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CAN THE VEDIC PEOPLE BE IDENTIFIED ARCHAEOLOGICALLY? – AN APPROACH

Swords have been crossed and are still being so done on the identification of the Vedic people on the terra firma. Most Western scholars – not all, and their dyed-in-the-wool followers in India hold that nomadic hordes of the Vedic people entered the subcontinent from the north-west and invaded the Harappan cities, as a result of which the Harappa Culture became extinct. They also hold that the Vedas are only as old as 1200 BCE. In the present paper we will try to analyze the literary as well as archaeological data to find out if the Vedic people can at all be identified archaeologically and if so with which material culture-complex.

Looked at in a historical perspective, the seeds of this controversy may be said to have been sown in the nineteenth century when a renowned German scholar, Max Muller, declared that the Vedas were to be placed around 1200 BCE. Accepting that the *Sūtra* literature was assignable to the sixth century BCE, he allowed a period of 200 years for each of the preceding literary stages, viz. those of the *Āraṇyakas* and *Brāhmaṇas*. This took him to 600 + 200 + 200 i.e. to 1000 BCE. Since the *Vedas* preceded the *Brāhmaṇas*, he opined that the former may be placed between 1000 and 1200 BCE. This was a most mechanical way of dating the Vedic literature, and obviously could not cut much ice. Thus, when his contemporaries, like Wilson, Whitney and Goldstucker, made a lot of hue and cry on this kind of approach, a cornered Max Muller acknowledged that his dating was

"merely hypothetical" and finally surrendered by adding: "Whether the hymns were composed [in] 1000 or 1500 or 2000 or 3000 BCE, no power on earth will ever determine" [1].

The next stage in this historical perspective comes in the first quarter of the twentieth century when a mighty civilization, now called variously the Harappan, Indus or Indus-Sarasvatī Civilization, was discovered in the north-western part of the Indo-Pakistan subcontinent. It is characterized by well established cities, systematic town-planning, use of kiln-fired bricks for structures, and, above all, underground drainage – features which were lacking in the contemporary civilizations of Egypt and Mesopotamia. It may also be noted that this Indian civilization spread over an area much wider than that covered by the aforesaid two civilizations put together. The exquisitely carved steatite seals of the Harappan Civilization would ever remain the envy of any craftsman, past or present.

It took no time for archaeologists to date this newly found Indian civilization to the third millennium BCE, since objects belonging to it were found in datable contexts of the Mesopotamian civilization. And herein lay the further sprouting of the seeds of the debate. Since the Harappan Civilization was datable to the third millennium BCE and the Vedas, according to the above-mentioned fatwa of Max Müller, were no older than 1200 BCE, it seemed most logical, in the context of the then prevailing chronological framework, to say that the Harappan Civilization could not have been the product of the Vedic people.

The third and final stroke was that delivered in 1946 by Mortimer Wheeler (later knighted) when he discovered a fortification wall around one of the mounds at Harappa. Without losing any time, he declared as follows: [2]

> The Aryan invasion of the Land of Seven Rivers, the Punjab and its environs, constantly assumes the form of an onslaught upon the walled cities of the aborigines. For these cities the term used in the *Ṛigveda* is *pur*, meaning a 'rampart', 'fort' or 'stronghold'… Indra, the Āryan War-

1. F. Max Müller, *Physical Religion*, New Delhi, Asian Educational Services, reprint 1979.

2. R. E. M. Wheeler, "Harappa 1946: The Defences and Cemetery R 37", *Ancient India*, 3 (1947), p. 82.

> g̱od, is puram.dara, 'fort-destroyer'. He shatters 'ninety forts' for his Āryan protégé Divodāsa.
>
> Where are – or were – these citadels? It has in the past been supposed that they were mythical, or were 'merely places of refuge against attack, ramparts of hardened earth with palisades and a ditch'. The recent excavation of Harappa may be thought to have changed the picture. Here we have a highly evolved civilization of essentially non-Āryan type, now known to have employed massive fortifications, and known also to have dominated the river-system of north-western India at a time not distant from the likely period of the earlier Āryan invasions of that region. What destroyed this firmly settled civilization? Climatic, economic, political deterioration may have weakened it, but its ultimate extinction is more likely to have been completed by deliberate and large-scale destruction. It may be no mere chance that at a late period of Mohenjo-daro men, women and children appear to have been massacred there. On circumstantial evidence, Indra stands accused.

Thus came the climax in the framing of the thesis that the Vedic Aryans were invaders who destroyed the Harappan Civilization.

We may now begin with an examination of Wheeler's postulations. He speaks of a massacre at Mohenjo-daro. Was it really one? There are several flaws in it. In the first place, if it was a massacre which led to the destruction of the site and its consequent abandonment, one expects that these skeletons would lie at the uppermost level. But that is not the case. Stratigraphically, in the history of the site, some belonged to the Intermediate levels, some to the Late, while some more came from deposits which got accumulated after the site had been deserted. Secondly, as to their locale, all these came from the Lower Town – an area occupied by the common folks, but none from the Citadel where lived the elites and the rulers. Are we then supposed to believe that the invaders were choosy in their onslaught and slaughtered only the commoners and carefully avoided the rulers who really ought to have been their prime target. Thirdly, some of the skeletons bore cut-marks which had been healed. Such a healing would have been impossible had the persons concerned died in a warfare, since the death would have been immediate, leaving no time for the wounds to heal. And finally, no weapons have been found at the site which could point to a warfare; nor has the site yielded any material remains that could be associated with the (supposed) invaders. Taking all these factors into consideration, one

cannot but agree with George F. Dales when he damns this as a 'mythical massacre' [3]. Surely, Indra stands exonerated!

