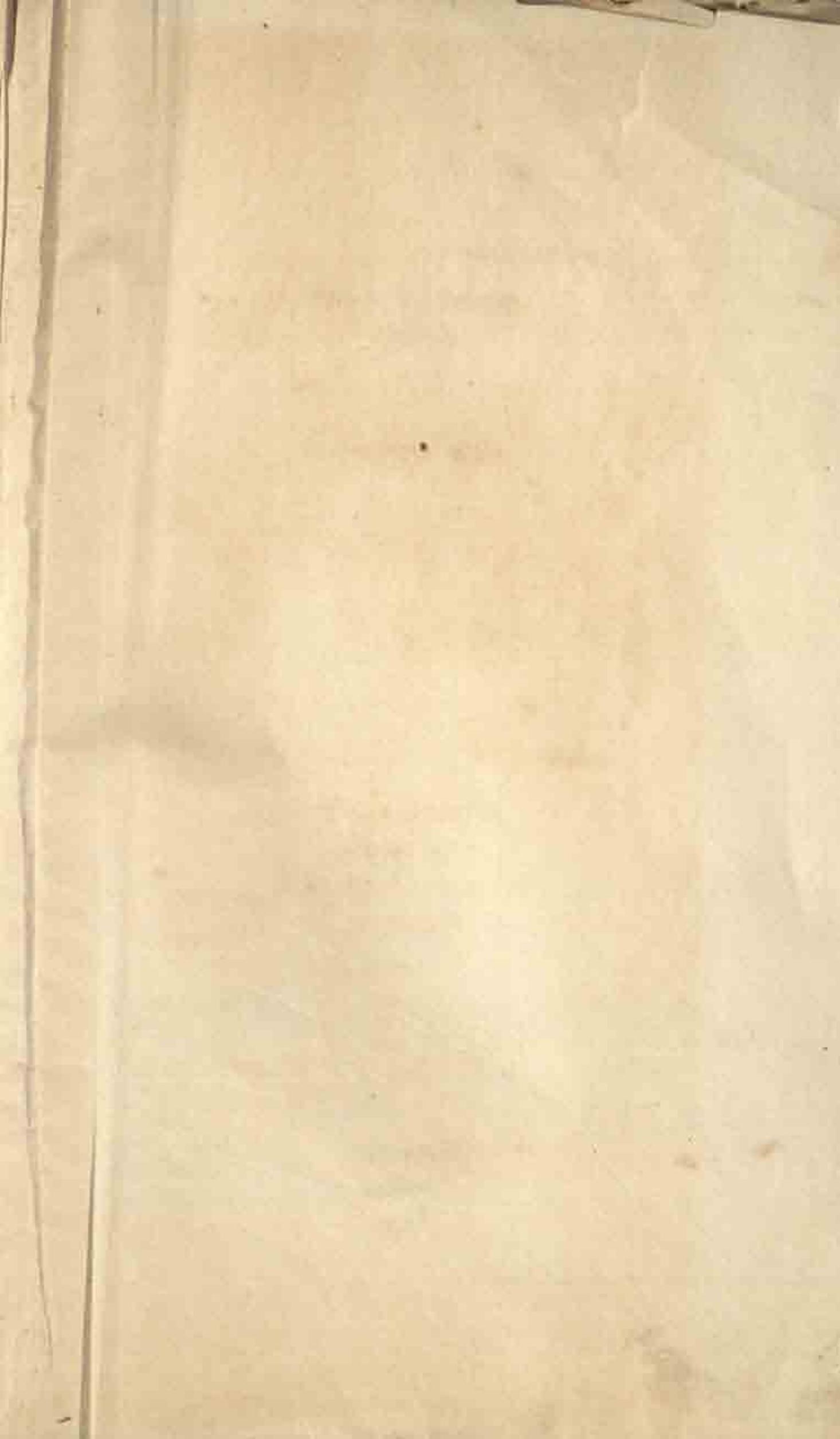


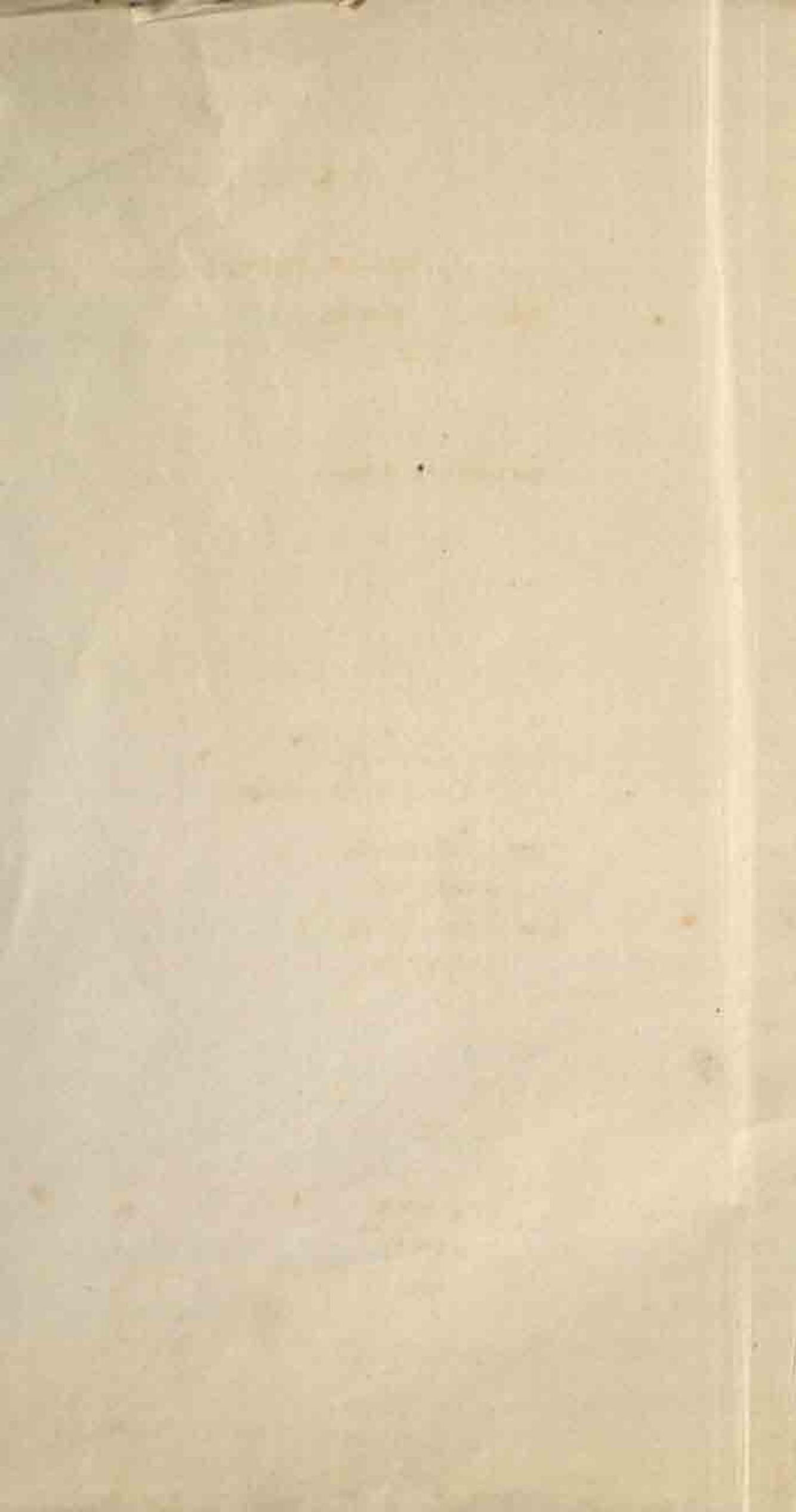
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ESSAYS ON HARAPPA

CULTURE

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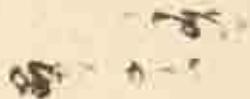
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DEDICATED

To the memory of  
my grandmother  
SURABALA MAJRA.





