spanish language, simply because there would be no oak in Spain then.

It is beyond the scope of this article to list the dates of appearance and disappearance of the oak tree in each and every region of Europe. It is because of this disappearance and reappearance that there is no uniformity in the naming of oak, and we get *ch]nne* in French, *carvalho* in Portuguese and *roble* in Spanish for oak—names which were given to the tree as and when it arrived in the region.

If the Sanskrit word *bhoja* is accepted as a cognate word of Greek *phagos* (oak; both *bhoja* and *phago-s* mean to eat), then the following words too may be cognates of *bhoja*:

Dialects of Kafiri and Dardic *wSzu* (oak), *bôñð*, *bonz* (oak), *bÉu]ch*, *bÉu]c* (*Platanus* tree); Kurd. *b"uz* (elm); Hindi *bāj*, Kumauni (Pahari Hindi) *bāj* (oak), Nepali *buk* (oak tree), *bājh*, (*Echinocarpus*, a tree of *Tilia* family; see CDIAL 11209; 12067; Witzel 2001:51n).

This possibility becomes more plausible if we take into account the Nostratic protagonist Blapek's finding that the ultimate source of *phagos* (and also of Latin *fagus*) is Nostratic with meaning "tree with edible fruits" (2000; cited in Witzel 2005:394, n176). However it is also possible that *bhoja* was a different tree in India, and on arrival to Greece, the word was thrust on to the oak tree. But the other possibility too remains that the oak was known as *bhoja* in northwest India during the beginning of Holocene, and when the northwest Indians went to Greece they identified oak as *bhoja* or *phagos*. Hence the PIE reconstructed for the words *phagos* is *\*bh"aō o-s*, which is very close to the Sanskrit word *bhoja*.



Many of the words listed by Pokorny as cognates of 'beech', and by Turner as cognates of Sanskrit *v\_rk]sa*, may in fact be the cognate words of Sanskrit *bhoja*, with meanings changed after arrival into Europe. Examples are: German *Buche*, O. Icelandic *b"ok*, O.E. *b"oc*, English 'book', O.H.G *buoh*; Slavic *buz*; Shina (Dardic) *bÉu]ch*, *bÉu]c* etc meaning different tree/ plant products in different languages (see CDIAL 11209 *vanj*; 12067 *v\_rk]sa*; Pokorny:107-8).

The meaning 'oak' was retained only in the Greek language and has been lost from the other European languages. The cognates have been applied to name 'beech', 'elm', 'elder' and many other trees in the other European languages (see Pokorny:107-108).

### **Beech (*Fagus sylvestica*)**

Beech is a European tree of temperate climate, and not found in India. It has been claimed that the reconstructed PIE *\*bh"a o-s* (Pokorny:107-108) meant beech in the Aryan homeland, and that there is no cognate word for beech in Sanskrit. That means the Indo-Aryans came to India from steppe, and lost the word for beech altogether after not finding the tree in India—this is the argument (Witzel 2001:51 note120; 61 note 146).

However beech is not found east of the famous beech line running through Poland and Romania (Bolte 2007; Thieme 1954:16, cited in Witzel 2001:51,61). That means beech is not found in the steppe, the claimed homeland, which is located much to the east of the beech line.

Witzel claimed that the beech was found in the steppe, much to the east of the modern beech-line, at the Atlantic period about 5,500 to 3,000 BC (Witzel 2001:51 n120; 61 n146). This is a clear case of concoction. The archaeological evidence from palynology has proved that the beech was found only in South France, South Italy and the south Balkans (Greece, Macedonia etc) before 3000 BC (Tonkov; Feurdean). The much later expansion of the beech tree was from south (Balkan Peninsula) to north and from west (France) to east, not from east to west. It has also been proved archaeologically that the steppe never had beech over the last 12,000 years and the nearest beech forests in the mountains of Ukraine and Romania had beech only over the last 4000 years (since about 2000 BC). Thus the claim can be proved bogus on the basis of sound material evidence.



Fig. The beech line passing through Poland and Romania,  
East of which beech tree is not found

It is an example how the Eurocentric authors have thus taken recourse to deception and concoction to write whatever they wanted to prove, and the thing was accepted as fact by others. The great difficulty for history was that the hard evidence was circumvented by lies.

Witzel tells another untruth in the same article that the beech tree is not found in Greece, and adds that the word for beech tree *fagus* (Latin) was adopted in the Greek language to mean 'oak' because Greece is a beech-less country (2001:51, 61; 2005:394). This is again a huge concoction and deception. Forest survey reports from Greece mention that beech is found there in plenty (Bergmeier 2001). Archaeology too proves that the Balkan Peninsula, in which Greece is located, is the oldest home of beech in Europe (*vide supra*).

Thus the beech tree has been found in Greece since at least 12,000 years back, and has expanded only recently to other places. Unfortunately, Elst contradicted Witzel's logic well, yet did not notice the concoction in his story.<sup>6</sup> Clearly the Greeks never had the

identification problem for 'beech' because had been there always. We can say that the Greek word *phagos* (oak) has not changed its meaning on arrival of IE in Greek, rather the Latin *fagus* is a borrowing into Latin (Gk *phagos*, oak > L. *fagus*) with associated change of meaning, and it was applied to name a different tree 'beech' in the Latin language, because of disappearance of the oak from the Latin speaking regions about 5,000 BC. Hence we can date the arrival of Indo-European into the South-West Europe to a date between 5000 and 2,500 BC.

Beech (*Fagus sylvatica*) survived the Last Glacial period in Europe only at three small locations namely the *refugia* in Southern France, southern Italy and the Balkans (Bartsch:425). Its northward expansion started about 8000 BC, and it was very slow to move northward, taking 7000 years to reach Germany (Bartsch:425). It reached north Spain by 3000 BC (Davis 1994:186), and reached northern Balkans by 2000 BC (Tonkov). It arrived into Romania by 2,700 BC, but established itself in the forests only by 1300 BC (Feurdean 2001:135-36). From southern France, *Fagus* reached Salonnnes (North-East France) by 1000 BC (Riddiford 2012, Fig. 4b).

Beech reached its modern limits in the northern parts of Europe only about 1000 years back. It is not found east of Poland (Bolte 2007) and it never reached the steppe. Other than Western Europe, it is also found in Turkey (*Fagus orientalis*), China (several species) and Japan (*F. japonica*).

Hence we can conclude that the knowledge of the tree 'beech' at 4000 BC, or even 1500 BC, in the steppe region is not possible. Thus even if this is accepted that beech was the PIE *bh"āō-s*, this philological evidence goes against steppe being the Indo-European homeland. The fact from archaeo-geography about absence of beech in North Europe, Germany, Russia, Ukraine and Central Asia at about 4000 BC rules out these countries from being the place of origin of the Indo-European languages at 4,000 BC.

Philologically too, a common word for beech lacks in the European languages. Only some of the Germanic languages have in common the cognate words meaning 'beech' e.g. E. 'beech', German *Buche*, Icelandic *beyki* etc. Otherwise, there is complete irregularity in the naming of this tree. Some examples are:

Greek *oxya*; Spanish *haya*, French *hetre*, Portugese *faia*, Romanian *fag*; Albanian *ah* (all meaning 'beech').

On the other hand, the listed cognates of PIE *bhago-s* mean different trees in different languages of Europe, for example:

German *Buche* (beech), Greek *phago-s* (oak), Russian *buz* (elder tree), Icelandic *beykir* (cooper) etc.

People have considered Celtic (Gaul) *b"agos* too to be cognate of Latin *fagus* or 'beech'. However this is in all likelihood, a loan word from Greek or Latin and other Celtic languages do not share this word for beech:

Irish *feá, fáibhile* (beech), Welsh *ffewyddden* (beech).

On the other hand, words for 'beech' in the non-IE languages Hungarian (*bükkfa*) and Finnish (*pyökki*) are closer to the Germanic words for beech.

Turner thinks, in case of Indo-Aryan languages, that many of the names of the forest tree (which resemble German *Buche* etc) are no cognates of PIE *\*bh"ādo-s* at all, but are derived from Sanskrit *v\_rk]sa* (see CDIAL:12067):

Sanskrit *v\_rk]sa* (tree), Pali *vaccha* (tree), Prakrit *vakkha*; umaki *b+ik*, Dameki (Dard) *bigyòes* (willow), Tirahi (Dard.) *br+iĀc*, Maiya (Dard.) *bi]ch* (pine tree), Shina (Dard. gil) *bÉu]ch, bÉu]c* (plane or *Platanus* tree), Kohistani (Dard) *b+i]ch* (*Pinus excels*); West Pahari (Kochi) *b+ikh* (tree), Nepali *buk* (oak tree). To this list we can add Hindi (rural) *biriccha*, Vajjika (Bihari) *bir+ich* (tree). Clearly the cognates have meanings from any 'tree' to pine, oak, *platanus* and willow.

In fact many of these are very similar to the following: Slav. *\*buz-*, *\*bbzb-* (elder tree *sambucus*), Russ. *buz*, Slovak *b[z*, Russ. dial. *boz*, Kurd. *b"uz* (a kind of elm).

It may be claimed that the resemblance of the words *buc, bikh* etc of Turner's list to similar sounding words from Pokorny's list is coincidental. However some of the Germanic words are certainly from Sanskrit *v\_rk\_sa* e.g. German *Viereiche* (oak) and OHG *ferheih* (oak). At the beginning of Holocene when the Indians reached the Central Europe (as R1a1a, Underhill 2009), the oak was there already. Hence the word *vriksha* (*v\_rk\_sa*, tree) got applied on to them.

## Juniper

A conifer tree within the same order as pine (*Pinales*) is not found in the inhabited regions of India, although it grows in the remote heights of the Himalayas (1800 meters to 3000 meters; Costantini:172) in Afghanistan, Pakistan, Nepal, Bhutan and India, and has been named *Juniperus wallichiana* or *indica* (Hook and Thomson 1874:537, cited in Adams:208). The tree is no more remaining in the memory or

awareness of the people living in the Indian plains, and the Indian name of the tree has been lost, making any philological identification difficult.