And there are many other eminent scholars who do not see eye to eye with Wheeler. For example, Collin Renfrew has the following comments to offer [4]:

> When Wheeler speaks of 'the Aryan invasion of the land of the Seven Rivers, the Punjab', he has no warranty at all, as far as I can see. If one checks the dozen references in the *Ṛigveda* to the Seven Rivers, there is nothing in any of them that to me implies invasion.
> (…) Despite Wheeler's comments, it is difficult to see what is particularly non-Aryan about the Indus Valley Civilization.

If we cast a glance at the Harappan sites, from west to east and from north to south, we do not find any evidence of wilful destruction, much less of an 'Aryan Invasion': be it Kot Diji in Sindh, or Harappa itself in Pakistani Punjab, or Rakhigarhi in Haryana or Lothal in Gujarat. On the other hand, there is ample evidence of a cultural devolution, taking the story from an urban scenario to a rural one. These transformations begin to assume local configurations. For example, at Harappa itself there is a transition from the Mature Harappa Culture to what has been termed the Cemetery H Culture. Or, in Gujarat there is a devolution of the Harappa Culture into what is known as the Rangpur Culture. This is not the place to go into the causes of such a devolution, in detail. Briefly, however, some of these seem to have been: the wearing away of the landscape owing to excessive exploitation for agricultural purposes; a major change in climatic conditions; and, above all, a steep fall both in internal as well as external trade.

There is yet another kind of evidence which stands in the way of any kind of 'invasion'. This comes from the study of human skeletal remains. In a paper published in 1991, Hemphill and his colleagues observe as follows: "As for the question of biological continuity within the Indus Valley, two discontinuities appear to exist. The first

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3. G. F. Dales, "The Mythical Massacre at Mohenjo-daro", *Expedition*, (6)3(1964), pp. 36-43.

4. C. Renfrew, *Archaeology and Language*, New York, Cambridge University Press, 1998, pp. 188 and 190.

occurs between 6000 and 4500 B.C. (…) and the second occurs at some point after 800 B.C." [5]. In the face of such a categorical assertion by distinguished anthropologists, how on earth can we push in, even through a back door, the 'Aryan invaders' who are regarded as aliens and ethnically different from the Harappans?

Even in the face of the foregoing evidence against the Aryan invasion theory, those who have a mind-set that the Aryans must have been nomads, entering India from outside, continue to harp on their pet theories, only changing garbs, as if in a theatrical performance. For example, Romila Thapar comes out with an alternative formulation: [6]

> It is now generally agreed that the decline of Harappan urbanism was due to environmental changes of various kinds, to political pressures and possible break in trading activities, and not to any invasion. Nor does the archaeological evidence register the likelihood of a massive migration from Iran to northwestern India on such a scale as to overwhelm the existing cultures. If invasion is discarded then the mechanism of migration and occasional contacts come into sharper focus. The migrations appear to have been of pastoral cattle-herders who are prominent in the *Avesta* and *Rig Veda*.

But once it is conceded that there is no evidence to support the invasion theory, what purpose would it serve to keep on giving life-saving injections to a dead horse, by formulating another theory, viz. that of sporadic 'migration and occasional contacts' by 'pastoral cattle-herders'? What archaeological evidence is there to substantiate the theory even in its new garb?

Toeing the aforesaid line of Thapar and following the footsteps of Fairsservis as well, R. S. Sharma writes: "(…) the pastoralists who moved to the Indian borderland came from Bactria-Margiana Archaeological Complex or the BMAC which saw the genesis of the culture of the *Ṛg Veda*" [7]. But can the learned author point out even a single site in India, east of the Indus – which was the main scene of activity of

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5. B. E. Hemphill *et al.*, "Biological Adaptations and Affinities of Bronze Age Harappans", in R. H. Meadow (ed.) *Harappa Excavations 1986-90*, (1991), pp. 137-82.

6. R. Thapar, in *Journal of the Asiatic Society of Bombay*, 64-66 (1988-91), pp. 259-60.

7. R. S. Sharma, *Advent of the Aryans in India*, New Delhi, Manohar Publishers,1999, p. 77.

the Ṛigvedic people – where settlements/ remains of the BMAC as such have been found? If not, why then indulge in baseless speculations? Perhaps in this context the pro-BMAC scholars might like to point to a recent paper in which Possehl refers to some seal-impressions on clay found in his excavation at Gilund, a Banas Culture site in south-eastern Rajasthan, which, according to him, are similar to those associated with the BMAC [8]. While these seal-impressions yet remain to be studied more closely, let it be stated that the occurrence of a few seal-impressions does not necessarily imply the 'immigration' of the people as such belonging to the BMA Complex. Their presence can equally well be explained by trade-contacts and so on. Don't we give the same explanation for the occurrence of the objects of the Harappa Culture in Mesopotamia, Iran and Central Asia, and for the counter presence of some objects from these areas at Harappan sites on the Indo-Pakistan subcontinent?

Once again, those who have their mind deeply immersed in the 'Aryan Invasion/Immigration' theory, take recourse to another kind of argument, viz. that of the flora. For example, Possehl writes: 'One thing seems certain; the speakers of Vedic Sanskrit (…) came from elsewhere. This conclusion comes from (…) Indo-European words for trees which are species such as birch, Scotch pine, linden, alder and oak. These are plants from a temperate environment and the fact that their names are shared among the early languages of the family suggests a homeland in this environment' [9].