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## II.

INTRODUCTION

Sir John Marshall - a great name in the field of researches on Harappa Culture, and his general views about Harappa and Mohenjodaro are accepted by the Indologists of the world. Again it is a well known fact that a belief based on ill-logic can hardly be abolished in a short period of time even by rigid analyses. The Indus Valley Civilization (Harappa Culture) is depicted by the Marshallians far more mysterious than what it is. Marshall concluded that the civilization was non-Aryan in character and a contemporary of the Assyrian and Sumerian ages. Then he tried to annual the historical contradictions of his views by an interesting, imaginative description which gave birth to a new history void of a vestige of predetermined historical fact.

In fact, Marshallians tell us a pompous mythological story veiled in the curtain of mysticism in order to describe the creator and the period of the civilization by rampant scholasticism. All these titletattles are logically criticised in the essays.

To me, it seems that the civilization is basically different and comparatively recent and it may have certain possibility to be a distinct and developed phase of Vedic civilization.

\*\*\*\*\*

The last chapter of the book is the tentative decipherment of the mystic inscriptions of Harappa and Mohenjodaro. I have tried to decipher the inscriptions by attributing tentative phonetic values to the pictographs. There may be defects in some cases to do so, but I am sure that the defects will be corrected through criticism by learned readers. I think that exact phonetic values have been attributed to       and to  . The language of the inscriptions is Sumericritic which will be clear from the tables. Almost all the inscriptions contain distinct Aryan names, few place names.

### III.

For about 45 years we are inclined to the mysticism of Marshalls, but even now we have found out nothing substantial from it. It is as mystic as it was before, an unsolvable puzzle of the age. Now, I think, it is necessary to grasp new hypotheses and to judge the validity of the hypotheses from new cut looks. Marshalls think that the civilization was something highly developed emerging from out of nothing. I think that the civilization was an inevitable event, following of the necessity in the chain of historical development.

Old pedantic Marshalls from all parts of the world, I am afraid, will launch severe attack upon my hypothesis as their beloved mythological 'palace of cards' will be endangered by my arguments. But I deserve congratulations from fresh young scholars who are highly energetic to frame out new hypotheses to solve the puzzle of the age.

To decipher the seals tentatively, I was highly inspired by Mr. Indranath Majumder to whom I am really grateful. I wish to thank now Mr. Subh-narayan Biju, Mr. Saradindu Ghosh and Mr. Mitabrat Singh-thakur who helped me in various ways to represent the essays.

## DYING HARAPPA AND THE NEW-COMERS

(There were two cemeteries in Harappa the Cemetery R - 37 and the Cemetery H (H<sub>I</sub> + H<sub>II</sub>). According to specialists Cemetery R-37 - the earlier cemetery was the cemetery of the Harappans, whereas Cemetery H (H<sub>I</sub> + H<sub>II</sub>), the later cemetery was the cemetery of the New-Comers - the Vedic Aryans.

I have tried to establish that the Cemetery R-37 was not the cemetery of the Harappans. It was the cemetery of the New-comers - the Irano-Caspians i.e. the second wave of the Aryans who entered India marching through Iran. From different sources, it can be proved that those Irano-Caspians entered India ca 1000 B.C. or even later.

This conclusion has far reaching effect on the study of Harappa Culture, as the New-comers dwelt - on the ruins of the Harappans at a time when the centre of Vedic culture was shifting from the Indus valley to the Gangetic plain, definitely leaving the ruins of their cities in the region.

This has forced me to infer that the Harappans were the Vedic Aryans - the first wave of the Irano-Caspians in India.

This paper is written from this standpoint).

### 1. PROBLEM:

Before the excavations at Harappa and Mohenjodaro, it was settled by the scholars that the Aryans were the creators of Indian civilization in ancient time (6 preface V) and though there was practically no doubt that they came from somewhere outside India, yet the time of their arrival was a matter of some speculative discussions without any rigid set of reasons. After the establishment of relationship between the Hittite Kings and Aryans, it was common among the specialists to consider the arrival of the Aryans in India at least after 2000 B.C.

When the chalcolithic culture of Harappa and Mohenjodaro came to light, Marshall (6 preface V-VI; pp.102-112) and Sayce, (19, p.6) the veteran Assyriologist recognised startling similarities between this non-Aryan (also Pre-Aryan) Indian civilization and Sumerian civilization and considered this Indian civilization flourishing before 2500 B.C., with the support of the then archaeologists (5, p.218).

But actually, studying of the Indian materials in western setting started from 1933 when Childe compared the chalcolithic pottery with the pottery of West Asian sites (8, pp.15-25).

In the year 1931 Stein discovered the cemetery of Shahi Tump and observed that the graves (associated with different foreign objects not known to Harappan people) had been dug into the ruins of the Harappan period (7, pp.88-105).

In 1934 Majumder found out the type site Jhukar where a post Harappan culture - late Jhukar culture was stratified just over the Harappan level (12, p.9) and a good number of pottery found in this level was quite alien to Harappan people. During the excavations of 1933-34 at Harappa a cemetery which is now known as Cemetery - H with complete burials and post exposure pot burials associated with a beautiful polychrome pottery different from that of Harappa culture was discovered. The cemetery as thought by the excavator was contemporary with the time of the last occupational level (not reached at Mohenjodaro) of the city (Harappa); and related with foreign conquest (22, p.295).

Thus it was being apparent that a new culture different from that of the Harappans existed in the region, after the dissolution of Harappan culture.

In 1934 Childe the well known contributor to the history of the Aryans equated the Cemetery H people with the Aryans (10, p.223). In the same paper he also pointed out the uses of (i) mace heads at Mohenjodaro and at Babylon (10, p.217), (ii) beads of frit or stone of specialised types at Mohenjodaro and in the Early

Dynastic graves of Sumer (10, pp.268-269) and (iii) the axe adze, at Mohenjodaro and at Tepe Hissar III (10, pp.268-269). One thing should be clear here that Childe would think that the Aryans entered India circa 1400 B.C. (or later, 4, p.31) and he accepted that Harappa culture ceased to exist circa 2500 B.C. (19, p.6) and as Cemetery H was thought to be related with the New-comers, so he put the hypothesis that the Cemetery H people might be the Vedic Aryans. In 1936 Childe realised the exotic character of Chanhu-daro pins and wrote an illuminating commentary on the distribution of the type (14, pp.113-119).