However, the pollen studies of the archaeological remains prove that juniper was present in the Kachi plain of the Indus Valley until the end of the fourth millennium BCE (Costantini:171-72) and was widely growing in the Himalayan foot-hills. We have the following material to arrive at a philological identification:

Vedic *kadru* (*Taittiriya Samhita* 2.1.4.2), Sanskrit *kedara* (a tree, listed in the Dictionary by Monier-Williams, but not identified so far); Greek *kedros* (juniper), Latin *cedar* (pine); Lith. *kadag±ys*, O.Pruss. *kadegis* (juniper) indicate the Indo-European status of the *kadru* or *kedara* tree. But which tree was known as *kadru* or *kedara*: Juniper or pine? Both of them were present in India then.

The Old Church Slavonic word *kadilo* means ‘incense’ (Pokorny: 537). This indicates that the original *kedara* was juniper, because it is the juniper whose wood is used as incense-wood for Vedic rituals in Nepal and many parts of north India. The Indian Himalayan tree *Deodar* which is a pine, has been given the scientific name *Cedrus deodara*. The genus name *Cedrus* too is a cognate of Sanskrit *kadru* and *kedara*. In our view, the ancient Indian *kedara* was juniper.

### ***Kikkar (Acacia)***

*Kikkar*, *k+ikara* (Hindi, Punjabi etc; *Acacia arabica* tree), Proto-Indo-Aryan *\*kikkara* (CDIAL 3151). It is possible that the word *k+ika\_ta* used in the *Rig-Veda*, describing region where “cows did not yield much milk” refers to a region where the *k+ikara* plant grew in plenty. This region has been identified as Magadha (South Bihar and Jharkhand), and this tree grows as wild weed in plenty in Jharkhand and South Bihar. The Sanskrit word *ki«nkar"ala* meaning the same plant *Acacia* may be the Sanskritized form of the Proto-Indo-Aryan word *\*kikkara*.

Pokorny preferred not to include the Indo-Aryan cognates in this list. Thus he gives the cognates as:

PIE *ÂkiÂker-* pea (Pokorny: 598); Armenian *sisern* (chickpea); Greek-Macedonian *kikerroi*, Greek *krios* (chickpea) < *\*kikrios*; Lat. *cicer* (chickpea); Lith. *keke* (grape), Ltv. *k"ekars* (shine), Ltv. *k"eÂkis* (umbels like cumin, coriander; grape), Lithuanian and Latvian *cekulis* (flamingo plant, tassel, jute, tussock grass), *cecers* (frizzy hair); Czech *ÃceÃceÃriti* (to make shaggy or frizzy); Albanian (*\*k"ekar*) *kokër* (grain, bean).

The *kikkar* (*Acacia*) fruits are legumes like the chickpeas, and both belong to the same family *Leguminoecea*. *Acacia*'s inflorescence is umbel, hence Latvian *k"e@kis* (umbel). Its flowers look like tassel or spike of tussock grass (hence Latvian *cekulis* tussock grass). Thus we find that it is the *Acacia* plant which has some feature in common with the rest in the group. Hence the original meaning tree was *Acacia*.

### **Mulberry (*Morus*)**

Mulberry is a sub-Himalayan Indian tree which has also been traditionally grown in China and Japan. With the silk trade the tree has spread to Central Asia, Near East, Spain, North and East Africa, South Europe and the Americas.<sup>7</sup> It was never grown, nor even known, in the steppe. Therefore philological evidence for the presence of mulberry in the Indo-European homeland proves beyond doubt that the place of origin of the IE languages was in the India, and certainly rules out the steppe.

There are at least two possible PIE reconstructions for the mulberry tree. Presence of reconstructable PIE root means the IE homeland was at a place where mulberry grew. One is *\*moro* of Pokorny, and the other *\*brahma* (of this author).

Pokorny's Eurocentric bias becomes obvious when we note that he does not give the meaning 'mulberry' for the PIE *\*moro-*, but gives instead the 'blackberry'. He also omits the Sanskrit word *madhura-v k a* (mulberry, lit. 'sweet tree'; CDIAL 14733) from the list of the cognate words of *\*moro-*. He proposes that the cognates (of *\*moro-*) originally meant the 'blackberry', however they acquired the additional meaning 'mulberry' on arrival to South Europe, where mulberry was found (Pokorny:749). However, archaeobotany tells us that the mulberry was not found in Europe when the arrival of the IE speakers to South Europe took place. In Latin there are two words, *morus* means only mulberry, however *m"orum* means 'mulberry' and 'blackberry' both (Valpi: 271). Hence it is the 'blackberry' to which the name was applied later and the *\*moro-* was originally the name of the 'mulberry' tree, which was before the silk-trade, a tree confined to India and China.

The English word 'mulberry', Welsh *merwydden* (mulberry), French *murier* (mulberry), Old High German *môrbere* (mulberry) point out to the fact that PIE *\*moro-* was philologically 'mulberry' not the 'blackberry'.

PIE *moro-*(blackberry, as per Pokorny; mulberry<sup>8</sup>;  
Pokorny:749); Sanskrit *madhura-v k a* (mulberry-tree; not in

Pokorny's list, however Turner notes it: CDIAL 14733); Armenian *mor, mori, moreni* (blackberry); Gk. *moron* (μρον, mulberry, blackberry); Welsh *merwydden* (mulberry); Lat. *m"orum* (mulberry, blackberry), Spanish *morera* (mulberry), French *murier* (mulberry); O.H.G. *m"ur-, m"orbere*, M.H.G. *m"ulber* (mulberry); Lith. *mōras* (mulberry). An Indian tree *Artocarpus lacucha*, which belongs to the mulberry family (Moraceae) and has identical fruits and leaves to the mulberry, is called *madar* in Assamese and Bengali languages (CDIAL 9849; *madhura*>*mad"ara*).

### **Fraxinus or Ash Tree**

The *Fr"axinus* tree (Latin, ash-tree) which is a first class firewood and burns with bright light with little smoke, has been considered present at the PIE stage by the name *\*bherðY"-* or *\*bhr"e;g"-* (Pokorny:139-140), which is a clear cognate of the *Rig-Vedic* word *bh\_rgu*, which was a group of men specializing in lighting, burning and preserving fire (*RV* 1.58.6; 6.15.2).

Clearly the *Rig-Vedic bh\_rgu-* must have been named after this tree's name which is one of the best firewood. In the *Rig-Veda* the word *bh\_rgu* has been used in the context of car (*ratha*) building (*RV* 4.16.20), indicating that the same specialists could also make carts from this wood. It is known that not the wheel of cars, but the bodies of cars were built from this wood in Europe because of the flexibility of the wood. Obviously, when the tree became extinct in India, the particular tree, as the meaning of the term, was lost, and the word *bh\_rgu* came to be remembered only for the specialists who worked with this wood. The English word 'bright' is the cognate of *bh\_rgu*. Hence we need to fix the date of the *Rig-Veda* before 4000 BC, after which this tree was not found in the northwest India.

### **Abbreviations:**

CDIAL: *A Comparative Dictionary of the Indo-Aryan Languages*. See Turner. *RV Rig-Veda, TS Taittiriya Samhita*

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[http://www.ias.ac.in/jbiosci/dec2009/Witzel\\_fulltext.pdf](http://www.ias.ac.in/jbiosci/dec2009/Witzel_fulltext.pdf)

### Footnotes

- <sup>1</sup> [http://www.efloras.org/florataxon.aspx?flora\\_id=5&taxon\\_id=200005744](http://www.efloras.org/florataxon.aspx?flora_id=5&taxon_id=200005744) accessed 28 May 2013.
- <sup>2</sup> Goden Willow <http://www.ag.ndsu.edu/trees/handbook/th-3-139.pdf> , accessed 30 May 2013.
- <sup>3</sup> [http://www.efloras.org/browse.aspx?flora\\_id=110&name\\_str=salix&btnSearch=Search](http://www.efloras.org/browse.aspx?flora_id=110&name_str=salix&btnSearch=Search) [http://www.efloras.org/florataxon.aspx?flora\\_id=110&taxon\\_id=129059](http://www.efloras.org/florataxon.aspx?flora_id=110&taxon_id=129059) [http://www.efloras.org/browse.aspx?flora\\_id=5&name\\_str=salix&btnSearch=Search](http://www.efloras.org/browse.aspx?flora_id=5&name_str=salix&btnSearch=Search) [http://www.efloras.org/florataxon.aspx?flora\\_id=5&taxon\\_id=129059](http://www.efloras.org/florataxon.aspx?flora_id=5&taxon_id=129059) All accessed 28 May 2013
- <sup>4</sup> Golden Willow in Pakistan: [http://www.efloras.org/florataxon.aspx?flora\\_id=5&taxon\\_id=200005744](http://www.efloras.org/florataxon.aspx?flora_id=5&taxon_id=200005744)
- <sup>5</sup> vetas (willow) is the flower of the waters. Here the context is that of the golden willow.
- <sup>6</sup> Koenraad Elst, <http://voi.org/books/ait/ch33.htm>
- <sup>7</sup> Sanchez, M.D., World Distribution and Utilization of Mulberry, Potential for Animal Feeding, Food and Agriculture Organization document, Electronic Conference on Mulberry for Animal Production.
- <sup>8</sup> Pokorny gives meaning 'blackberry' which cannot be supported on the basis of available philological material, and 'mulberry' should be the meaning of the PIR root-word.

## Concept of Time and History in Sanskrit Literature

Radhavallabh Tripathi\*

Sanskrit is one of the great repositories of Indian traditions. Sanskrit literature not only records the ideas of ancient Indian philosophers and historians on the concepts of time and space, it is also an invaluable source for history. The earliest elaboration of Time (*K"ala*) as an ontological category occurs in the *Atharvaveda*. The concept of time is elaborated upon in two of hymns in this Veda<sup>1</sup>. At the very outset of the first hymn, the seer views Time as a Mighty Horse running with immense speed, with seven reigns and seven wheels. Time here is viewed as an Ultimate with the eternal flow, in which everything is finally subsumed. 'He is the Horse but He is the Rider' the seer says- 'only poets (*kavaya*]h) and scholars (*vipa«scita*]h) can ride over Him.' All the worlds (*bhuvan"ani vi«sv"a*) are His wheels. He is the substratum and the substrata. The worlds are his off-shoots, and then he is an off-shoot of these worlds. Therefore, He is the father and the son as well. He pervades all phenomenon and yet He also transcends it and stands out of it.