I have dealt with this issue in great detail in my latest book [10], but it may briefly yet categorically be stated here that the earliest book of the Aryans, viz. the *Ṛigveda*, does not mention any of the species of cold-climate trees enumerated above. On the other hand, all the trees mentioned in the *Ṛigveda*, such as the *Aśvattha* (*Ficus Religiosa L.*), *Khadira* (*Acacia catechu*), *Nyagrodha* (*Ficus benghalensis*), to name just a few, do not belong to a cold climate but to a tropical one.

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8. Gregory L. Possehl, "The Ahar-Banas Complex and the BMAC", *Man and Environment*, 29(2), 2004, pp. 18-29.

9. Gregory L. Possehl, *Indus Age: The Writing System*, New Delhi, Oxford and IBH, 1996, p. 65.

10. B. B. Lal, *The Homeland of the Aryans: Evidence of Ṛigvedic Flora and Fauna and Archaeology*, New Delhi, Aryan Books International, 2005.

Likewise, the Ṛigvedic fauna, comprising such species as the lion, elephant, peacock also belongs to a tropical climate and does not include any species specific to cold climate. So where is the case for importing the Ṛigvedic people from a cold-climate zone?

There is yet another misconstrued theory, viz. that the Harappans were a Dravidian-speaking people, which requires an examination. This indeed is an off-shoot of the 'Aryan Invasion' theory itself. It is held by the proponents of this theory that as a result of the Aryan invasion the Harappans were driven away all the way to south India but a pocketful of them somehow managed to stay on in Baluchistan; and these residual people now speak the Brahui language which is regarded by these proponents as a branch of the Dravidian group. Let it straightaway be stated that most scholars do not agree that Brahui belongs to the Dravidian group. Some even hold that the Brahui-speaking people migrated to that region from elsewhere during the medieval times.

Further, if the so-called Dravidian-speaking Harappans were pushed down to South India, one expects to find some Harappan sites in that region. But the hard fact is that in none of the four Dravidian-speaking States of South India, viz. Tamil Nadu, Andhra Pradesh, Karnataka and Kerala, do we have even a single site of the Harappan Culture! On the other hand, what we do have in South India about that time is a neolithic culture. Do then the proponents of the 'Harappan= Dravidian' equation expect us to believe that the urban Harappans, on being sent down to South India, shed away overnight their urban characteristics and took to a Stone Age way of living?

And now comes another significant observation. It is seen all over the world that even if the original inhabitants are pushed out of an area, some of the rivers, mountains and towns in that area continue to bear their original names. Thus, for example, even after the Europeans overran North America and gave their own names to the towns, such as New York, New Jersey, etc., many of the names of the towns and rivers given by the earlier inhabitants, viz. the American (Red) Indians, may still be noted: for example, Chicago and Massachusetts as those of towns and Missouri and Mississippi as of rivers. But in the entire region once occupied by the Harappans, from the Indus to the upper reaches of the Yamunā-Gaṅgā, there is not even a single name

of river, mountain or town which can claim a Dravidian origin. Why? The obvious answer is that the Harappans were not a Dravidian-speaking people.

If, as we have just seen, the 'Aryans Invasion' is a myth and the Harappans were not Dravidian-speakers, were they themselves the ones who composed the Vedas and are popularly called the Aryans. Further, were they indigenous, occupying the north-western part of the Indo-Pakistan subcontinent? There are four major objections to a Vedic=Harappan equation and we shall examine the same one by one, though rather briefly in view of the space-constraint of this paper.

First. It has vociferously been orchestrated that the Vedic Aryans were nomads, and since the Harappans had reached an urban stage, how could the two be equated? But this concept of the Vedic people is, as we shall see, a complete myth perpetuated over a couple of centuries. The Aryans were not nomads, wandering from place to place, but had regular settlements which were even fortified. This would be abundantly clear even from the few quotations that we give below from the *Ṛigveda* itself. For example, *RV* 7.15.14, runs as follows:

> *Adhā Mahī na āyasyanādhṛiṣṭo nṛipītaye pūrbhavā śatabhujiḥ.*
> And, irresistible, be thou a mighty metal fort to us,
> With hundred walls for man's defence.

Through another verse, *RV* 10.101.8, the devotee prays that not only should the forts be metal-like strong, but that he should also be provided with many coats of armour, evidently signifying military strength:

> *(…) varma sīvyadhvam bahulā pṛithūni*
> *puraḥ kṛiṇudhvamāyasīradhṛiṣṭā*
> (…) stitch ye [oh gods] the coats of armour, wide and many; make metal forts, secure from all assailants.

On the economic front too, the Vedic Aryans were quite affluent. They were engaged in both internal as well as also overseas trade. This is clearly indicated by the following Ṛigvedic verse, 9.33.6:

> *rāyaḥ samudrāñschaturo asmabhyam soma viśvataḥ. Ā pavasva sahasriṇaḥ*

O Soma, from every side pour forth four seas filled with a thousand-fold riches.

For carrying out sea-trade, they used large-sized boats which were sometimes provided with a hundred (i.e. a large number of) oars. Says *RV* 1.116.5:

anārambhaṇe tadvīrayethāmanāsthāne agrabhaṇe samudre
yadaśvinā ūhathurbhujyumastam śatāritrām nāvamātasthivānsam
O Asvins, you saved Bhujyu (from drowning) in a deep sea where there was nothing to hold on, by lifting him up in a boat that had a hundred oars and sending him to his place. This was indeed a brave act of yours.