In the same year R. Heine - Geldern studied four weapons, e.g. (i) a trunnion axe from Kurram Valley, (ii) a bronze dagger from Fort Munro, (iii) copper swords with antennae hilts from the Gangetic plain and (iv) a bronze axe-adze from Mohenjodaro. After comparisons with the similar weapons from ancient cultural zones outside India he decided that those Indian weapons indicated a date between 1200 B.C. and 1000 B.C. or even later. Heine-Geldern attributed the users of these foreign influenced articles to the Vedic Aryans and tried to indicate the arrival of the Vedic Aryans in India after 1200 B.C. (15, pp.87-113). In this year B.N.Dasta pointed out the different modes of disposal of the dead prevailed among the Vedic Aryans and their similarities with the system of disposal of the dead of Cemetery H people (16, pp.223-307; 17, pp.1-68) in order to defend the hypothesis that Indus culture and Vedic Aryans belonged to the same ethnic cultural group. In 1939 Childe compared round bead seals of baked clay and a few button seals of stone from Jhukar culture with those of Tepe Hissar (19, pp.13-14) and thought that Shahi Tump burials might foreshadow the still inferential Aryan invasion in India (19, p.15).

In the year 1940 Mr. Vats in course of analysis of the paintings on the prehistoric pottery of Cemetery H excavated at

Harsappa compared the paintings of post-exposure pot burial pottery with rites, rituals and beliefs contained in the hymns 14, 16 and 18 of the Xth Mandala of the Rigveda, though it was 'not intended to suggest more than a comparison' on account of the characteristic system of disposal of the dead (22, pp.208-209) of the Cemetery H people. Gordons in this year studied the animal headed pins obtained from different Indian sites in western background (21, p.65).

In 1943 Mackay published the reports of the excavation 1935-36 at Chanhudaro where Jhukar Culture (Chanhudaro II) was surasified over Harappan period (Chanhudaro I; 27, p.102).

In the meantime a site of exceptional importance - Tepe Hissar was excavated in the Northern Persia.

In 1926 Childe supported the orthodox view that the eastern wing of the Indo-Iranian people descended into India not much later than the arrival of the Western wing of the Indo-Iranian into Mitanni (4, p.41).

Tepe Hissar was excavated in 1931 and Schmidt suggested the following dates for its first three periods (from below) of the site:

Hissar I - before 3000 B.C. to ca 2500 B.C.

Hissar II - ca 2500 B.C. - ca 2000 B.C.

Hissar III - ca 2000 B.C. - 1500 B.C. (9, p.341, p.366, p.390, p.452, pp.472-73).

In 1934 Kappers published his famous work "An Introduction to the Anthropology of the Near East" which placed sufficient reasons to consider the neolithic longheads of central Europe, the dolichocranials of Hissarlik III and Alisher IV, Damghan people (Tepe Hissar), the dolichocranials of Mohenjodaro and Kal, the Punjabis, the Zoroastrians, the Celts and the Dardous, coming from the same ethnic stock which might be called by the name - the Indo-Europeans (11, p.124). Kappers suggested the dates of Tepe Hissar as follows :-

Period I - 3500 B.C. - 3000 B.C.

Period II - 3000 B.C. - 2500 B.C.

Period III - 2500 B.C. - 1500 B.C. (11, p.94).

Later on, Krogman and Schmidt modified the chronological position of the periods and suggested as follows :-

Hissar I - Before 4000 B.C. to Ca 3500 B.C.

Hissar II - Ca 3500 B.C. to 3000 B.C.

Hissar III - Ca 3000 B.C. to Ca 2000 B.C. (23, p.6).

Thus the existence of the Indo-Europeans in Tepe Hissar upto 1500 B.C. (as suggested by Schmidt) or 2000 B.C. (as modified by Krogman and Schmidt) was not going against the hypothesis that the Cemetery H people were the Vedic Aryans.

In 1935 Herzfeld writes that after the beginning of the 1st millennium B.C. a new people, the Aryans brought the change of the composition of the population of Iran (13, pp.6-7) Herzfeld also writes that three great movements of the Aryans took place from the Aryan homeland 'Eranvej' - the land of the two rivers Oxus and Ixartes, Khwarizm and Samarkand : first, the Indo Aryan migration which happened between 1500 B.C. and 1450 B.C., the second, Iranian migration which took place after the beginning of the 1st millennium B.C. and the third, the Sak migration (13, pp.7-8).

But in 1942 D.E. McCown suggested that Hissar might have ceased to be inhabited at the very beginning of the Akkadian period (24, p.52). Thus the disappearance of the Indo Europeans before of 2500 B.C. from Tepe Hissar makes the appearance /them in Cemetery H after 1500 B.C. chronologically incompatible. So in 1942 Childe from Indian stand point disputed feebly on the McCown's dating of Tepe Hissar III C (25, pp.357-358). It is Stuart Piggott who through many research papers has established a close connection between Hissar III and Jhukar Culture (26, p.180) and has tried to adjust the so called gap between the disappearance of Tepe Hissar people and the appearance of the New comers in the Indus Valley.

He has suggested a late date for Tepe Hissar (- 'not earlier than Akkadian probably some centuries later', 26, pp.176-177) and has equated Hissar III with Jhukar Culture and has established the contemporaneity of Jhukar, Shahi Tump, the last phase of Mohenjodaro, Anau III and Hissar III and has regarded the sites of India and

Baluchistan as representatives of a diffuse movement of people eastward in the first half of the second millennium B.C. "But whether the authors of the culture spoke Indo-European dialects" according to Piggott "is another question" (28, pp.24-25).

Cemetery

During the excavation of 1937 at Harappa a cemetery/- R-37 was accidentally discovered. Excavation of 1946 by Wheeler proved that Stratum I of Cemetery H was much subsequent to the Cemetery R-37 and combining report and observation Wheeler showed that Stratum II of Cemetery H also was stratigraphically later than R-37 - the cemetery of Harappans (30, p.85). For the destruction of Harappan civilization Wheeler accused Indra, i.e. the Aryans on circumstantial evidence (30, p.82).

In 1946 Ross described the Ranaghundai tell in North Baluchistan, whence stratified sequences of human occupation were discovered (29, pp.284-316). In the year of 1947 Gordon classified Cemetery H pottery as Ravi I and Ravi II pottery. He placed Ravi I, Shahi Tump and Chanhu-daro III (Jhukar) Culture in the chronological scale - little earlier than 1500 B.C. and Ravi II and Jhanger culture - little later than 1500 B.C. (31, p.212, p.235).

In the years 1947-48 Piggott wrote detailed notes on certain pins and a mace head from Harappa (32, pp.29-38); which were touched by Childe before many years of the publishing of this paper. In 1948 Schaeffer assigned the date of Hissar III to the period 2300-2100 B.C.

In 1949 Piggott agreed to the date scheme of Hissar III as given by Schaeffer (33, p.63) and related the New comers of Harappan culture and the people of the cairn burials of Baluchistan with Hissar people and Sialk 3 cemetery people respectively assigning the date of the new comers to 2000 B.C. - subsequent few centuries for the former and to 1100 B.C.-1000 B.C. for the latter (33, pp.240-241).

In 1950 Gordon suggested that the people of Jhukar culture invaded the Indus valley circa 1800 B.C. (35, pp.56-57) and this people might be 'uman manda' (known from Babylonian, Assyrian and Hittite texts) - a mixed people which included a branch of Indo-Aryan stock (35, p.57).