The seer of both the hymns describing Time is Bhrgu, who is also known as an upkeeper of *Itih"asa*. The families of Bhrgu and AEGiras were involved in keeping the historical records and they are also associated with the creation of the *Atharvaveda*.<sup>2</sup> The *Atharvaveda*, therefore, is also known as the *Bh\_rgu-Angirasveda* in the tradition.

Time is said to be the root cause of the genesis of all beings and all worlds and it is also said to have its genesis out of these worlds. In this way Time has two forms – It is eternal and indivisible at one level

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and ephemeral and divisible at the other. ©*Sr+imadbh"añgavata* views the cosmos moving within this cycle of Time. The indivisible time can be viewed in fragments. It is the human resolve that would lead to such fragmentations. The indescribable would then manifest within the limits of definability.

Manu<sup>3</sup> has given the following measurements for the time which runs at the practical level:

*Nimesa*

*K"a]s\_th"a* (18 nimecas)

*Kal"a* (30 *k"a]s\_th"as*, one minute and 36 seconds)

*Muh"urta* (30 *kal"as*, 48 minutes)

*Ahor"atra* (30 *muh"urtas*; 24 hours)

One human year is equivalent to one *ahor"atra* (day and night) of gods. One year of gods (*divyavar]sa*) is used as a unit for specifying the length of the four *yugas*. Accordingly the four *yugas* are respectively comprised of 4800, 3600, 2400 and 1200 *divyavar]sas*.

Var"ahamihira defines three levels of Time – *bhutan"am antak\_rt* (That which leads to the annihilation of all beings), *vy"avah"arika* (practical) and *vyavah"ar"anarha* (immeasurable).

These concepts and measurements related to time incorporating both the macro and micro levels suggest that the Indian in ancient times were attentive to Time as the Absolute and time as visualized through history as well. They also incorporated both these levels in the treatment of the *Itih"asa*.

The *Itih"asa* views time on both of its levels – the transcendental and the pragmatic, bringing out the spaces that emerge in its different segments. It is interesting to note that the word *Itih"asa* occurs for the first time in the *Atharvaveda* itself. It is said there that the Primordial Being moved towards the big direction (*brahat+i dik*) . And then *Itih"asa*, *Pur"ana*, *G"ath"a* and *N"ar"a«sa=m«s+i* followed Him. He who knows this, becomes the dear abode of *Itih"asa*, *Pur"ana*, *G"ath"a* and *N"ar"a«sa=m«s+i*.<sup>4</sup> This signifies the manifestation of the unmanifest in a time and space. In fact, *Itih"asa*, *Pur"ana*, *G"ath"a* and *N"ar"a«sa=m«s+i* are genres embodying the historical consciousness of Indian mind. While the first three comprised the descriptions of the heroic deeds of a noble person, the *g"ath"a* presented eulogy to such a person in lyric form. The Rgveda refers to a number of poets who composed the *g"ath"as* as the *g"ath"ak"aras* or *g"athins*. The seers belonging to the families of the Bh<sub>rgus</sub>, the Ka<sub>nvas</sub> and the A<sub>ngirasas</sub> were known to have been composing the

*g"ath"as*.<sup>5</sup> Ka/nva refers to the *g"ath"a* composed by him in ^Rgveda.<sup>6</sup> The seers of the angiras family were historians in the sense they that preserved the vast storage of *g"ath"as*. *N"ar"a«sa=m«s+i* is a poem describing some hero. ^Rgveda also refers to *N"ar"a«sa=m«s+i* as a popular form of poetry with historical contents several times <sup>7</sup>

It is true that the term *Itih"asa* as used in Sanskrit literature has a wider and different connotation than in its modern sense of the term History (which is also translated as *itih"asa* in our vernaculars). In that sense the word *aitihya* comes closer to the concept of modern History. Epistemologically Aitihya (History) is regarded as one of the valid means of knowledge (*prama]nas*). In Taittiri+iya +Ara]nyaka, *aitihya* is recognised as a *pram"a]na*. The particle 'iti' literally meaning 'in this way' is compounded with both the terms. They however differ in respect of their range in time. The former involves multiple layers of time embracing past, present and future, whereas *aitihya* is supposed to be limited to the happenings of the past.

In this way, *Itih"asa* and *Aitihya* are ephemeral manifestations of this *akhan]da* and *param"artha satt"a*. Abhinavagupta rightly points out that the prefix 'iti' in the term *Itih"asa* is indicative of events that have actually happened and have been seen, whereas the words *ha* and *"asa* suggestive of their continuity and recurrence. In this way an account of the events that have actually been seen to have occurred, and which might recur again is *itih"asa*.

Through *Itih"asa*, the past, present and the future are viewed in a continuous flux, which is our way of looking at the history. The present is a tiny moment, it is through the flow of time that the historical present and our identity in it can better be known. *Itih"asa* serves as a tool for our search of an identity.

Both *Itih"asa* and *Aitihya* became tools for sustenance of memory, and this memory embraced various layers in time and space. It could be the memory of a nation, a society, a family or a dynasty. The priests worked for invoking these memories and keeping them alive. A nation, a race, a family or an individual was able to re-discover and re-locate itself through *Itih"asa* and *Aitihya*; Beginning from the horoscope or *Janmalagna*) which served the purpose of recording the *Itih"as'* of an individual, *Itih"asa* had a range of channels for its sustenance – inscriptions and epigraphy, royal commands, records of families etc. Every temple maintained its records forming both *Itih"asa* and *Aitihya*. Some particular families of priests devoted themselves to recording the

chronicles. The tradition of Bhṛagu-angiras family known from Rgvedic times for its engagement with *Itih"asa*, continued with several priestly families.

It is true to some extent that the ancient India did not produce books of History as per western standards, because the western idea of history was supposed to unearth the outer layer of the reality only, it had also to be perceived in the larger perspective of things that could have happened, that continued to happen and are likely to continue. This led to an amalgamation of legends, myths and tales in the makings of the *Itih"asa*. But then the concept of *Itih"asa* and its applications in Sanskrit literature do not altogether disregard historical accounts as such. In the large periphery of *Itih"asa*, history continued to be interwoven. Thus, in between the legends or "*akhy"anas* in Vedic literature there are records of wars fought and battles won. *^Rgveda* provides narratives in History also. The History of King Sud"asa belonging to Bharata-family can be cited as an example. There was competition between Va«si]s\_tha and Vi«sv"amitra for the office of priest under this king, in which the Va«si]s\_tha family finally won. But king Sud"asa continued to maintain relations with Vi«sv"amitra, and the later helped the armies of Bharatas in their attempts to cross the rivers Vip"a«s"a and @Sutudri (Satlaj). *^Rgveda* also describes the D"a«sar"aja battle – involving ten kings; and having emerged victorious in this battle, Sud"asa assumed the title of 'D"a«sar"aja'.

In comparison to the modern concept of history, the *Itih"asa* and Pur"ana had a wider scope. V"atsy"ayana in his *Ny"ayabh"a\_sya* on *Ny"ayas"utra* I.1.61 rightly says that *lokav\_rtta* – the affairs of this world forms the theme of the *Itih"asa* and the *Pur"a]na*. Both *Itih"asa* and *Pur"ana* were treated at par with '*Akhy"ana* (legendary tale) also and were regarded as the fifth veda. They were also invariably included in the curricula of ancient Indian gurukula system. The Chandogya Upanishad repeatedly described the study of *Itih"asa* and *Pur"ana* along with the four Vedas as a part of gurukula education<sup>8</sup>. Both Ram"aya]na and the Mah"abh"arata are known as the *itih"asa* as well as "*akhy"ana*. *Itih"asa* or '*Akhy"anas* were presented on a number of ceremonial occasions – like performance of 'A«svanedha or R"ajas"uya sacrifices or celebrations like s+imantonnayana samsk"ara. Kau\_tilya in his *Artha«s"astra* prescribed that a king should listen to *itih"asas* daily in the afternoon. *Itih"asa* to Kau\_tilya is a gamut of six disciplines - *pur"a]na*, *itiv\_rtta*, "*akhy"ayik"a*, *ud"ahara]na*, *Dharma«s"astra* and *Arthasastra*. Manu also gives the ruling that *itihasa* along with

*Dharma*«s"astra and 'Akhy"ana should be listened in every house.

While the Great Epics (the *R"am"aya]na* and the *Mah"abh"arata*) imbibe the concept of meta-History, that continues to be re-written and re-stated in all ages, History at micro levels continued to be presented through *upapur"a]nas* and *sthala-pur"a]nas*. A *sthala-pur"a]na* presents the account of the past and present of a particular region or a city. *®Sr+im"alapur"a]na* presents the history and topography of a city named *®Sr+im"ala*, now known as *Bh+inam"ala* in Rajasthan. *Skandapur"a]na* incorporates several section dealing with history, geography and topology of particular places. The *K"a«s+ikha]n]da* of this *pur"a]na* is an encyclopedia on the region of Kashi, while *Nep"alam"ahatmya* which also forms a part of this *pur"a]na* deals with the history of Nepal. *N+ilamatapur"a]na* describes the history of Kashmir.

*Kalha]na* has utilized all the sources – inscriptions, royal orders, records, seals, etc. as well as ancient texts on History. *K]semendra* has composed *N\_rp"aval+i* (line of Kings) before him, and *N+ilamatapur"a]na* comprising the history, topography, geography of Kashmir was also available to *Kalha]na*. *Kalha]na* re-examined these sources, he has vehemently criticized *K]semendra* for giving incorrect information in *N\_rp"aval+i*. *Jonar"aja* continued the sequel of *R"ajatarang]n+i* updating *Kalha]na's* account up to the reign of *Jainul-Abdin* in fifteenth century. Thereafter *Pr"ajybh\_t]ta* and *®Suka* wrote their own history books on Kashmir.

There is a whole tradition of historical epics in Sanskrit where history reveals itself in disguise. This disguise is not a camouflage, it is an investiture. A historical event is interpreted to make it assume the legendary proportions. The authors of these epics are conscious of the fact that they are not just writing the account of what actual has happened, they are creating history. *Padmagupta* alias *Parimala*, a protégé of *Kings Muñja* and *Sindhur"aja* in the city of *Dh"ar"a*, composed *Navas"ahas"a=nkacarita* in 1005 ACE. A staunch admirer of *Muñja*, *Padmagupta* was shocked by the sudden and pathetic demise of his mentor in 995 ACE. In between the legendary accounts of *Sindhur"aja's* victory over the *N"agas*, *H"u]nas* and his continuance his victorious journey up to *Karnatak*.