On the land, the Ṛigvedic Aryans plied, besides bullock-carts, fast-running chariots, to which were sometimes yoked as many as four horses each, bedecked with pearl-ornaments. This is vouchsafed by the following (*RV* 1.126.4):

chatvārinśad daśarathasya śoṇāḥ sahasrasyāgre śreṇim nayanti
madachyutaḥ kṛiśanāvato atyān Kakṣīvanta udamṛikṣanta pajrāḥ
Forty bay horses of the ten cars' master before a thousand lead the long procession.
Reeling in joy Kakṣivān's sons and Pajrā's have grounded the coursers decked with pearly trappings.

Unlike nomads, the Vedic people were highly organized on the social as well as political fronts. The *Ṛigveda* throws valuable light on the polity of the times, as indicated by the occurrence in it of such terms as *sabhā* and *samiti* on the one hand and of *samrāṭ*, *rājan*, *rājaka*, etc. on the other. The first two terms clearly refer to assemblies that took vital decisions on matters of public interest. That there did exist these institutions in the Vedic society is clearly borne out by the following verse of the *Ṛigveda* (9.92.6):

pari sadmeva paśumānti hotā rajā na satyaḥ samitīriyānaḥ. /
somaḥ punānaḥ kalaśāṃ ayāsīt sīdan mṛigo na mahiṣo vaneṣu //
As the priest seeks the station rich in cattle, like a true king who goes to great assemblies,

Soma hath sought the pitchers while they cleansed him, and like a wild buffalo, in the wood hath settled.

In the above-noted verse, certain similes are given: viz. that the Soma enters the pitcher (*kalaśa*) just as the king enters the assembly or a wild buffalo enters the forests.

The other three terms, viz. *samrāṭ*, *rājan* and *rājaka*, point to a hierarchy of rulers. In *RV* 6.27.8, Abhyāvartī Chāyamāna is referred to as a Samrāṭ, whereas in *RV* 8.21.18 Chitra is said to be a mere Rājan and the epithet of other still inferior rulers is Rājaka.

RV 6.27.8:
dvyāṁ agne rathino viṁśatim gā vadhūmato maghavā mahyam samrāṭ /
Abhyāvartī Chāyamāno dadāti dūṇāśeyam dakṣiṇā pārthavānām //
Two wagon-teams, with damsels, twenty oxen, O Agni, Abhyāvartin Chāyamāna,
The liberal Sovran, giveth me. This guerdon of Pṛithu's seed is hard to win from others.

RV 8.21.18:
Chitra id rājā rājakā idanyake yake Sarasvatīmanu /
parjanya iva tatanaddhi vṛiṣṭyā sahasramayutā dadat //
Chitra is King, and only kinglings are the rest, who dwell beside Sarasvatī.
He, like Parjanya with his rain, hath spread himself with thousand, yea, with myriad gifts.

Does one expect such fine distinction of governance in a nomadic society? That these distinctions were not imaginary but very much real is borne out by the *Śatapatha Brāhmaṇa* (V.1.1.13) when it clearly states:

Rājā vai Rājasūyeneṣṭvā bhavati, Samrād Vājapeyena / avaraṁ hi rājyaṁ paraṁ sāmrājyaṁ / Kāmayeta vai Rājā Samārḍ bhavitum avaraṁ hi rājyam paraṁ samrājyaṁ / Na Samrāṭ kāmayeta Rājā bhavitum avaraṁ hi rājyaṁ paraṁ samrājyaṁ /
By offering the *Rājasūya* he becomes Rājā and by the *Vājapeya* he becomes Samrāṭ, and the office of *Rājan* is lower and that of *Samraj* the higher. A *Rājā* might indeed wish to become a *Samrāṭ*, for the office of *Rājan* is lower and of *Samrāj* the higher; but the Samrāṭ would not wish to become a Rājā

for the office of the Rājan is lower, and that of *Samrāj* the higher.

From what has been quoted above from the *Ṛigveda* itself it must have become abundantly clear that the Ṛigvedic Aryans were highly advanced on most fronts – social, economic and political. Should these people be labelled 'nomads'?

Now to the second objection. It has been argued that whereas the Vedic vehicles had spoked wheels the Harappans were unfamiliar with such wheels [11]. This is highly misleading. While in the hot and humid climate of India it would be too much to expect wooden wheels to have survived, we do have ample examples of terracotta models of wheels which clearly show that these were spoked. Thus, Kalibangan and Rakhigarhi, both well known sites of the Harappan Civilization, have produced terracotta examples of wheels in which the spokes are shown by painted lines which emerge from the central hub and radiate to the periphery (Fig. 1, from Rakhigarhi). And yet another technique, viz. that of low relief, was used to depict the radiating spokes, examples of which come from Banawali, another Harappan site.

The third objection, viz. that the Harappans did not domesticate the horses is equally ill-founded. Mackay, who carried out further excavations at Mohenjo-daro, categorically stated: "Perhaps the most interesting of the model animals is the one that I personally take to represent a horse" [12]. Wheeler not only re-affirmed the same, but also added further evidence: "One terracotta, from a late level of Mohenjo-daro, seems to represent a horse, reminding us that the jaw-bone of a horse is also recorded from the site, and that the horse was known at a considerably earlier period in northern Baluchistan" [13].