He also suggested that Cemetery H (more specifically Ravi II people) people was the Vedic Aryans coming much after the arrival of first Aryan speaking mixed people umman manda, (Jhukar people) in the region (35, p.58).

In the same paper Gordon pointed out that the cairn burials of Dambkoh, Jiwanri, Zangian and Moghul Ghundai are reminiscent of Necropole 3 at Sialk and the contents of some of the cairns of Moghul Ghundai are similar to those of the graves of the Cemetery B at Sialk (35, p.66). The people of cairn burials would use iron objects and their earlier date, according to Piggott is ~~ca~~ 700 B.C. in Baluchistan.

In 1950 Lal pushed the date of PG ware (generally thought to be associated with the Aryans) towards 1000 B.C. to fill up the vast interval of 1500 years between the Harappa culture/the third - second millennia B.C. and the early historic periods of ~~circa~~ fourth-fifth centuries B.C. (34, pp.89-93).

In 1951 Lal has pointed out that it is only mixing up of issues to consider the weapons of the Gangetic copper hoards as connected with the Aryans. He showed that these Copper hoards might have been associated with ill-fired ochre washed ware and the author of these weapons might be Proto-Australoid (37, p.39) tribes. His conclusion that the hoards need no longer be associated with the Vedic Aryans as was thought by Heine-Geldern and S.Piggott previously, has been supported by Childe, Piggott, Wheeler and Wainendorf (38,p.93). Lal is right definitely in connecting the Gangetic Copper hoard with the Proto-Australoid tribes, but the predominant western influence in the antennae swords as shown by Heine-Geldern is undeniable.

In the same year Beatrice De Cardi showed the affinities of Londo ware with the Persian Pottery of Sialk VI Cemetery B and assigned the site Londo (discovered by her) to about 1100 B.C. or later (36, pp.71-72; 45).

In 1954 Ghirshman wrote on Tepe Hissar - "If it is dated to the middle of the 2nd millennium, the cause of this destruction could be attributed to the movements of Indo-Europeans described above. If it is brought down to the last centuries of the same millennium, it may be that the cause was a new wave of Indo-Europeans, this time bringing the Iranians on the plateau" (39, p.63).

Thus, just like Herzfeld, he points out that two waves (excluding the Sakas) of the Indo-Europeans might have come in Iran in two different times.

In 1966 Meine-Geldern has successfully shown, that the trunnion axe from the Kurram valley, a bronze dagger from Fort Munro, Copper swords with antennae hilts from the Gangetic Valley, an animal headed copper rod from the upper most level of Harappa, a pin topped by two deer heads from Mohenjodaro and the much discussed bronze - axe adze from Mohenjodaro indicate a date between 1200 B.C. /So he advocates for his previously stated hypothesis that Vedic Aryans came to India between 1200 B.C. and 1000 B.C. (40, pp.136-139). In the same year Walter A. Fairservis has thought, as a whole, the date 1500 B.C. for the end of Harappa culture is too early and suggested probably more accurate date near 1200 B.C. for the disappearance of the Harappans has (41, p.155). He also made suggestion to consider the Londo-ware people as candidate for 'a maker of the period of the Aryan civilization' (41, p.155).

In 1959 Wheeler has thought that if the Aryans concerned with the P.G. were are dragged into the picture, then, they may represent the second phase of their invasion of India (44, p.28).

In 1962-63 Lal has published the results of C-14 dating (50, pp.203-221) worked out by different laboratories which have again pushed the final phase of Harappa towards 1300 B.C. Thus the reconstruction of the so called archaeological gap between the disappearance of Harappa culture and the arrival of the Aryan has been solely dismissed. Really, the so called C-14 datings of ancient periods of different

archaeological sites have given a shock to the systematic thoughts and works of many well known archaeologists and they seem now to reconcile their archaeological researches with this 'Scientific method' of dating. But we beg to state, that this C-14 dating of ancient Indian sites, what misfortune it may be, is solely worthless; either for the chosen defective standard or for inaccurate laboratory works or for any other unknown causes.

In 1964 D.P. Agarwala has sought to relate the Banasians with the first wave of the Aryans (54, p.200).

In the same year Ghirshman has put the hypothesis that the Iron user Sialk VI Cemetery B people was the Iranians who entered Iran in 1000 B.C. at a time when the Vedic Aryans entered India (52, pp.3-4).

In 1965 N.R. Banerjee has tried to show that the Vedic Aryans would know the uses of iron when they entered into India (57, p.144). He has also argued to condense the two distinct migration of the Caspians into one which disintegrated into two - the Indo Aryans and the Indo Iranians when they reached Iran or just before the Iranians marched into Iran shortly after 1200 B.C. (57, p.126).

In 1966 Kennedy and Melhotra pointed out striking similarity of the Nevasa people with the people of Harappan Cemetery R-37 (59, p.120) and Sankalia noted the survival or a continuation both of physical types and burial practices from Harappa to Nevasa stretching from about 2500 B.C. to 1000 B.C., though there was a great difference between the cultures of these two places (59 Foreword). At the 1st half of this decade Dales (51, p.36) and Raikes (53, pp.281-82; 58, pp.196-203) have raised objections against Wheeler's hypothesis of the destruction of Harappan cities by the Aryans (60, p.348, F.N.37).

In 1968, D. K. Chakrabarti has published a paper on the Aryan hypothesis in Indian Archaeology (60, pp.343-358). This paper has been much helpful to us to construct the shape of this problem.

We are no trying in the following paragraphs to solve the problem, mainly depending upon the view of Kappers :-

We have used the terms - the Caspians for the Indo Europeans and their synonyms; the Indo Caspians for the Vedic Aryans and their synonyms; the Irano-Caspians for the Iranian Aryans and their synonyms taking into account the suggestions of S.S.Sarkar (55, p.94).

2. Both the peoples of Cemetery R-37 and Cemetery H of Harappa were new comers:

Now let us try to solve the problem who the peoples of the Cemetery R-37 and Cemetery H were and whether they were the local peoples or New comers. Harappan pottery associated with the Cemetery R-37 does not necessarily mean that they were the Harappans as pottery is generally non-portable for a great migration and there is fair possibility that the New-comers might use the pottery of the local people of that region at least for some time where they migrated from a very distant land. Thus we see that it is not possible at the present state of knowledge to answer the question precisely.

But a tentative conclusion can be drawn from the analysis of Marshall on the problem.

(i) It is apparent from the work of Stein that cremation was the chief process of disposal of the dead among the people of the Indus culture (49, pp.54-57) and inhumation was the dominant method of disposal of the dead among the people of the 'Persien' culture (6, pp.89-90) and also of the Irano Caspians before their conversion to Zoroastrianism(1, p.505). And so it can be decided that the Harappans would cremate the dead bodies and this wretched process has made much disadvantage to discover their skeletal remnants. It comes then that both the Cemetery R-37 people, and the Cemetery H peoples were New-comers to Harappa (ii) The racial analyses of the peoples of Tepe Hissar, Anau, Shahi Tump, Cemetery R-37 and Cemetery H support this conclusion. The problem is connected to a large extent with the north Persian sites e.g. Hissar and Anau.