*Vikram"a<nkaadevacaritam* was composed by *Bilha]na* around 1085 ACE), It describes Both *Bilha]na* and *Kalha]na* knew *King Har]sa* personally, both have witnessed the turbulent times during his reign. Their view of *Har]sa's* personality and his history are different. Who is

historically more accurate Kalha]na or Bilha]na? Bilha]na is nearer to the Indian sense of history.

Ca]n]dakavi's P\_rthv+ir"ajavijaya together with the accounts of Prathv+ir"aja in the *Bhavi]syapur"a]na* have not been fully utilized to update the history of India during eleventh Twelfth centuries.

In the fifteenth century ACE, Hamm+iramah"ak"avya of Nayacandra ends in tragic death of the hero, written after one hundred years of his death in 1301. This is a glaring example of the care for Historical validity through an epic, composition. This tradition has continued till nineteenth century, until the colonizers destroyed the fabric of faith and creativity in which the world of Sanskrit was woven. Param"ananda, a contemporary of Shivaji wrote *Sivabh"aratam*- an epic to commemorate the heroic deeds of the great Maratha warrior He was followed by Harikavi, who wrote *Sambhur"ajacaritam* subjecting the life and deeds of Shivaji's son, *Sambh"aj+i Bhansale*. The life of *S"ahaj+i* (1684-1710 ACE) is described in *S"ahendravil"asa* by *Sr+idhara Venkate«sa*, who spend his life in the royal court of Tanzavur under *S"ahaj+i* himself. Kerala Varman describes the life of the Kng Swati Tirunal of Kerala in his *Vi«s"akhavijaya*.

Karnatak and Rajasthan have contributed enormously to the genre of Historical epic. There is a ling traditions of caritak"avyas. Enormous literature under the patronage of Moghul kings was produced in Sanskrit which remains yet to be evaluated as the study in history.

### Endnotes

- <sup>1</sup> *Atharvaveda*, IXX.54 and IXX.55
- <sup>2</sup> Pathak, V.S.: *The Ancient Historian of India*, p. 12-13
- <sup>3</sup> *Manusm\_rti*, I.64
- <sup>4</sup> *Atharvaveda* XV.6.11-12
- <sup>5</sup> ^Rgveda , VIII.2.38, I.4.34
- <sup>6</sup> ^Rgveda, VIII.32.1
- <sup>7</sup> ^Rgveda , IX.6.42, X.64.3, III.2.34
- <sup>8</sup> Ch"andogya Upana]sad, VII.9.29; I.63.89; 3.45.8



# Symbolism in the New Era of Buddhism: The Change of Maitreya from Buddhist Texts to Social Facts of Modernity in Vietnam<sup>1</sup>

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**Keywords:** *Symbolism, new era of Buddhism, Maitreya symbol, Maitreya – God of Wealth (MGW), religious change, religious commoditization, social fact, Buddhist text, amoral cult, quasi-religion*

## Introduction

Symbolism provides a theoretical basis used in many disciplines to decode the meaning of symbols. However, the concept is complex because it also connotes the symbolizing of the facts and phenomena of social life. According to Tzvetan Todorov “the notion of the symbol can not be studied in isolation. Just as often as with the concept of symbol, we shall be dealing, in the pages that follow, with sign and interpretation, use and enjoyment, tropes and figures, imitation and beauty, art and mythology, participation and resemblance, condensation and displacement, and many other terms as well”(Todorov 1982, p.9). There are two main ways of approaching the subject of symbolism; textual sources and social facts.<sup>2</sup> In general, “symbolization is a universal process. But we still need to understand much more about it, especially in it’s comparative aspects, in different societies, different classes, different religions” (Firth 1955, p.15).

This paper examines the viewpoint of symbolism, a particular socio-religious phenomenon, in contemporary Vietnamese *late socialist* society,

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namely the belief of *Đi L]Éac - Th<sup>1/2</sup>/4an tài* (Maitreya, God of Wealth, abbreviated here as MGW). The new era of Buddhism described in this paper is a special period for religion in Vietnam, which began with "*d<sup>1/2</sup>oi m-oi* and post-communism and has lasted until the present.<sup>3</sup> "One of the most influential discourses on the concept of 'religion' in Vietnam is linked directly with the state. Religion has played a part in legitimizing and reinforcing the state and in rebellions against it. The relationship between 'religion' and 'state' is thus best characterized in terms of 'persistent ambiguities' or 'balanced tension.'<sup>4</sup> Within such a reality of religious freedom, the Vietnamese are trying to free their minds' and their daily lives through *lách lu<sup>1/2</sup>]at* (lit."to get around the law").<sup>5</sup> Some new religious phenomena, exemplified by *Bà Chúa Kho*<sup>6</sup> and MGW, demonstrate the application of *lách lu<sup>1/2</sup>]at* to circumvent state law. In effect, this is the main reason explaining the many abnormal religious phenomena in contemporary Vietnamese society.

The study of the symbolism of Maitreya in the new era of Buddhism in Vietnam, elucidates *religious freedom* as an abnormality in the regulation of *red-capitalism*<sup>7</sup> that creates a new face of religion in Vietnamese late-socialism.<sup>8</sup> What is the new incarnation of Maitreya in the new era of Buddhism in Vietnam, and how does it appear in Vietnamese contemporary religion? Answering these questions is the main task of this paper, which focuses on symbolism in the new era of Buddhism by examining the Maitreya symbol through Buddhist texts and social facts in contemporary Vietnamese society.

## 1. Maitreya in Buddhist Texts

Maitreya is one of the most important symbols in the three main branches of Buddhism, i.e., Mahayana, Hinayana and Vajrayana. Traditionally, Maitreya is second only to Sakyamuni, but in some cases Maitreya stands for Sakyamuni, and thereby attains the top position within the trends of Millenarianism and Messianism. Maitreya, in particular, is a unique symbol in Buddhism that remains in two kinds of incarnation: Buddha and Bodhisattva. Sometimes Maitreya appears as Arhat in the role of a Buddhist protector, together with Vajrasattva/or Vajrapani, Avalokiteshvara, or Manjursi. This is exemplified in sculptures in Mathura, Gandhara, Ajanta, and Elora, at the beginning of Iconic Buddhism. There are many different Buddhist textual sources mentioning Maitreya. And many Buddhist texts mention very different times for Maitreya's descent. For example, from 5,000 years after the birth of

Sakyamuni Buddha (Getty 1914, p.46) or 4,000 years (Bhattacharyya 1924, p.80) to 80,000 years<sup>9</sup>, or even 84,000 years,<sup>10</sup> when Maitreya awaits rebirth at that time in the distant future when Sakyamuni Buddha's dispensation will have been forgotten completely (*Encyclopedia of Buddhism* p.507). At present, Maitreya remains in Tsusita Heaven as a Bodhisattva. In the past, he taught the Buddhist doctrines that enabled Master Asanga to write the Five Dharmas or Five Teachings of Maitreya.<sup>11</sup> The future appearance of Maitreya is the real reintroduction of the "true" *dharma* to the people. In turn, that would allow the construction of a New World.

According to the *Cakkavatti Sutta: The Wheel-turning Emperor* (Digha Nikaya 26 of the *Sutta Pitaka* of the *Pali Canon*), Maitreya Buddha will be born in a time when humans live to an age of eighty thousand years, in the city of Ketumatth (present Benares), whose king will be the Cakkavattth Sankha. Sankha will live in the palace where King *Mahapanada* once dwelt, but later he will give the palace away, and will himself become a follower of Maitreya Buddha. The *Maitreyavyakarana (The Prophecy of Maitreya)* states that gods, men and other beings will worship Maitreya and will be freed from their doubts, and the torrents of their cravings will be cut off. Thus freed from all misery, they will manage to cross the ocean of becoming, and, as a result of Maitreya's teachings, will lead a holy life. No longer will they regard anything as their own; they will have no possessions, no gold or silver, no home, no relatives! But they will lead the holy life of chastity under Maitreya's guidance. They will have torn the net of the passions, they will manage to enter into trances, and theirs will be an abundance of joy and happiness, for they will lead a holy life under Maitreya's guidance.<sup>12</sup> According to the *New World Encyclopedia* (pp.512-517), Maitreya represents the millennial aspirations of the vast majority of the world's Buddhists, regardless of their particular doctrinal orientations. In eschatological terms it is thought that Maitreya's coming will occur after the current *Buddha's* teachings (the *Dharma*) are completely forgotten and the world has been left in a moral vacuum. At this time the enlightened Bodhisattva will descend from his miraculous abode in *Tsusita* Heaven (literally, the realm of the "contented ones"), and be reincarnated as a human child. Once he attains adulthood, it is foretold that Maitreya will attain *Bodhi* (true enlightenment) in seven days, by virtue of his many lives of preparation for Buddha-hood (similar to those reported in the Jataka stories of Shakyamuni Buddha).

Throughout the examples above it can be seen that the legends and/or Buddhist doctrines always mention the source of Maitreya by ambiguous texts. Many famous Masters, such as Hsien Tsang in “*Ta-Tang Si-Yu-Ki*” (Buddhist travels in the western world) or Asanga in *Maitreyanatha*, also certainly accepted the appearance of Maitreya without questioning the source of the most important symbol of Buddhism. Some scholars profoundly involved in Buddhist studies consider that most Buddhist texts mentioning the source of Maitreya only approach “the top of the tree.” Thus the source of Maitreya remains vague and veiled. As Asha Das has pointed out in her book, “no measure measures him who has reached the goal. But by what measure is the immeasurable measured? No words describe the indescribable. Buddhist art represented Maitreya with only some of the signs that are impressive and spiritualized. Therefore, the physical appearance of Maitreya in art and architecture is perfectly proportioned”(Das 2003, p.15). And Inchang Kim sums it up:

Maitreya became an immediate source of that *dharma*, for both Hinayanists and Mahayanists. Even after realizing that such salvation is not possible in the present life, they desired to be reborn in the paradise of Maitreya, either in Tsusita or in Ketumati, in order to hear the *dharma* directly from Maitreya. Finally, they all wish to descend along with Maitreya to Ketumati, and under the guidance of Maitreya, to enter the final *nirvana*. Tsusita and Ketumati are the lands of pure Buddhist Law for all the Buddhists” (Inchang Kim 1997, pp.31-32).