In addition to the foregoing, there is a lot of new evidence. Lothal, a well known Harappan site in Gujarat, has yielded a terracotta figure of the horse (Fig. 2), besides a second upper molar of the animal [14]. To

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11. R. S. Sharma, *op. cit.*, pp. 18-19.

12. E. J. H. Mackay, *Further Excavations at Mohenjo-daro*, Delhi, Government of India, 1938, Vol. I, p. 289.

13. R. E. M. Wheeler, *The Indus Civilization*, Cambridge, Cambridge University Press, 3rd edition, 1968, p. 92.

14. S. R. Rao, Lothal – *A Harappan Port Town*, New Delhi, Archaeological Survey of India, 1985, Vol. II, p. 641.

cap it all, there are more faunal remains from Surkotada, yet another Harappan site in Gujarat [15]. Commenting on these, the renowned international expert on horse-bones, Sandor Bokonyi, wrote in 1993 a letter to the Director General of the Archaeological Survey of India, as follows: "The occurrence of true horse (*Equus caballus* L.) was evidenced by the enamel pattern of the upper and lower cheek and teeth and by the size and form of incisors and phalanges (toe bones). Since no wild horses lived in India in post-Pleistocene times, the domestic nature of the Surkotada horses is undoubtful. This is also supported by an intermaxilla fragment whose incisor tooth shows clear signs of crib biting, a bad habit only existing among domestic horses which are not extensively used for wars." An attempt is being made by certain scholars to play down the Surkotada evidence, but this has not cut much ice. Faunal remains of the horse have also been found at a few other Harappan sites, such as Rupnagar in Panjab and Kalibangan in Rajasthan. Indeed, the truant horse has crossed the hurdles [16]!

And finally comes the alleged chronological disparity between the Harappan and Vedic times. To recall, whereas the Harappan Civilization belongs to the third millennium B.C., it is held even today by many blind followers of Max Müller that the Vedas are no older than 1200 B.C., although the savant himself had ultimately given up his ad hoc hypothesis (above, p. 174).

We shall now ascertain the date of the *Ṛigveda* from a combination of evidences, namely those from literature, archaeology, geology and hydrology. In this investigation, the Ṛigvedic river Sarasvati- plays a vital role. Some scholars, e.g. R. S. Sharma [17], hold that this river is to be identified with the Helmand of Afghanistan. And, taking a leap further, they hold that the Ṛigvedic Aryans lived in Afghanistan. Well, it requires no extra wisdom to say that if we are looking for the identification of the Ṛigvedic Sarasvatī we have first to go to the Ṛigvedic text itself and find what it has to say about the location of this river.

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15. J. P. Joshi, *Excavations at Surkotada 1971-72 and Explorations in Kutch*, New Delhi, Archaeological Survey of India, 1990, p. 381.

16. B. B. Lal, *India 1947-97: New Light on the Indus Civilization*, New Delhi, Aryan Books International, 1998, pp. 109-12.

17. R. S. Sharma, *Advent of the Aryans in India*, New Delhi, Manohar Publishers, 1999, p. 35.

Verses 10.75. 5 and 6 of the famous *Nadī-stuti* hymn of the *Ṛigveda* enumerate the rivers in a serial order from the Gaṅgā and Yamunā on the east to the Indus, along with its western tributaries such as the Kabul, Gomal and Kurram. The verses run as follows:

> *imam me Gaṅge Yamune Sarasvati Śutudri stomam sachatā Paruṣṇyā /*
> *Asiknyā Marudvṛidhe Vitastayā Ārjīkīye śṛiṇuhyā Suṣomayā //5//*
> *Tṛiṣṭāmayā prathamam yātave sajūḥ Susartvā Rasayā Śvetyā tyā /*
> *Tvam Sindho Kubhayā Gomatīm Krumum Mehatnvā saratham*
> *yāhirīyase // 6//*
> O Gaṅgā, Yamunā, Sarasvatī, Śutudrī (Sutlej) and Paruṣṇī (Ravi), O Marudvṛidhā with Asiknī (Chenab), O Ārjikīyā with Vitastā (Jhelum) and Suṣomā (Sohan), please listen to and accept this hymn of mine. // 5 //
> O Sindhu (Indus), flowing, you first meet the Tṛiṣṭāmā (and then) the Susartu, the Rasā, and the Śvetā (Swat), and thereafter the Kubhā (Kabul), the Gomatī (Gomal), the Krumu (Kurram) with the Mehatnu; and (finally) you move on in the same chariot with them (i.e. carry their waters with you). // 6 //

From the above geographical description it is abundantly clear that the Sarasvatī flowed between the Yamunā and Sutlej. Do we have these rivers in Afghanistan? If not, how can we place the Sarasvatī there? Of course, not.

Now we pass on to *RV* 7.95.2 which refers to the Sarasvatī as a mighty river flowing from the mountains to the sea:

> *ekāchetat Sarasvatī nadīnām śuchir yatī giribhya ā samudrāt /*
> *rāyaścetantī bhuvanasya bhūrerghṛitam payo duduhe Nāhuṣāya //*
> Pure in her course from mountains to the ocean, alone of streams Sarasvatī hath listened. Thinking of wealth and the great world of creatures, she poured for Nahuṣa her milk and fatness.

While we do have mountains in Afghanistan, there is no sea; and the Helmand does not have any access to the sea. How could then the Sarasvatī be identified with the Helmand? No chance!