From the excavations of Tepe Hissar we know that a homogeneous population of cranial index 70-71.9 (average 70.8) for the male (and 72.8 for the female) was living in Tepe Hissar I, II and III (11, p.96);

in the period II, almost all the indices are dolichocranials whereas in the period III, though the majority are dolichocranials, yet a 77-79 cranial strain can be observed (II, p.124).

During the final phase of the Marappa culture peoples entered into Baluchistan; and whether they were responsible for the disappearance of the Marappans is a separate issue. Shahi Tump man as Piggott has pointed out can be considered as one representative of the New comers (33, p.221) who on their way to reach India buried one of their warriors.

It will be seen from the analyses of the cranial indices of the skulls of Cemetery R-37 and Cemetery H - open and jar burials, that it is the skulls of Cemetery R-37 which show close resemblance with Tepe Hissar skulls, but not with the Cemetery H skulls to such a large extent (open and jar burials). Ukrainian (cranial index 75; 22, p.123, Fig.65) and Irano-Scythian (cranial index 78; 22,p.125) strains are prominent in the skulls of Cemetery H, though some of the skulls are dolichocranials. Hence it is absurd to think that Cemetery R-37 people was other than the New-comers.

In North Kurgan (at Anau) and South Kurgan, Damghan people settled temporarily (II, p.99, p.101) and the same people inhabited at the third city of Hissariik (II, p.162) Alishar IV, (II,p.106) Manoi Tepe B<sub>1</sub> (II, p.104) and they are closely related with the Neolithic long heads of Central Europe (II, p.98) and also to some present peoples e.g., the Baltis (II, p.114) the Dardous (II, p.114) the Punjabis (II, p.95,p.115) and the Zoroastrians (II, p.24). This people was uniquely identified by Kappers as the Caspians (Indo-Europeans; II, p.112). Thus we can conclude that the R-37 Cemetery people might be a branch of the Damghan people and the Cemetery H people might be considered as mixed Damghan people containing strains of local people on their later movements towards India.

3. Evidence that the Cemetery R-37 people was the Caspians and the Cemetery H peoples were mixed Caspians.

A lot has been said concerning the racial affinities of the peoples of different chalcolithic Indian sites by Sewell and Guha who have much used the then terms like 'Mediterranean', 'Proto Australoid' etc. which seem after Kappers to be not so useful for the racial analyses of the peoples of Harappa. Most interesting and trustworthy method of representing a people known only by their skulls is simply to represent them by their cranial indices and it is highly probable that the cranial index 70-71.9 (for the male) though not in itself sufficient for the diagnosis of a race, may have a great typognostic value to indicate a race (11, p. 96) particularly for the ancient peoples of Near East. Frequency distribution curves for the comparisons of the cranial indices as has been frequently used by Kappers can not be successfully applied for the cranial indices of Harappa, Mohenjodaro, or other Indian Chalcolithic sites, as the data are scanty.

Kappers first identified a close relationship among the peoples of Nal (11, pp. 117-118) Mohenjodaro (11, pp. 117-118) Tepe Hissar, Alisher IV, Hissarlik III, Anau, the present Punjabis, the Dardous, the Baltis and the Zoroastrians and declared that they might have come from the same ethnic stock, the Caspians. Mr. S. S. Sarkar has done his best to show that the skulls of Harappan Cemetery R-37 might have a close ethnic relationship with the Caspians. His study on Racial affinities (55, pp. 72-94) of Harappan peoples is of exceptional importance and I shall advise the reader to consult it.

From the table of cranial indices of Cemetery R-37, Cemetery H<sub>1</sub> and Cemetery H<sub>II</sub>, Chanhudaro, Nal, and Shahi Tump it will be clear at once that the cranial indices of Cemetery R-37, Chanhudaro, Nal and Shahi Tump might be compared successfully with the cranial indices of the modern Punjabis, the Dardous, the Baltis, the Zoroastrians and with the cranial indices of the old peoples of Tepe Hissar (Damghan people), Anau (Kurgan people), Troy II, Alisher IV, Hanoi Tepe B<sub>1</sub> and with the neolithic long heads of Europe which are thought by Kappers as contained in the same ethnic stock, the Caspians\*.

\*A very prominent peak (Cephalic index) at 72 is also obvious in the UP Brahmanas. The Maithili Brahmanas also show a peak at 72, while the Kanaujia Brahmanas of Bihar at 73" (53, p. 28).

On the other hand, Cemetery H<sub>I</sub> and H<sub>II</sub> peoples and the Nevasa people have two different peaks, one at 71, and the other at 75. Hence it can be assumed that these peoples are latter branches of the Caspians (mixed) containing Ukrainian element which they might have received from local peoples of Iran. Thus Childe's hypothesis that the Cemetery H people were the Vedic Aryans and Wheeler's hypothesis that the Cemetery H was the cemetery of the Harappans do not seem to carry any momentum. It is rather more correct to say that the people of Cemetery R-37 were the Caspians (whether the Indo-Caspians, or the Trans-Caspians, we shall decide in the latter part of the paper) whereas Cemetery H peoples were the branches of the mixed Caspians containing a prominent Ukrainian strain.

4. The Cemetery R-37 people represents the 2nd wave of the Caspians or the Indo-Caspians; but not the first wave of the Caspians or the Indo-Caspians (Vedic Aryans).

#### (i) Time of arrival

(a) Pigott tried to uphold Wheeler's hypothesis of Arya invasion on Harappa culture assigning Missar IIIc to 2000 B.C. (33, p.63) and the disappearance of Harappan culture and the appearance of the Indo-Caspians in the Indus Valley to after 2000 B.C. (33, p.210). But later on, the disappearance of Harappan culture has been pushed to ca 1800 B.C. and the appearance of the Indo-Caspians has been drugged down to ca 1000 B.C. (57, p.223). But both these assignment are antagonistic as there is no such hiatus between the Harappan level and the level of the New-comers arrived at Shahi Tump, Jhukar and Chanhuaro which could make us suppose such interval from archaeological standpoint. Hence it is either the dating of the final phase of Harappa by carbon - 14 method (50, pp.202-221) is faulty or the time of the arrival associates with the final phase of Harappan culture and the first phase of the New-comers as done accordingly by Prof. R. Heine Geldern (40, pp.126-129) is of no value. But ~~as~~ <sup>we</sup> are more intentioned to depend upon the archaeological system of dating as has been done by Mr. Heine Geldern and hence wish to dismiss the radio carbon dating as worthless for dating chalcolithic Indian sites.

(b) H. D. Sankalia has brought to our notice strong Sialk necropolis B and Tapa Nissar strains in the pottery of NVT III (Navadatoli), Nagada, Bahala and Prakash (43 Preface xii-xiii). Really a considerable no of pottery published by him makes us suggest that a people who came into close contact with Iranian civilization were inhabitating in Malwa. The date of top layers of chalcolithic habitation of NVT III has been assigned to 1000 B.C. by Miss. E. K. Ralph with C-14 method and this date is hardly to be substantiated.