Thus, it can be said that the ancient Buddhist texts, including doctrines, historical books, and literature mentioned Maitreya only as an unanalyzed and unverified legend . However, some new research approaches this symbol as a social fact and/or social phenomenon. According to Hue Tam Ho Tai in *Maitreya the Future Buddha* (p.168), “Maitreya had symbolized compassion, to the sectaries of the nineteenth and twenty centuries, he symbolized their aspirations for a perfect world that came from their utter hopelessness.” Therefore, while studying the Maitreya symbol we have to understand thoroughly its social aspect, without which one of the most important aspects of the Maitreya symbol would be lacking. From the symbolic perspective of Maitreya in the context of contemporary society, it is basic to locate a feature of the Maitreya symbol not only in Buddhism, but also in many religions and beliefs in the world, both in particular characters and general aspects.

Thus, to understand the Maitreya symbol, this research must be approached by taking a broad perspective and synchronic historical view simultaneously with a diachronic view in comparison with the saviors in the other religions, such as Judaism, Christianity and Islam. Specifically, we must approach Maitreya symbolism as a special phenomenon of mental crisis based on social facts. This paper has chosen to focus on the Maitreya symbol in Vietnamese Buddhism, and its usage based on a new social situation that began in 1986.

## **2. The Change of The Maitreya Symbol in Buddhist History**

### **2.1. Maitreya Symbol in the Early Indian Subcontinent**

During this period most Buddhist images were Aniconic Buddhist symbols, such as the *Buddha foot print*, *Dharmachakra* (or *Dharma wheel*), an *Empty chair*, etc., which began in the fourth century BCE. Anthropomorphic symbols marked the period of *Iconic Buddhism* from the start of the first century BCE. Anthropomorphic symbolism appeared from around the first century CE, with the arts of Mathura and the Greco-Buddhist art of Gandhara, and was combined with previous symbols. Anthropomorphic representations of the Buddha began to emerge in Northern India from the first century AD. The art of Gandhara benefited from centuries of interaction with Greek culture, since the conquests of Alexander the Great in 332 BC and the subsequent establishment of the Greco-Bactrian and Indo-Greek Kingdoms led to the development of Greco-Buddhist art. Gandharan Buddhist symbols influenced Greek art and the concepts of Greek mythological culture. Thenceforth, Buddhist symbols developed beyond Buddhist texts by reflecting creations both inside and outside Buddhism. The creation of Buddhist symbols speeded, broadened and strengthened the dissemination of Buddhism because it became easy for the uneducated general populace to understand Buddhist doctrines. Diverse Buddhist symbols appeared in society.

Maitreya was one of the earliest Buddhist symbols to appear in Iconic Buddhism in Gandhara and Mathura, the two main initial Buddhist centers in the Indian subcontinent. Defining the Maitreya symbol among so many other kinds of Buddhist and Hindu symbols in ancient Indian archaeological sites is among the most difficult of classification tasks. However, scientists found that a key to recognizing the Maitreya symbol is the combined image of Buddha and Bodhisattva. As noted by Inchang Kim (1997, p. 34), “[t]he earliest typology of Maitreya icon from

Mathura is characterized by three distinct features: firstly, it has characteristics of the Buddha images in the hair style and in the garments; secondly, it adopts the Bodhisattva ornamentation, and lastly, it holds *kamandalu* in the left hand.” From this can be determined the Maitreya symbol in Iconic Buddhism with the two main forms of standing or seated images.



P1. Seated Maitreya in Mathura, 2<sup>nd</sup> century      P2. Seated Maitreya in Gandhara, 2<sup>nd</sup> century      P3. Standing Maitreya in Gandhara 2-3<sup>rd</sup> century

**Group 1: Maitreya symbols in Iconic Buddhism**

Those images reveal the influence of Greek art. In other words, Greek culture followed Alexander the Great in leaving its mark on conservative Indian culture. Thenceforth Buddhism diffused from Central Asia to other Asian civilizations, and via China, Korea, and Japan to Vietnam. However, the Maitreya among many other Buddhist symbols not only spread, but also interacted with indigenous cultures to form new symbols. This is one of the most important reasons accounting for the spread of Buddhism, as well as explaining the changes it wrought in each civilization to which it diffused.

**2.2. The change of the Maitreya symbol in the diffusion of Buddhism**

During the spread of Buddhism from the Indian subcontinent, Buddhist symbols, especially the Maitreya symbol, influenced many aspects of local cultures to create new variations, and even new beliefs outside Indian culture. These include Budai Heshang in China and MGW in Vietnam. This is the main way that the Maitreya symbol changed in each culture where it appeared. It also explains the differences between Maitreya in Buddhist texts and as a social fact, as exemplified below.



P1. Maitreya in Bihar, India



P2. Maitreya in Elora, India



P3. Maitreya in Ladakh, India



P4. Maitreya in Bamiyan, Afganistan



P5. *Maidar burkhan* (Maitreya) in Mongolia



P6. *Jampa* (Maitreya) in Tibet



P7. Maitreya in Yungang, China



P8. Maitreya in Sichuan, China

***Group 2: Maitreya in the First Millennium***

Although some things changed in comparison with the original Indian cultural symbol, the symbols of Maitreya in first millennium Asia retained many of the basic characteristics of the Indian Maitreya symbol, including form, gesture and decoration. This form of Maitreya symbol appears in most of the main Buddhist centers, including Ladakh,



Elora and Ajanta, in India, Bamiyan in Afghanistan, and Dunhuang, Yungang and Longmen, in China, during the following centuries. Some ancient styles still influence East Asian cultures, as discussed below.

**Maitreya in Korea**

**Maitreya in Japan**

**Maitreya in Thailand**



P1. Seated Maitreya, Korean 4-5th century. Guimet Museum



P3. Miroku Bosatsu (Maitreya) in Koryu-ji Temple, Japan 7<sup>th</sup> century



Bodhisattva Maitreya, 8th century Buriram Province, Prakhon Chai



P2. Standing Mirug (Maitreya) in Korea



P4. Maitreya in Japan. 6, Century



P6. Mitrreya in Ayuthaya, 18<sup>th</sup> century

***Group 3: Different forms of Maitreya within each country in Asia***

However, after acculturated to the center of Chinese culture, Maitreya symbol had a big change, that is the process of Sinonization to



became Maitreya – Budai Heshang. Budai Heshang is the nick-name of the new Maitreya – Chinese Maitreya. According to Chinese history, Budai was an eccentric monk who lived in China during the Later Liang Dynasty (907–923 CE). He was a native of Fenghua, and his Buddhist name was Qieci (Chinese: 契此). He was considered a man of good and loving character with a big cloth sack (Budai mean cloth sack). Budai Heshang in folklore is admired for his happiness, plenitude, and wisdom of contentment. One belief popular in folklore maintains that rubbing his belly brings wealth, good luck, and prosperity. In spite of the distinct visual differences in how each has been depicted, in China and those areas to which Chinese cultural influence spread, the depiction of Budai is consistently short and round.



P1. *Budai Heshang* in Hang Zhou



P2. *Budai Heshang* in Taiwan



P3. *Budai Heshang* in Beijing

**Group 4:** Maitreya in China: *Budai Heshang*

This form of Budai Heshang is appear not only in China but also in many East Asian countries such as Japan, Korea and Vietnam.



P1. *Miroku Bosatsu* (Maitreya) in Japan



P2. Maitreya in Samgak-san Doseon-sa temple, Korea



P3. Maitreya in Bai Dinh temple, Vietnam

**Group 5 :** The form of Budai Heshang in East Asian countries

It can be said that the change Maitreya underwent in Chinese culture is the most important change of all. From being a “thin” Buddha, he appears in Chinese culture in the new form of a Chinese monk, a “fat” Buddha exhibiting a new pattern of behavior. Although it is obvious that the outward appearance changed totally, the inner or symbolic change is less easily recognized, because the name did not change. Therefore to define the character of this symbol, we have to understand the relationship between Buddhism and local culture, and also to define the main characteristics of Maitreya in Indian culture compared to its new classification in Chinese culture. We should query why Maitreya became Budai Heshang in China. The answer requires a profound understanding of Chinese traditional culture, especially its long-enduring symbols. However, this is not easily done, because a hypothetical framework is required to organize information in a way that explains the turning point of the Maitreya symbol within Chinese culture.

### **3. Change of the Maitreya Symbol in Northeast Asian Cultures**

Before Budai Heshang became established in China, at the end of the first millennium, and then spread to other Northeast Asian cultures, the Asian form of Maitreya remained the same as in India. (The illustrations P7, P8 in Group 2 in China and P1, P3, P4 in Group 3, in Japan and Korea, show exactly what we are mentioning.) Most Northeast Asian Maitreya in the form of Budai Heshang were created after the tenth century, such as P1, P2, P3 in Group 4 in China, or P1, P2, P3 in Group 5 in Japan, Korea and Vietnam. Thus, it can be affirmed that Budai Heshang is a composite of Chinese traditional culture and Buddhist Maitreya forming a new symbol that bears a Chinese character but retains the pre-existing name of Maitreya from Indian culture.

That raises a new question: Why did the “fat” Buddha named Budai Heshang appear mainly in Northeast Asian cultures? There appear to be three main reasons. Firstly, this area was heavily influenced by Chinese traditional culture, and so is regarded as the Chinese cultural sphere or “Sinosphere”. Secondly, Buddhism in this area is Mahayana, so it could accept very easily a symbol created in Chinese Mahayana Buddhism. Finally, a syncretism of folk belief and Buddhism is very common, as best exemplified by the God of Wealth, the Earth God and the God of Happiness in Northeast Asian traditional culture.

The first and second reasons are easily comprehended. However,

the third reason requires further explanation, since it is still a hypothesis. It requires an examination of the Northeast Asian culture realm, including Japan, Korea and Vietnam, together with a comparison of the Maitreya symbol and local deities.

### **3.1. The folk concepts of God of Wealth, Earth God and God of Happiness in Northeast Asian culture<sup>1</sup>**

Among the many kinds of deities that characterize Northeast Asian cultures, the God of Wealth, the Earth God and the God of Happiness are the most widespread, occurring in many forms and assuming many appearances. The God of Wealth is one of the most important, and is worshipped by most people in East Asia since he bestows the blessings of luck and wealth. Traditionally a custom practiced by businessmen, worship of the God of Wealth gradually became popular in folk culture. In China this god was officially recognized as Zhao Gongming, Guan Yu, Zhao Gong, Xiao Sheng, Cao Bao, Chen Jiugong, and Yao Shaosi, among others. Although they have different names and cultural sources, they all have the same duty regarding wealth and treasure, and the bringing of luck and good fortune.