If the Sarasvatī is not to be identified with the Helmand of Afghanistan, then with which river should it be? As seen from *RV* 10.75.5 (quoted above), the Ṛigvedic Sarasvatī lay between the Yamunā and Sutlej. Even today there flows a river called the Sarasutī

(=Sanskrit Sarasvatī) between the aforesaid two rivers. It now originates at the foot of the Siwalik hills and flows in a southwesterly direction in Haryana, passing by Pipli, Kurukshetra and Pehowa. Thereafter it joins the Ghaggar, and the combined Sarasvatī-Ghaggar stream dries up near Sirsa. Beyond that it is only the dry bed that is identifiable, going by the names of the Ghaggar in Rajasthan, the Hakra in Cholistan (Pakistan) and the Raini and Wahinda in Sindh, and joining the sea at the Rann of Kachchha.

A question may well be asked: Since as of now the Sarasvatī-Ghaggar combine does not carry plenty of water and dries up beyond a certain point, how come that the dry bed is so wide, sometimes even up to 8 km? In search of the answer, we have once again to get back to the Ṛigveda. Verse RV 6.61.2 states:

> *iyam śuṣmebhirbisakhā ivārujat sānu girīṇām taviṣebhirūrmibhiḥ /*
> *pārāvataghnīmavase suvṛiktibhiḥ Sarasvatīmā vivāsema dhītibhiḥ //*
> This (Sarasvatī river) has shattered the mountain peaks with her fast and powerful waves, just (as easily) as one uproots the lotus stems; let us invoke her, who strikes what is far and near, with holy hymns and prayers.

It would thus be seen that the Ṛigvedic Sarasvatī had plenty of water in it, so much so that its fast and powerful currents could sometimes even shatter the peaks of mountains.

From where did the Ṛigvedic Sarasvatī get all this tremendous supply of water? In this context one can do no better than refer to a most recent study of the problem. It is by two eminent geologists, V. M. K. Puri and B. C. Verma [18]. In their paper, they present a very comprehensive survey of the Himalayan region – of its rivers, terraces and glaciers, and observe:

> Thus, the terraces studied in Sudanwala, Bata, Garibnath and Markanda provide an irrefutable geological evidence to suggest a course of a river that was flowing in almost west-northwesterly direction in the past. Its dimension was very large as it contained a very high discharge that traversed in its upper reaches a terrain of quartzite and metamorphic rocks.

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18. V. M. K. Puri and B. C. Verma, "Glaciological and Geological Source of Vedic Sarasvati in the Himalayas", *Itihas Darpan*, Vol. IV, No. 2, 1998, pp. 7-36.

> Such a region does exist in central and upper reaches of Yamunā fourth order basin where Central Crystallines and Jutogh group of rocks are located towards north, north-east and eastern side of above-mentioned four terraces. Moreover, in the Paonta valley, there is a clear evidence that prior to the present Yamunā river, there existed a major river channel at a much higher elevation that followed a westerly and southwesterly course through a route now almost completely obliterated on Siwalik platform due to erosion but its terraces are still observed along Adh Badri-Markanda link in the plains immediately to the south of Siwalik belt.

After a further study of the region, these geologists produced a map which shows that the ultimate sources for this Vedic Sarasvatī were what are known today as the Sarasvatī, Jamadar, Supin and Manjee Glaciers, supplemented by Rupin and Nargani Glaciers. All these glaciers melted near Naitwar and the river thus formed moved first in a southwesterly direction and then in the westerly. Breaking through the Siwaliks near Adh Badri, it finally made its mighty descent on the plains. This, in brief, is the story of perennial water supply to the once mighty Sarasvatī which is now represented by mere dry beds, though, as already stated, these are at places as wide as 6-8 kilometres.

A very relevant question that may now be asked: If the Sarasvatī was such a mighty river, how did it dry up? The answer, again, had to be sought thorough an investigation of the Himalayan terrain, which the afore-mentioned geologists, Puri and Verma, verily did. According to them, there took place a major seismic upheaval in the Himalayas, as a result of which there arose the Bata-Markanda Divide, nearly 30 metres in height [19]. It blocked the passage of the Sarasvatī, which could no longer flow westwards. Since water must find its way out, it flowed backwards and, taking advantage of the Yamuna Tear opening, joined the Yamunā river. Thus ended the glorious history of the river long-venerated by the Ṛigvedic Aryans.

It is very interesting to note that this event of the drying up of the Sarasvatī is duly confirmed by a later Vedic text. The *Pañchaviṁśa Brāhmaṇa* (XXV. 10. 16) refers to the drying up of the Sarasvatī.

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19. Puri and Verma, *op. cit.*, Fig. 13.

Thus, the literary data fully corroborate the presence of tremendous amount of water in the Sarasvatī river in ancient times as well as its subsequent drying up.