NVT III stratigraphically underlies the debris of the early historic period (IV) characterised by W.P. ware. From Nevasa N.B.P. Ware is dated to 2nd - 1st century B.C. (46,p.69); and there is no gap\* identified between these two periods. Hence the date of the top layers of NVT III will be assigned to the end of the first half of the first milenium B.C. (or even much later). So from the archaeological excavation at NVT and Nevasa (not paying any heed to C-14 method of dating which has assigned the topmost layer of chalcolithic culture at Nevasa to 984 B.C.-1238 B.C.; 46,p.68), we can conclude that the chalcolithic cultures of Malwa with prominent Iranian elements existed most probably, at least upto 500 B.C. (or even later). Thus we see that the time of arrival of these branches of the Caspians and the mixed Caspians is circa 1000 B.C. or later but never ca 1500 B.C. which is the supposititious time of arrival of the Indo-Caspians (Vedic Aryans).

\*As yet the full reports of all the excavations have not been published. But one thing is certain, viz., the relative stratigraphical position of the Chalcolithic culture. It generally lies over the black or dark brown soil and underlies the debris of the earliest historical cultures characterised by the use of iron, coins and black and red pottery associated with the N.B.P. and very often buildings of large-sized bricks'. The excavations at Maheswar and Navdatoli Sankali subbaras, Deo. p.244.

## (ii) Disposal of the dead

The dominant method of disposal of the dead of the Indo-Caspians (Vedic Aryans) was definitely cremation (though other forms were known and might be practised; ritual books have no rules regarding it, except in so far as the bones of the cremated might be interred). This is elaborately stated in different ritual books of the Hindoos. (1, pp.475-479; 3, pp.617-618, 2, p.126).

Some of the orientalists with a view to supporting the connection of the Cemetery H people with the Indo-Caspians (Vedic Aryans) have deliberately translated slokas from the religious books of the Hindoos to prove that they would practice burials (16, pp.223-307; 17, pp.1-68).

It is absurd to connect the complete burials and post exposure pot burials of Cemetery H<sub>I</sub> and H<sub>II</sub> with the Indo-Caspians. Rather the complete burials of Cemetery R-37 might invoke the burial custom of the Irano-Caspians as known from their later records and from the tombs of Achaemenians (1, p.505). Again the burial customs of Cemetery H<sub>I</sub> might invoke Median influence which might be explained by assuming that the mixed Indo-Caspians assimilating the local people of Iran might bring this custom first to India.

Thus it is better to assume that this branch of the Caspians were the Irano-Caspians than to think them as the Indo-Caspians who would dominantly practise cremation.

## (iii) Contemporaneity of the P.G.Ware people in the Gangetic plain and the New-comers.

During the arrival of the New-comers (1000 B.C.), we find the Indo-Caspians - the P.G.Ware people (1000 B.C.) in the Gangetic plain mainly. If we consider the New-comers as the Indo-Caspians, how we shall reconcile the literal fact that the Punjab (not the Gangetic plain) was the region where the Vedic Aryans first inhabited.

It can be reconciled by thinking that the New-comers were the Irano-Caspians who entered India at a time (ca 1000 B.C.) when the Indo-Caspians (Vedic Aryans) had just mainly migrated from the Indus Valley region to the Gangetic plain.

## (iv) The route of expansion inside India

We see a strong ethnical and cultural similarity of final phases of chal-colithic cultures of Malawa with Hissar and Sialk VI Cemetery B. But no such similarity could be traced in the Gangetic plain. Again it is probable that some branches of the New-comers reached Bihar and Bengal via Madhya Pradesh. This might indicate a strong pressure from the Gangetic plain which made the New-comers to go mainly to the South. Thus the route of expansion of the New-comers inside India mainly towards the South, does not provide us with the suggestion of connecting them with the Indo-Caspians. Rather, the route of expansion of these Caspians towards South may suggest that they were the second wave of the stock.

## (v) Route outside India

Again if we trace the route outside India traversed by these New-comers we shall find that the New-comers of Cemetery R-37 of Harappa came down from N.E.Iran to S.E.Iran; entered Baluchistan and touching Shahi Thump Jhukar and Chan-hudaro, they reached Harappa at a time when most of the Parappans changed their place of civilization from the Indus plain to any other unknown places.

The route through which the New-comers came, does not correspond with the route of the Indo-Caspians who possibly did not cross Iran but simply touched it to the North. So it is more probable that this branch of the Caspians was a group of the Indo-Caspians. Some archaeologists are eager now to fix the time of the arrival of the Indo-Caspians circa 1000 B.C. But it is highly improbable to fix the date much after 1500 B.C. from the evidence of literary records and causes detailed in those previous paragraphs.

Hence considering time and other causes aforesaid, the hypothesis of the migration of the Caspians in one wave in India becomes untenable; it is highly probable that the Caspian migrations took place in two distinct waves (excepting the later migration) in Iran and in India and these New-comers of Harappa were related with the second wave of the Caspian migration i.e., the migration of the Iran-Caspians.

Ghirshman has tried to establish that Sialk VI Cemetery B people were the Irano-Caspians and N.R.Banerjee has extended this hypothesis in the case of Indian Protohistory which states that the Aryans would know the uses of iron when they entered India. For this reason only he is willing to relate the Caspians not to Hissar but to Sialk VI Cemetery B people (57, p.127). But this hypothesis of Ghirshman can never be supported from Indian background. Culturally Sialk VI Cemetery B is related to the cairn burials of Baluchistan of comparatively recent times and ethnically the people of Sialk VI Cemetery B (brachycranials with mesocranial strain) was related with the people of the megalithic burials of Brahmagiri (47, p.23) and Jallewaram (49, p.26, p.28).

At the present state of our knowledge, to consider these cairn burials of ca 1000 B.C. connected with the Caspians is a blunder and to hope for days when some rigid evidence will come in support of Ghirshman's hypothesis from India is simply nothing but to dream of a day-dream. As the evidence comes from Hissar, Shahi Tump, Jhukar, or Chanhudaro it is by no means logical to consider that this branch of the Caspians would use iron when they inhabited at Hissar or when they came to India.

A 77-79 cranial index people whom Koppers has identified as iron - users (11, p.154) was present, at Tepe Hissar, (Table I) Harappa (Table I) and also in the megalithic burials of Brahmagiri and Jallewaram\* (Table II). Again we see that influx of this people (cranial index 77-79) took place more deliberately at Tepe Hissar than at Sialk. Hence to identify this 77-79 cranial index people as Iron-users is hardly to be substantiated in Iran. Rather Sialk VI Cemetery B. people, the brachycranials might be considered at least one of the iron introducers both in Iran as evidenced from Sialk VI Cemetery B and also in India as evidenced from Brahmagiri (47, p.15, p.23) and Jallewaram (52, p.26, p.31).

\*Unfortunately, no human skulls are obtained from the cairn burials of Baluchistan so that any comparison can be done.

Thus we see that all the prehistoric chalcolithic migrations through Baluchistan to India can primarily be attributed directly or indirectly to two broad categories. The first one - the migrations connected with Hissar; Cemetery B-37, Jhukar, Chanhudaro II, Shahi Tump and Cemetery H might be included in this category.

These migrations were the migrations of mainly 71 cranial index people mixed with different amount of Ukrainian strain (75 cranial index) and Irano-Scythian strain (77-79 cranial index) at different sites.