In addition to the God of Wealth, the Earth God plays an important role in Chinese culture. Normally called *Tu Di Gong* (土地公), the Earth God is one the most important “grassroots deities” in China, with every village, or even every family, having a shrine for his worship. The practice of Earth God worship in China can be traced back to the Zhou Dynasty (1045-256 BC). The Zhou practiced Heaven and Earth worship as something above and below humans, and which they named *Tenchijin* or *Tian-Di-Ren* (天地人). The Earth God still appears very commonly in folk culture both in China and among Overseas Chinese communities.

Another very important god in Chinese culture is *Fu Gong* or *Fu Xing* (God of Happiness). The God of Happiness does not appear alone, but together with the God of Prosperity and God of Longevity (*Lu* and *Shou*). This *Fu-Lu-Shou* forms the triple blessing of Happiness-Prosperity-Longevity. *Fu Xing* (officially called *Tian Guan*) is the God of Happiness and Fortune, who carries a boy in his arms to signify thriving offspring. *Lu Xing* (*Yuan Wai Lang*) is the god who awards official ranking and money. *Shou Xing* (*Nan Ji Xian Weng*) is a smiling old man with a long white beard and a bald-head.

Although the three gods (*God of Wealth, Earth God and God of Happiness*) are separated in Chinese culture, that is not the case in the other East Asian countries, where sometimes they are linked or even conflated. This is explained in detail below.



P1, P2, P3: God of Wealth in Chinese culture



P4, P5, P6: Earth God in Chinese culture



God of Happiness in Chinese culture

**Group 6: God of Wealth, Earth God and God of Happiness in Chinese culture**

In Japanese culture *Shichi Fukujin*, or the **God of Wealth, stands for** commerce and trade, and is referred to as *Daikokuten* or *Daikoku* (see the second position in the illustration below). This god is worshipped widely in Japan as a household deity in the kitchens of monasteries and private homes. It appears as both a God of Wealth and an Earth God. *Daikoku* is depicted mostly with a paunch, as in Fig. 5 (the fifth position in Group 7 illustration below). *Hotei* (布袋), the God of Contentment and Happiness, has a cheerful face and a paunch, and carries on his back or shoulder a large cloth bag containing food for the destitute. Many believe in the tradition that if a group of strangers gathers together on New Year's Eve and asks *Hotei* for a gift, that he will grant it, provided they truly believe, (Chiba 1996). In recent times, *Hotei* has become referred to also as the Patron Saint of Restaurateurs and Bartenders, Such that when a person overeats or drinks to much, he/she may sometimes jokingly attribute it to *Hotei*'s influence.<sup>1</sup>

Another popular god in Japanese culture is *Jurojin*, the God of Wisdom and Longevity (the sixth position in Group 7 illustration below). He, probably, has the same origin as his godfather *Fukurokuju*, with whom he is often confused. Thought to be a great lover of rice wine (*sake*), he is represented as a small old man with a wide forehead (but narrower than that of *Fukurokuju*), and holding a knobby staff to which the Book of Knowledge is attached. He is accompanied by a crane, a black deer, or a tortoise. He is sometimes called *R"ojinseishi*, when identified with the Chinese sage *Laozi*.<sup>2</sup> In Japan, *Daikokuten*, *Hotei* and *Jurojin* persist in folklore as fat, paunchy and bald-headed gods in the Seven Lucky Gods (*Shichi Fukujin*). These three appear very different from the other four in this set. Why do the three gods appear as fat, paunchy and bald-headed gods? This is key question for making a connection between the three gods described above and appearance of Maitreya – Budai Heshang in 3.2. bellow.



**Group 7: The Seven Lucky Gods of Japan**

In Vietnam, the *God of Wealth*, the *Earth God* and the *God of Happiness* are vague deities for which textual sources are rare. There are many beliefs regarding wealth, property, luck, and prosperity that are linked to “things “or phenomena that we termed “fact”. These include rain, wind, light, mountains, rivers, and trees, among other things that we can term “natural deities,” as well as ancestors, heroes, the mother goddesses, or other revered community or state ancestors.

The principal difference between Vietnam and China or Japan is the way in which the Vietnamese spread local beliefs by simply orally transmitting the concepts to the next generation. As a result of Chinese acculturation, beliefs became written in official sources. However, the Vietnamese deities are given Chinese names. The same occurred in Japanese culture. Within the Sinosphere, Vietnamese culture accepted items of Chinese culture, but changed their background to fit them into local culture and form the main characteristics of belief or religion. The *God of Wealth*, the *Earth God* and the *God of Happiness* were all changed in this way.

In Vietnam the Chinese *God of Wealth* was first adopted by the Chinese communities, and then spread throughout the entire country.<sup>1</sup> In general, in Vietnam the *God of Wealth* is also worshipped as in the Chinese communities. However, his form changed over time. In particular in Vietnam the *God of Wealth* and the *Earth God* became conflated as *Th<sup>1/2/4</sup>an tài - Ông Đ<sub>ia</sub>*. At first *Ông Đ<sub>ia</sub>* (Earth God) was worshipped in a small shrine temple or other sacred place, called in Vietnamese *am*, or *mi<sup>1/2/4</sup>eu* if outside the house, or *khám* when inside.

In addition, the worshipping of ancestors is the most important belief, such that *Táo quân*, *Th<sup>1/2/4</sup>an tài* and *Ông Đ<sub>ia</sub>* (*God of Kitchen*, *God of Wealth* and *Earth God*, respectively) are among the main deities worshipped in most Vietnamese families. However, at present the trend of uniting the deities at one place has become popular. According to Hu<sup>1</sup>ynh Ng<sup>1</sup>oc Tr<sup>1</sup>ang’s (1993, p.25) idea, with recent economic and urban development business has become increasingly more important than farming, so Vietnamese families have gathered their household deities together onto one main tablet, called “*Th<sup>1/2/4</sup>an tài*” or “*Th<sup>1/2/4</sup>an tài – Ông Đ<sub>ia</sub>*” (God of Wealth or God of Wealth-Earth God). The purpose of their worship is to become rich and prosperous. This phenomenon is explained for the case of Maitreya – God of Wealth (MGW) in the next section.

Besides the God of Wealth and the Earth God mentioned above, the phenomenon of the Vietnamization of a foreign deity is exemplified



also by the God of Happiness (*Phúc th<sup>1/2</sup>/<sub>4</sub>an*, *Ng<sup>±u</sup> phúc* or *Ch<sup>±u</sup> Phúc* in Vietnamese culture). *Phúc* (Happiness) is a special concept in Vietnamese culture. *Phúc* originated from Chinese culture (via the belief of *Three Stars Gods* : *Fuxing*, *Luxing*, and *Shouxing*, *Phúc* standing for *Fuxing*) but it appeared in Vietnam as a concept rather than a god. So we can see many kinds of *Phúc* : *Phúc* symbol in *Ng<sup>±u</sup> phúc* (or *Ng<sup>±u</sup> phúc lâm môn* standing for *Wu Fu Lin Men* (五福临门) which means "may the five fortunes arrive at your door"). The word *Phúc* also stands for an important role of causality. It is not only a concept of harmony in social relationships, but also one relating to the effect of the past on the future. In Vietnamese culture the word *Phúc* became a symbol of happiness, belief and hope. It shows the characteristic of *huống thi<sup>1/2</sup>]en* (inclined to the good) of Vietnamese, and is a part of the value *chân-thi<sup>1/2</sup>]en-m<sup>±y</sup>* (the true, the good and the beautiful) in Vietnamese culture (Đình H<sup>1/4</sup>ong H<sup>1/4</sup>ei 2012, pp. 102-123).



God of Wealth in Vietnamese culture



Earth God in Vietnamese culture



Happiness word and God of Happiness in Vietnamese culture

**Group 8: *God of Wealth, Earth God and God of Happiness* in Vietnamese culture**

**3.2. The combining of *God of Wealth, Earth God and God of Happiness*, and a hypothesis on the formation of Maitreya – Budai Heshang in Northeast Asia**

In section 2.2, we mentioned the change of Maitreya with the dissemination of Buddhism in Asia, and acculturation between local cultures and the Maitreya symbol in Buddhist texts. In this section, we put forward a hypothesis on the change of the Maitreya symbol via three gods, the *God of Wealth*, the *Earth God* and the *God of Happiness*, in Northeast Asian cultures. Apart from some local factors originating in Northeast Asian legends regarding those gods, some of the main characteristics revealed are *aspiration to have a full stomach, happiness, wealth, and longevity*. The aspiration is made concrete by the images of a fat old man with a look of satisfaction on his face. He has the two notable characteristics of paunchiness and baldness that appear in many depictions. Such a manifestation would be defined as “not beautiful” by Westerners. However, in Northeast Asian traditional cultures these traits characterize a person who is *full, happy, wealthy, and endowed with longevity*. In other words an unreachable ideal for most Asians, who are poor, ragged, hungry, have short life spans, and are not prosperous.

This prompts the question of whether or not aspirations are linked to popular belief and art, to create the forms assumed by their gods. Although there is no straightforward answer, nevertheless a purpose can be recognized. People create gods to serve their ideas and demands



in spiritual as well as material life. Beseeking gods for wealth, luck and happiness is an indispensable need. And the way their gods are described depends on the ideas of both the general populace and artisans. From their ideas and through their thinking and artistic skills artisans shape symbols that are imbued with the contemporary spirit and social influences. Obviously, symbols in plastic art are the directed and lively denotation of a people's concepts regarding their religion, belief and culture. Therefore, the images of rich-fat-full gods are retained in mind when forming a new god based on the same fundamental idea. Similar to that, the Maitreya symbol acculturates to Northeast Asian cultures to bring *fullness, happiness, wealth, and longevity*, in the same way that local deities have done to satisfy people's aspirations, regardless of whether or not he is a Bodhisattva, Future Buddha or Messiah. The denotations and connotations are summarized in *Table 1*.