In this context attention must be drawn to some very telling evidence from the Ghaggar-Sarasvati bed itself, at Kalibangan. When the excavations over here were in progress, we were naturally keen on verifying locally the facts about the drying up of the river, since it was obvious to us that the massive settlement at Kalibangan could not have flourished without the adjacent river having been alive and active. With this end in view, a project, combining the efforts of the Archaeological Survey of India, Geological Survey of India (represented by Shri R. K. Karanth) and an Italian firm named Raikes and Partners (headed by Mr. R. L. Raikes), was set in motion. Four boreholes were dug, one of which lay in between the two mounds comprising the site and three in the river-bed itself, located at a distance of 300 metres from one another towards the centre of the bed. All things apart, the most revealing fact was that the greyish sand encountered in these bore-holes, at a depth of about 11 m below the present floodplain, was 'very similar in mineral content to that found in the bed of the present-day Yamuna'. This confirms the findings of Puri and Verma that the source of the Ghaggar (Sarasvatī) lay high up in the Himalayas from where the Yamunā also originated, thus making the sand similar in both the cases. Further, as Raikes has very aptly captioned his paper just referred to, viz. 'Kalibangan: Death from Natural Causes' [20], the Harappan settlement at Kalibangan came to a sudden end because of the drying up of the Ghaggar, even though it was still in a Mature stage and not decaying and ending up in a normal process.

The next question is: Is it possible to date the drying up of the Sarasvatī? While geologists have yet to come up with a precise dating, archaeologists and hydrologists do have some noteworthy facts and figures to offer. The hydrological evidence (discussed above) shows that the Mature Harappan occupation at Kalibangan had to be given up suddenly because of the stoppage of water-supply consequent on the drying up of the adjacent river, viz. the Sarasvatī. The radiocarbon

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20. Robert Raikes, "Kalibangan: Death from Natural Causes", *Antiquity*, XLII, 1968, pp. 286-91.

dates show that this sudden abandonment of Kalibangan took place around 2000 BCE [21]. It follows, therefore, that this was the time when the Sarasvatī dried up.

To wrap up the history of the Sarasvatī. From the above discussion it is clear that:

1) the now-dry Ghaggar on whose bank stands the site of Kalibangan is none other than the Sarasvatī of the *Ṛigveda*;

2) it originated in the Himalayas and flowed all the way down to the sea;

3) it dried up because of a tectonic upheaval in the Himalayan region which threw up a barrier known as the Bata-Markanda Divide, with the result that the path of the Sarasvatī was blocked and its water got diverted to the Yamunā via the Yamunā Tear; and

4) this drying up of the Sarasvatī led to the abandonment of the Mature Harappan settlement at Kalibangan – an event that took place around 2000 BCE, as testified to by the radiocarbon dates.

We may now pass on to the most significant outcome of the foregoing data. Since during the Ṛigvedic times the Sarasvatī was a mighty flowing river but it dried up around 2000 BCE, the ***Ṛigveda* has got to be earlier than 2000 BCE.** How much earlier – by 500 years, 1000 years or even more? It is anybody's guess.

What are the ramifications of such a dating of the *Ṛigveda* in terms of history? To recall, according to the famous *Nadī -stuti Sūkta* of the *Ṛigveda* (*RV* 10.75.5-6, already quoted above), the area occupied by the Ṛigvedic Aryans extended from the upper reaches of the Gaṅgā -Yamunā on the east to the Indus and its western tributaries on the west. Now, if a simple question is posed, viz. which archaeological culture flourished in this very area during the pendency of the Ṛigvedic times, i.e. prior to 2000 BCE?, the inescapable answer will

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21. B. B. Lal, *The Earliest Civilization of South Asia*, New Delhi, Aryan Books International, 1997, pp. 245-46.

have to be: The Harappa Culture, none else. In other words, **the Harappa Culture and Vedic Culture are just two faces of the same coin** (see Map, Fig. 3).

To take the debate further. Were the Harappans intruders from outside or autochthonous? Soon after the discovery of the Harappan Civilization in the early 1920s it was held that this civilization must have had its origin somewhere in West Asia, since it was the prevailing belief at point of time that civilization began on the Indian subcontinent only after the invasion of Alexander. However, when the protagonists of the West-Asian origin were called upon to point out which constituents of the Harappan Civilization were identical with those of the West-Asian civilization concerned, they fumbled, since there was nothing that they could put their fingers on, in support of their thesis. They then took recourse to a strange theory, viz. 'ideas have wings', suggesting that, if not the actual civilization itself, the idea of civilization must have come from West Asia. Thanks, this baseless theory has since been abandoned because excavations carried out during the past fifty years have revealed a fool-proof story of the gradual evolution of the Harappan Civilization on the soil of the Indo-Pakistan subcontinent itself. The principal excavated sites yielding evidence of settlements which were ancestral to the Mature Harappan ones are: Mehrgarh, Kotdiji, Harappa itself, Gumla. Rehman Dheri, etc. in Pakistan; and Kalibangan, Banawali, Rakhigarhi, Kunal and Bhirrana in the Sarasvatī Valley in India. There are at least two stages that preceded the Mature Harappan stage of the second half of the third millennium BCE. The stage that immediately preceded the Mature Harappan is known variously as Kot Diji/Sothi/ Kalibangan I Culture, and goes back to the last quarter of the fourth millennium BCE. There is yet another earlier stage, known as Hakra/Ravi in Pakistan, going back to the beginning of the fourth millennium BCE. or somewhat earlier. At Mehrgarh, the chalcolithic complex goes well back to the fifth millennium BCE. This earlier stage is now being also revealed in the Sarasvatī Valley, where, at Bhirrana in Haryana, the Carbon-14 dates, as per the Radiocarbon Laboratory of the Birbal Sahni Institute of Palaeobotany, Lucknow, are as follows:

Sample No. BS 2314.– Calibrated age: 1 Sigma 4770 (4536, 4506, 4504) 4353 BCE
Sample No. BS 2318.– Calibrated age: 1 Sigma 5336 (5041) 4721 BCE
Sample No. BS 2333.– Calibrated age: 1 Sigma 6647 (6439) 6221 BCE

Even if we temporarily ignore Sample No. BS 2333, the other two samples clearly show that the ancestry of the Harappa Culture in the Sarasvatī Valley goes back to the beginning of the fifth millennium B.C.