And the second one - the migrations connected with Sialk VI Cemetery B; the cairn burials of Baluchistan and the megalithic burials of South India might be included in this category. These migrations were the migrations of the <sup>brachycranial</sup> people mixed with some mesocranial strain, who might have entered India with the knowledge of iron. This people was definitely other than our Caspians.

At Lothal it seems that both Tepe Hissar people (cranial index 71) and Sialk VI Cemetery B people (brachycranials) lived together (56, p. 204) and made a composite culture.

#### 5. CONCLUSIONS

We can now trace two ethnic migrations of circa 1000 B.C. via Baluchistan; one - the migrations of 71 cranial index people (with a little 75 and 77-79 cranial strains) and the other; the migrations of the brachycranials (mixed with mesocranial strains). First one in the previous paragraphs has been attributed to the Irano-Caspians and the second one might be attributed to the Sialk VI Cemetery B people, the Armenoids. Groups of mixed peoples of the Irano-Caspians later on, assimilating the local peoples of Iran and Baluchistan might have also constituted the later portion of the train of the migrations of the Irano-Caspians as evidenced from Cemetery H-II, Cemetery H-I and Nevass. Again, from Lothal it seems that the Irano-Caspians and the Armenoids made a composite culture.

Now the question arises, who then the Indo-Caspians (Vedic Aryans) were in the Indus Valley, who came at least before 500 years of the arrival of the Irano-Caspians in the region.

To solve this problem we are to judge the different aspects of Harappa culture, its disappearance from the Indus Valley ca 1000 B.C. and its different articles with strong Hindu resemblances, precisely and deeply.

Taking into account the mature civilization as evidenced from Harappa, we can conclude that the centre of civilization of the Harappans was the Punjab and from this place they moved eastwards towards the Gangetic plain and southwards towards the Deccan; whereas, the New-comers mainly went southwards\* most probably on account of the strong pressure from the Gangetic plain. Is not the expansion of Harappan culture from the Punjab towards east and south at a time (ca 1000 B.C.) when the Indo-Caspians (Vedic Aryans) are going from the Indus Valley to the Gangetic plain at all indicative ? Are the disappearance of the Harappans from the Indus plain (ca 1000 B.C.) and the appearance of the P.G. Were people ca 1000' (or little later) in the Gangetic plain really unconnected ? Should the similarities of the Harappan objects with Hindu objects of later times be simply dismissed by the hypothesis of borrowing ?

There is some vague similarities between different chalcolithic West Asian cultures and the culture of the Harappans but these are nothing but the general similarities of chalcolithic cultures of Asia as a whole; there are also some vague similarities among the culture of Harappa and the first phase and also the later phases of the civilization of the Indo-Caspians in the Gangetic Valley, which might be no more than a continuation of cultural heritage through ages. But there is at least some possibility to connect the

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\*Some branches of them reached Bihar and Bengal not through U.P. but most probably through M.P.

Harappans with the Indo-Caspians and their dissimilarity might also be reconciled by assuming the culture of the latter in the Gangetic plain as the same culture being transformed from the chalcolithic age to the iron age.

At least let us speak that it will not be at least irresponsibility to search facts to defend the hypothesis that the Harappans were the Indo-Caspians (Vedic Aryans); but veteran Indologists generally dismiss such hypothesis when some Hindoo orthodoxes hit the problem by their own ways.

It should be remembered that learned Indologists have done practically nothing to unveil the mystery of Harappa (except the collecting of facts). Their age old hypothesis that the Harappans were Non-Aryans and Pre-Aryans has not solved any problem but created many. We are not intended here to support the blind orthodoxy of those irresponsible orthodox theorists but only intended to judge their hypothesis properly from archaeological stand point but not from similar irresponsible dogmatic attitude.

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TABLE - I

A tentative racial analysis of the populations of the sites, ethnically related with Tepe Hissar People

| Site       | Sex  | Cranial | Indices | Remarks |
|------------|--|---------|---------|---------|
| M          | 66.2   |         |         |         |
| F          |  |         |         |         |
| I          | 74.85  |         |         |         |
| M          | 60.04; 68.04; 68.48; 69.27; 71.13; 71.20; 73.51; 73.85;              |         | 75.14   |         |
| F          | 70.79; 72.25; 72.32; 74.03; 74.86; 75.28; 75.54; 75.98               |         |         |         |
| A          |  |         |         |         |
| S          |  |         |         |         |
| O          |  |         |         |         |
| H          |  |         |         |         |
| H          |  |         |         |         |
| H          |  |         |         |         |
| P          |  |         |         |         |
| P          |  |         |         |         |
| T          |  |         |         |         |
| PERIOD III |  |         |         |         |
| M          | 68.29; 64.92; 65.08; 66.32; 66.34; 66.49; 66.57; 67.01; 67.03; 67.72 |         |         |         |
| F          | 67.84; 68.06; 68.11; 68.50; 68.53; 68.72; 68.75; 68.78; 68.95        |         |         |         |
| I          | 69.11; 69.15; 69.23; 69.23; 69.40; 69.47; 69.52; 69.59; 69.68        |         |         |         |
| M          | 69.73; 69.85; 69.90; 69.95; 69.95; 70.05; 70.16; 70.21; 70.31; 70.47 |         |         |         |
| F          | 70.49; 70.53; 70.62; 60.65; 70.68; 70.72; 70.81; 70.92; 70.92        |         |         |         |
| P          | 70.92; 70.97; 71.13; 71.27; 71.50; 71.58; 70.67; 71.65; 71.67; 71.74 |         |         |         |
| T          | 71.81; 71.81; 71.88; 71.88; 71.96; 71.96; 72.13; 72.16; 72.19; 72.25 |         |         |         |
| H          | 72.34; 72.43; 72.43; 72.73; 72.73; 72.97; 73.16; 73.26; 73.26        |         |         |         |
| H          | 73.30; 73.48; 73.51; 74.51; 73.60; 73.63; 73.68; 73.80; 73.89        |         |         |         |
| H          | 74.21; 74.30; 74.35; 74.59; 74.71; 74.74; 75.25; 75.25; 75.13; 75.68 |         |         |         |
| H          | 75.72; 76.22; 76.24; 76.84; 77.05; 77.78; 78.33; 80.90               |         |         |         |

The mode of the Cranial indices of Tepe Hissar people is at 71. These dolichocephalics are identified by Kappers as the Caspians. A negligible No. of 75 Cranial index people (Ukrainians) and 77-79 Cranial index people (Irano-Scythians) were also present. So we can conclude that the over-whelming majority of the Caspians and a negligible small No. of the Ukrainians and the Irano-Scythians constituted the total population of Tepe Hissar.