<i>Denotation</i>	<i>Connotation</i>
Gold	Wealth
Paunchy	Full
Bald	Longevity
Rich and having many children	Happiness

**Table 1:** Denotations and Connotations of East Asian Symbols

This begs the question of why Sakyamuni remains limited to a Buddhist context whereas Maitreya appears as a local god named Qieci or Budai Heshang. Sakyamuni is a mortal Buddha, as mentioned clearly in many Buddhist texts. Further, his teachings and doctrines are specific and always linked to social life and human beings. In contrast, Maitreya is both a Bodhisattva and a Future Buddha, so some things link to future conditions that must be better than the present world. The most purified world would be in "Pure Land". That is a dream of all who are forced to lead a miserable life. Maitreya is a wish-symbol of all people, so the image of a deity bearing *full, happiness, wealthy, and longevity* diffused throughout the whole of Northeast Asia during the development of Buddhism in the region.

Budai Heshang can be regarded as a mixed deity-Buddha created through the combination of Buddhist doctrine and Chinese culture. There is a particular phenomenon that, after Budai Heshang was created in Chinese culture, it continued to influence Northeast Asian culture

in a way contrary to what actually happened. That is, Budai Heshang, or Maitreya in Buddhism, became localized in Northeast Asia as a local deity. The proof can be found in the set of Japanese Seven Lucky Gods (*Shichi Fukujin*), which has three deities bearing the form of Budai Heshang (*Daikokuten*, *Hotei* and *Jurojin*). Noteworthy is that *Hotei* in Japanese is the real name of Budai in Chinese, and was Japanized to become a God of Happiness (*Fukujin*) in Japanese culture. Even more interesting is that Budai Heshang became the Vietnamese Maitreya, or God of Wealth (MGW), a brand new deity during the boom times of economic innovation that began in 1986. This will be examined below. The relative roles and the positions of Maitreya and local deities as *God of Wealth*, *Earth God* and *God of Happiness* based on the texts and social facts are summarized in *Table 2*.

<i>ORD Name</i>	<i>Role and Position</i>	<i>Appearance</i>	<i>Illustration</i>
1 Ajita	An attendant of Buddha Sakyamuni in Hinayana	A Prince as attendant of Buddha Sakyamuni in Original Buddhism	P 1
2 Future Buddha	Buddha in Pure land	A Buddha in Pure land and Buddhist Cosmology	P 2
3 Boddhisattva Maitreya	A Boddhisattva in Tsusita	A Boddhisattva in Tsusita Heaven	P 3
4 God of Wealth	God of Commerce	A God at home, restaurant, shop	P 4
5 Earth God	Protector God	A God at home, property	P 5
6 God of Happiness	Lucky God	A God at home, community	P 6
7 Budai Heshang	Buddhist Monk in Mahayana	Maitreya in Buddhist places	P 7
8 Maitreya – God of Wealth (MGW)	Popular god both in Buddhist places and pop-life	A God in Buddhist places, homes, restaurants, shops, property, community	P 8, 9

**Table 2:** A comparison of Maitreya and some local deities in text and social fact



P1. Seated Maitreya in Gandhara



P2. Maitreya in Thangka painting



P3. Maitreya as an attendant of Buddha



P4. God of Happiness in a store in Hanoi, Vietnam



P5. Earth God in Phat Tichs Pagoda, Bac Ninh, Vietnam



P6. God of Happiness (with a child in hand) in a store in Hanoi, Vietnam



P7. Maitreya in Cau Dong Temple, Hanoi, Vietnam



P8. God of Wealth in Maitreya style in Chua Boc Temple, Hanoi, Vietnam



P9. God of Wealth in Hanoi, Vietnam

**Group 9: Illustration of Maitreya in the social fact**

#### 4. Religious Change in Vietnamese Contemporary Religion via Maitreya Symbol

Maitreya is one of the most important idols of Buddhism, but in the context of the economic boom in Vietnam following ‘*d/2/4oi mói*’ (innovation), Maitreya also appears as a kind of God of Wealth or even as a decorative object. Hence, this idol has gone beyond the scope of Buddhism to become a symbol of luck and wealth in the contemporary religion in Vietnam. The current synthesis between Buddhism and local belief has introduced a great complexity in the representation of Maitreya. It is represented as both the Future Buddha and as a Savior. It plays an important role both as the Future Buddha in Mahayana Buddhism, and the God of Wealth in folk belief. To distinguish between the Buddhist deity Maitreya and the new God of Wealth of modern Vietnam, we must examine the new cultural factors that have combined to produce these various representations. Such a transformation goes beyond the general rules of existing religions. Thus, this research will not classify the new Maitreya cult within Buddhism, but will label it as an “amoral cult” of modernity in Vietnam. That means to study Maitreya in modern society we need to know the cultural space and religious places of the new idol resulting from the ‘new incarnation’ of Maitreya, and considering *religious change* in modern Vietnam.

##### 4.1. Distinguishing between the Maitreya symbol and quasi-Maitreya symbols in contemporary Vietnamese society

In contemporary Vietnamese religion and society, the manner of worshipping Buddha or the deities’ icons is a complex and even chaotic phenomenon. There are many distinct icons located within the same place of worship. These include *Sakyamuni*, *Avalokitesvara*, *Maitreya*, *Manjushri*, *Samantabhadra* and other Daoist icons like *Yu-huang-da-di* (玉皇上帝), *Guan-yu* (關羽) and *Tai-shang-lao-jun* (太上老君), among others. Even the Mother Goddesses are displayed together with an icon of Ho Chi Minh. To classify each symbols from a social or religious viewpoint, it is critical to separate out cultural factors accumulated within. The classification used in this paper follows Emile Durkheim’s four steps: *Definition*, *classification*, *explanation*, and *demonstration*. There are many ways of doing this, but the one used here is based on the two norms of (a) the *form of the symbol* and (b) *popular concepts regarding the symbol*.



P1. Maitreya in a car,  
Hai Phong



P2. quasi-Maitreya in a  
taxi, Hanoi



P3. A quasi-Maitreya  
as a decorative  
object, Hanoi



P4. A quasi-Maitreya in a  
family, Hanoi



P5. Maitreya in Boc  
pagoda, Hanoi



P6. Statue of President  
Ho Chi Minh-A new  
Maitreya in Vietnam

**Group 10: Some different statues of Maitreya and quasi-Maitreya**

***a) Distinction based on the form of the symbol***

It is not so difficult to recognize a symbol of Maitreya in an Buddhist environment, based on his position or form, like standing or seating. The forms of Maitreya before Budai Heshang have been mentioned already in chapter 2 of this paper, so here we examine the Maitreya symbol only in the form of Budai Heshang. Standing Maitreya symbols (P2 in Group 4; P2 and P3 in Group 5), normally have a Buddhist precious object in one hand and a rosary in the other. Seated Maitreya symbols (P1, P3 in group 4; P1 in Group 5; P7, P9 in Group 9) have

a rosary in one hand while the other is making a *xúc-"d\_ia* gesture (*bhumisparsa-mudra*). In general, each Maitreya symbol in Buddhist sacred sites has one hand in the Buddhist gesture, and the other holding a rosary or Buddhist precious object. Meanwhile, quasi-Maitreya (such as God of Wealth, MGW, Earth God, etc.) follows the same style, but always his hand is holding a piece of jade, a gold bar, a chain of money, or some object symbolizing money, wealth or luck (P8, Group 9 and Group 10).

***b) Distinction based on the concept of people about the symbol***

Distinguishing between Maitreya and quasi-Maitreya based on the form of the symbol is relatively straightforward. However, this approach would lead to difficulties if the underlying concepts or popular explanations of that symbol are not taken into account. An example is the symbol in P8 above, which has been placed on the large BÙc Pagoda, in Hanoi. Certainly, it is symbol of Maitreya, because the Master and the Buddhists in this pagoda accepted that is a statue of Maitreya (in fact, it is a quasi-Maitreya icon). Meanwhile, the real statue of Budai Heshang (P9, Group 9) is located at a position for the God of Wealth (in front of the door) .<sup>1</sup> Nowadays, the statues of MGW appear in many positions, and not only in Buddhist places, but also in local temples, on family altars, etc. They even function as a decorative object in a guest room. Clearly, such objects are quasi-Maitreya symbols.

The examples above show that the concepts about Maitreya, God of Wealth, Earth God and MGW in Vietnam are very arbitrary. There is confusion regarding 1-Maitreya inside a Buddhist place; 2-Maitreya outside a Buddhist place; 3-Maitreya in the role of the God of Wealth; and 4-Maitreya as a decorative object. The reason for this state of affairs lies in the circumstances surrounding religious change in contemporary Vietnamese society. This is the focus of the following section.

**4.2. Religious change in contemporary Vietnamese society:  
From Buddhist text to social fact via the Maitreya symbol**

Religious change has been a common phenomenon throughout Vietnamese history. Religion itself always changes as it adapts to new societies and new cultures, just as it must be altered to adapt to new situations. However, the term “religious change” as used in this paper does not embrace all the change that has occurred throughout the history

of a religion. Rather, as it is used here the term focuses specifically only on some new religious phenomena, and on the changes religion undergoes in modern societies. Although this new terminology is not yet mentioned in dictionaries or encyclopedias, it has received the approval of scientists. According to Tom Smith, “[r]eligious change around the world is a complex phenomenon. No simple description such as secularization, religious revival, or believing without belonging captures the complexity of the process. The pattern varies across countries, indicators, and periods” (Smith 2009).

In Vietnam religious change not only follows general rules, but also happens in a particular situation. Examples of the latter include an economic boom, religious change in “*d/2/4oi mói*”, lack of understanding about religion, the *secularization of religion* and the ‘*religionization of secular symbols*. So the usual “arm-chair” methodological approach to the study of Vietnamese religion and its symbols will encounter difficulties. Rather, a research approach focusing on the objects in the cultural space of local residents is required. Further, changes in the economy, culture, society and politics in the research location must be understood. The abnormal aspect of religious phenomena in present-day Vietnam makes very difficult to compare it with both its own historical situations and to western societies. The abnormal phenomena in contemporary Vietnamese society create many corollaries of social morality and ethics.