It would then follow that the Harappans, to use a rather colloquial term, were 'the sons of the soil'. In which case, the Vedic people too, being identical with the Harappans as shown earlier, were the same, i.e. autochthonous.

To Sum up

Scientific investigation is an ongoing process. What appears to be true today would call for a fresh evaluation in the light of evidence that may turn up tomorrow. Thus, when Wheeler propounded in 1946 his theories of an 'Aryan Invasion' of India and the 'extinction of the Indus Civilization', he may (or may not) have been justified at that point of time. But the new evidence that has piled up from extensive explorations and intensive excavations at a large number of sites on the subcontinent during the past fifty years, discussed in this paper, clearly shows that Wheeler's postulates were wrong. Also, the other offshoot of the 'Aryan Invasion' theory, viz. that the Harappans were a Dravidian-speaking people, is equally untenable, as shown in the preceding pages.

An alternative that the Harappans themselves might have been the Vedic people draws knee-jerk reactions from scholars who have their minds glued to the former three postulates.

However, quite contrary to the widely orchestrated belief, the *Ṛigveda* amply describes its people as belonging to a highly civilized, politically organized, trade-faring society. Can such people be dubbed as 'nomads'?

Further, the unique picture that has emerged in recent years from a combination of evidences from a variety of sources – literature and sciences like archaeology, hydrology, geology and radiocarbon-method of dating – shows that the *Ṛigveda* antedated 2000 BCE. Besides, the literary evidence available in the *Ṛigveda* itself confirms that the region occupied by the Ṛigvedic people lay from the west of the Indus right up to the upper reaches of the Gaṅgā-Yamunā *doab* – which is precisely the area occupied by the Harappan/Indus/Indus-Sarasvatī Civilization prior to 2000 BCE. This new chronological-cum-spatial evidence poses a fresh question: could the Vedic and Harappan Civilizations have been the two faces of the same coin? While all the available data point to an answer in the affirmative, a word of caution seems necessary. And the caution is: this otherwise most plausible equation shall have to await a proper decipherment of the Harappan script – something which has eluded all the claimants so far [22].

CAPTIONS FOR ILLUSTRATIONS

Fig. 1. Rakhigarhi: Terracotta wheel. The painted lines represent the spokes. Mature Harappan.

Fig. 2. Lothal: Terracotta horse. Mature Harappan.

Fig. 3. Map showing a correlation between the Ṛigvedic area and the spread of the Harappan Civilization, before 2000 BCE.

22. B. B. Lal, *op.cit.*,1997, pp. 203-14.

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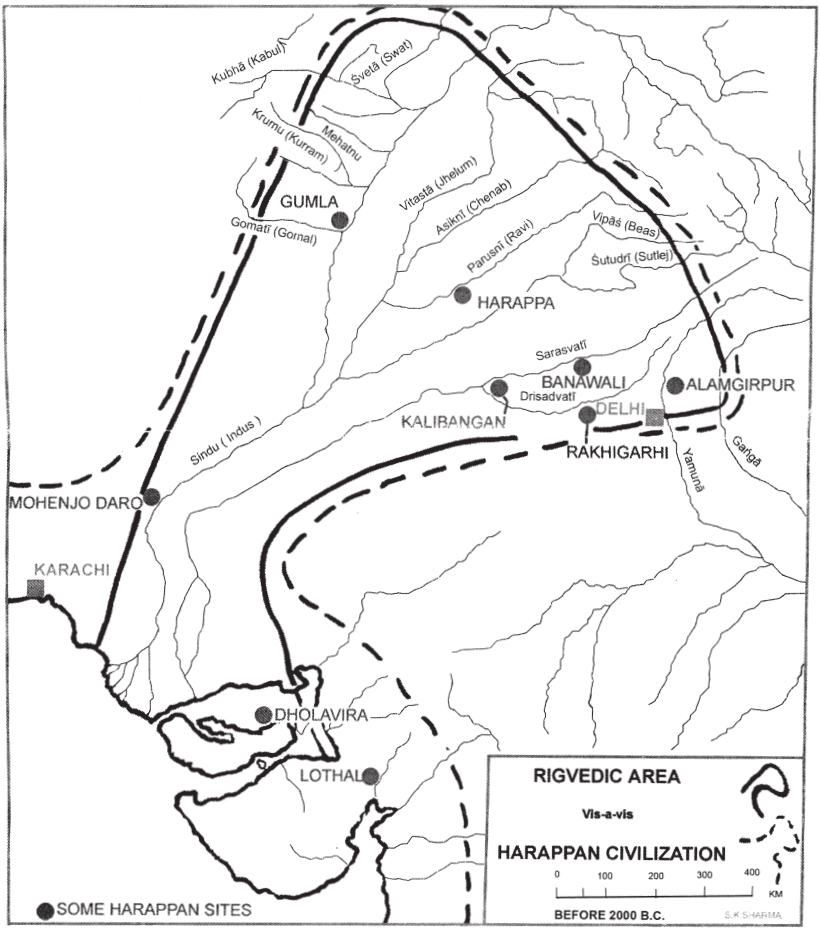

Fig. 3 Map showing a correlation between the Ṛigvedic area and the spread of the Harappan civilization, before 2000 BCE.