Such corollaries include many conflated factors that could be termed *amoral cult*, *pseudo-religion*, *quasi-religion*, or *religious commoditization*. However, in the case of religious change in Buddhism via the Maitreya symbol, the focus is on quasi-religion. This is a unique characteristic of the Maitreya symbol that occurred in the process of religious change in Vietnam, especially under the influence of the economic boom that followed “*d/2/4oi mói*.” It can be said that, the change of the Maitreya symbol in Vietnamese Buddhism is a major change of Buddhist symbolism. This symbol also creates the most complicated religious phenomenon. As we know, Buddhism blends with indigenous culture wherever it diffuses. Although the core doctrines remain intact, the form of Buddhism that the doctrines express adapts to the recipient indigenous culture. Therefore the symbolic representations of Buddhist teachings differ one from another. The form of fat gods, including Maitreya - Budai Heshang, has come to represent *gods of luck and wealth*. This reconciles amicably with the concepts and behavior of



Chinese merchants. Religious change not only combines folk elements to form a symbol of Buddhism, like Budai Heshang, but also continues to change that symbol into many local variants, as demonstrated in Vietnamese and Japanese cultures. This is illustrated by the formulae in *Table 3*.

<b>Maitreya-</b>	<b>God of Wealth, Earth God,</b>	<b>Budai Heshang</b>
-Indian culture	+ <b>God of Happiness</b>	= - Chinese Buddhism
-Buddhist doctrines	- Indigenous culture	-New symbol of Buddhism
- Folk concept		

The change of Maitreya to Budai Heshang

<b>Budai Heshang</b>	<b>God of Wealth, Earth God,</b>	<b>Daikoku, Hotei (Japan)</b>
-Chinese Buddhism	+ <b>God of Happiness</b>	= <b>MGW (Vietnam)</b>
-Chinese Buddhist symbol	- Indigenous culture	
	- Folk concepts	

**Table 3:** The change of Budai Heshang to local deities

In the first formula, the Maitreya symbol in Indian Buddhism acculturates with Chinese deities to form the Budai Heshang symbol. The reverse change occurs in the second, with Budai Heshang in Chinese culture being influenced by Northeast Asian culture to become *Daikoku*, *Hotei* in Japanese culture, and MGW in Vietnamese culture. Throughout the formulae in Table Z we can see the role of the God of Wealth, the Earth God and the God of Happiness always as a medium for religious change in any direction. Further, religious change in Vietnam crosses the boundary of Buddhist texts and the predictions of scientists for some of the following reasons:-

- The binary relationship between Buddha and Bodhisattva;
- The economic boom in Vietnam after “*đổi mới*”;
- Social-political change in Vietnam in late-socialist society;
- Awareness of religion and the educational level of the people; and
- The impact of art.

On this phenomenon, Robert Weller, in his research on the change of the Maitreya symbol in Taiwan, claimed that “[i]ts special popularity in recent years stems in part from real economic experience of the market. Any market is to an extent capricious and unpredictable, especially for the small entrepreneurs and investors who have created



much of Taiwan's growth" (Weller 1994, p.160). In the case of MGW in Vietnam, however, change occurred not only for economic reasons, but also for religious, political and social reasons, among many others. Some among the many terminologies linked to religious change in Vietnam could be applied to the case of MGW. These include *amoral cult*, *pseudo-religion*, *quasi-religion*, and *religious commoditization*. Moreover, economic, religious, political or social factors are very difficult to separate. Thus it is impossible to find a single term appropriate to the entire range of change of MGW in contemporary Vietnamese society. Therefore it was not found possible to use Robert Weller's term "amoral cult" to describe the MGW belief in Vietnam. Instead, the term "quasi-Maitreya" is applied to the religious phenomenon in this case.<sup>2</sup>

### **Conclusion**

Throughout the change of the Maitreya symbol from Buddhist text to social fact in contemporary Vietnamese religion we can observe the evidence of a special historical period that continues to occur. It demonstrates not only the change of religion, culture and society, but also reveals many facets of the economic, political and art nexus. The change manifests some of the following characteristics:

- Maitreya in the new era of Buddhism in Vietnam is a "product" that combines religion, belief, art and the impact of economic, political and social factors.
- The Maitreya symbol in contemporary Vietnamese society plays not only the role of a Buddhist symbol, but is also a social phenomenon via MGW.
- It crosses the boundary of religious doctrine, so that MGW developed overwhelmingly across the entire range of societal classes, forming a new cult, a new symbol and a new decorative object in Vietnamese culture.
- Religious change from text to social fact in contemporary Vietnamese society is a process of multi-cultural composition that extends from India via Central Asia, China, Japan, and Korea to Vietnam. Thus, to describe this symbol/phenomenon, it must be detached from each cultural class inside the symbol/phenomenon.

Long-term research is required to understand this phenomenon more profoundly, and the results require a monographic treatment. Of

necessity this paper has been limited to describing some research results linking to symbolism during a brief period - or a new era of Buddhism- via the Maitreya symbol. Hopefully, the hypothesis presented here will be further elaborated and explicated in the near future.

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**Footnotes**

<sup>1</sup> This research is funded by Vietnam National Foundation for Science and Technology Development (NAFOSTED).

<sup>2</sup> “A social fact is every way of acting, fixed or not, capable of exercising on the individual an external constraint; or again, every way of acting which is general throughout a given society, while at the same time existing in its own right independent of its individual manifestations.” Emile Durkheim, *The Rules of Sociological Method* (1895), 8th edition, trans. Sarah A. Solovay and John M. Mueller, ed. George E. G. Catlin (1938, 1964 edition), 13.

<sup>3</sup> *Đổi mới* is a process of change or innovation in Vietnam from 1986 until the present. It coincided with the collapse of the USSR and the socialist states of Eastern Europe in the 1990s. During this period *religious freedom* has reappeared in Vietnamese society after approximately a half-century of being controlled by communist rules based on atheism. However, *religious freedom* in late-socialist societies is *freedom inside an iron-net*, such that religion must be understood in ways different from Western concepts.

<sup>4</sup> Andrea Lauser, *Ancestor Worship and Pilgrimage in Late Socialist Vietnam*, <http://www.uni-goettingen.de/en/138637.html>

<sup>5</sup> The denotation of *Lách luật* is “thread one’s way” to a “forest of laws” and the connotation is a way of getting around state law. Further, another term, *làm luật* (lit. “making law”), means “to bribe bureaucrats to obtain benefits by circumventing official regulations.”

<sup>6</sup> Meaning *Lady of the Treasury*, for more detail see Kirsten W. Endres, Andrea Lauser “*Engaging the Spirit World: Popular Beliefs and Practices in Modern Vietnam 2012*” and “*Praying for Profit: The Cult of the Lady of the Treasury (Bà Chúa Kho)*,” *Journal of Southeast Asian Studies* 38(3): 493–513; Malarney, Shaun Kingsley 2002.

<sup>7</sup> A new terminology mentions the new phenomenon of later socialist societies like China and Vietnam that are controlled by a high-class of

the privileged who siphon-off most of the state-benefits under the guise of communism. See more detail in: *Red Capitalism: The Fragile Financial Foundation of China's Extraordinary Rise*, Carl E. Walter and Fraser J. T. Howie, Wiley Publisher 2011.

- <sup>8</sup> It is exceptionally difficult to define present socio-religious phenomena in Vietnam. They could be seen as an amoral cult, a pseudo-religion, a quasi-religious phenomenon, or religious commoditization.. This issue will be discussed at the end of the paper.
- <sup>9</sup> *Fo-Kow-ki* by Fahsien, XXXIX, Beal's trans. p.79.
- <sup>10</sup> *Milo Hsia-sheng Ching*, Taisho Tripitaka, No 453. The citations in this paragraph are taken from *The Future Buddha Maitreya* by Inchang Kim.
- <sup>11</sup> The Five Dharmasutras include: Ornament of Clear Realization (Skt. *Abhisamayalankara*), The Ornament of the Mahayana Sutras (Skt. *Mahayanasutralankara*), Distinguishing the Middle from the extremes (Skt. *Madhyantavibhaga*), Distinguishing Dharma and Dharmata (Skt. *Dharma-dharmata-vibhaga*), The Sublime Continuum (Skt. *Uttaratantra Shastra*).
- <sup>12</sup> For details see: <http://en.wikipedia.org/wiki/Maitreya>
- <sup>13</sup> Although Northeast Asia includes Korea, it is not mentioned here owing to its the particular religious situation compared to the other countries. For example, in Korean culture the Earth God (*Toju*) is a bunch of rice straw, and the God of Fire is a white cup, among other peculiarities.
- <sup>14</sup> Jennifer Polden, University of Wisconsin – Eau Claire. For details see <http://www.uwec.edu/philrel/shimbutsudo/hotei.html> [www.uwec.edu](http://www.uwec.edu)
- <sup>15</sup> For details see: *Jurojin, God of Wisdom and Longevity*, in <http://www.onmarkproductions.com/html/jurojin.shtm>
- <sup>16</sup> In Vietnam, Hoa (meaning Chinese) is a name of an ethnic minority. However, the Hoa people came from Fuzian, Guangtung, Guangxi, Taiwan, and Hainan are not the 'real' Han (Mandarin Chinese). In fact, they are similar to what the Vietnamese refer to as Bách Việt (Hundred Viet). For details see Nguyễn Ngọc Thọ, "Assessing Lac Viet Culture" in *Historical Heritage and New Perspectives*, Hanoi, The Gioi Publisher (2011).
- <sup>17</sup> For details see : [http://www.vatgia.com/home\\_detail.php?module=estore\\_news&type=0&iNew=24610](http://www.vatgia.com/home_detail.php?module=estore_news&type=0&iNew=24610)
- <sup>18</sup> Concept developed in the sociological study of religion by Arthur L. Greil (Alfred University) to encompass activities and groups that deal with the sacred but are anomalous in the context of American folk definitions of "religion." Many of the phenomena that Greil would classify as quasi-religions probably would qualify as religions under standard sociological definitions, but either do not see themselves or are not seen by others as unambiguously religious. Quasi-religions straddle the line

between *sacred* and *secular*, as these terms are commonly applied. Examples would include New Age and holistic health groups, spiritualist groups, witchcraft, Alcoholics Anonymous, and some excoriated “cults.” With David Rudy, Greil developed the concept of the *Identity Transformation Organization (ITO)*, and has argued that all organizations that try to “change” people have certain organizational features in common, whether or not the organizations are explicitly “religious.” For more detail see the *Encyclopedia of Religion and Society*. Ed. William H. Swatos, Jr. <http://hrr.hartsem.edu/ency/Quasi-Religions.htm>