TABLE - I  
(Contd.)

| Site                  | Sex | Cranial   | Indices | Remarks  |
|-----------------------|-----|---|---------|--|
| TEPEHISSAR            |     |   |         |  |
| PERIOD III            |     |   |         |  |
| I                     | F   | 68.82; 69.35; 70.06; 70.53; 70.72; 71.12; 71.43; 71.58; 71.66; 71.82<br>72.07; 72.07; 72.32; 72.32; 72.41; 72.47; 72.53; 72.67; 72.76; 73.03<br>73.08; 73.26; 73.51; 73.74; 74.03; 74.48; 74.57; 75.28; 75.31; 75.82<br>76.36; 76.52; 77.90; 77.91; 78.57; 79.43; 81; 85.62 |         |  |
| Nal.                  | M   | 70.02   |         | The Caspian  |
| Shah Tump             | M   | Dolichocephalic   |         | The Caspian  |
| Chankudaro            | F   | 71.07   |         | The Caspian  |
| Mohenjodaro           | M   | 63.32; 68.37; 68.72 ?; 71.16; 71.71; 72.73; 73.49; 76.73 ?  |         | The Caspian  |
|                       | F   | 57.45 ?; 69.45 ?; 70.08   |         |  |
|                       | I   | 85.37   |         |  |
| Harappa Cemetery R-37 | M   | 68.06; 68.91; 69.15; 69.21; 69.63 ?; 70.43; 71.44 ?; 71.81; 72.19<br>72.83; 74.47; 75.90; 79.79   |         | The case is here to a greater extent similar to Tepe Hissar. A majority of the Caucasians with relatively small number of the Ukrainian and the Indo-Scythians contributed the population of the graves. |
|                       | F   | 66.30; 68.68 ?; 70.78; 71.27; 71.28; 71.27; 72.13; 72.47; 75.68<br>77.84; 80.76   |         |  |
|                       | I   | 77.11   |         |  |

## Site

## Sex

TABLE I  
(Contd.)

Indices

Remarks

| Site             | Sex | Cranial Indices                                   |                                      |
|------------------|-----|---|--------------------------------------|
| Harappa Cemetery | M   | 75.13; 75.75; 79.27 ?                             |                                      |
| H (Open burial)  | F   | 71.93 ?; 80.24                                    |                                      |
| Harappa Cemetery | M   | 68.18; 73.39 ?; 76.63 ?                           |                                      |
| H (Jar burial)   | F   | 72.47 ?; 72.73; 74.18; 74.72; 75.72; 76.88; 84.00 |                                      |
|                  | I   | 70.66   |                                      |
| Harappa          | M   | 73.08   |                                      |
| Mound AB         | F   | 69.83; 69.95 ?                                    |                                      |
|                  | I   | 76.51   |                                      |
| Harappa Area C   | M   | 71.62; 72.47; 72.77; 78.01; 79.12; 79.33; 81.29   | The Caspians and the Irano-Scythians |
|                  | F   | 71.84; 77.11                                      |                                      |
|                  | I   | 65.87; 75.90; 80.63                               |                                      |
| Nevasa           | M   | 67.2  |                                      |
|                  | F   | 72.4; 75.8  | The Caspians and the Ukrainians      |

The case is here different from that of Tepe Hisar. The majority of the population might be assumed as the Ukrainians with relatively small numbers of the Indo-Scythians and the Caspians.

An intimate mixture of the Caspians, the Ukrainians and the Indo-Scythians.

TABLE-II

A Tentative Racial Analysis of the populations of the sites-ethnically related with Sialk VI Cemetery B People

| Site                        | Period   | Sex | Cranial Indices  | R e n s r k g   |
|-----------------------------|----------|-----|--|---|
| Sialk<br>I                  | Sialk    | M   | 69.3 ?; 69.3 ?; 74.79                                      | The Armenoids are highly prominent in the Sialk VI Cemetery B |
|                             |          | F   | 68.4 ?; 70.3 ?; 79 ?                                       |   |
| Sialk<br>II                 | Sialk    | M   | 65 ?; 65.3 ?   | The Armenoids are highly prominent in the Sialk VI Cemetery B |
|                             |          | F   | 74.1 ?; 74.8 ?; 82 ?                                       |   |
| Sialk<br>III                | Sialk    | M   | 69.1   | The Armenoids are highly prominent in the Sialk VI Cemetery B |
|                             |          | F   | 68.2   |   |
| SIALK<br>24.                | Sialk    | I   | 73.7; 76; 83.3   | The Armenoids are highly prominent in the Sialk VI Cemetery B |
|                             |          | F   | 82.1   |   |
| Sialk<br>IV                 | Sialk    | I   | 84.4 ?   | The Armenoids are highly prominent in the Sialk VI Cemetery B |
|                             |          | M   | 79.2 ?   |   |
| Sialk<br>V                  | Sialk    | M   | 73.9; 75.7; 80; 81.2; 81.8; 83.3; 84.2; 87.4; 86.1; 92.8 ? | The Armenoids are also traceable in the site                  |
|                             |          | F   | 72.1   |   |
| Sialk<br>VI                 | Sialk    | M   | 73.9; 75.7; 80; 81.2; 81.8; 83.3; 84.2; 87.4; 86.1; 92.8 ? | The Armenoids are also traceable in the site                  |
|                             |          | F   | 73.3; 78.4; 85.2; 86.9; 88.8; 89.6 ? 92.9                  |   |
| Megalith<br>Uniden-74.22    | Megalith | M   | 78.21; 79.13; 80.75 ?; 83.52                               | The Armenoids are also traceable in the site                  |
|                             |          | F   | 64.22 ?  |   |
| Uniden-74.22<br>Girid       |          |     | (Not from megalithic burials)                              | The Armenoids are also traceable in the site                  |
|                             |          | I   | 68.87; 69.27 * (Not from megalithic burials)               |   |
| Megalith<br>Jalles<br>Waran | Megalith | M   | 80.57; 81.73 ?; 83.09 ?                                    | The Armenoids are also traceable in the site                  |
|                             |          | F   | 74; 76.92  |   |

A Tentative Chronological Scheme

|  |  |
|--|--|
| Ca 1500 B.C. or a little earlier, probably<br>Ca 1800 B.C. | (i) Arrival of the Indo-Caspians in India; (ii) beginning of Harappan Culture  |
| Ca 1000 B.C.   | (i) Disappearance of the Harappans from the Indus Valley; (ii) appearance of the Indo-Caspians mainly in the Gangetic plain; (iii) arrival of the Irano-Caspians (New-comers) in the Indus Valley. |
| Ca 800 B.C.  | (i) Arrival of different branches of the mixed Irano-Caspians in India; (ii) arrival of the Armenoids (the brachycranials) in India.   |

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WEIGHTS AND MEASUREMENTS OF HARAPPA  
CULTURE IN TERMS OF RAKTIKA AND ANGULA

In the following paragraphs and tables I am intending to relate Harappan weights with the ancient Indian weights of Gold, Silver and Copper. According to Mr. A. S. Hemmy there were two systems of weights<sup>1</sup> used by the people of Harappa culture.

First one (in gms.) :- .856; 1.71; 2.28; 3.42; 6.85; 13.12; 27.39; 54.78; 136.96; 171.2; 273.92; 1370.

and the second one<sup>2</sup> described by Mr. Hemmy as exceptional weights at Mohenjodaro (in gms.) :- .98; 2.07; 3.03; 3.92; 24.5; 47.30.

From vivid observations (without making  $t$  test) of the tables of weights found from Harappa and Mohenjodaro, it will be at once obvious that the second system or the exceptional system is not exceptional at all; this system is originated, rather created with a view to showing an approximate similarity of some of the weights of Harappa Culture with Babylonian system by an "as you like" type explanation. The exceptional system can easily be reasonated with the first system i.e. the exceptional weight .98 gm. may be taken as one defective specimen of the normal system of the weight-standard of .850 gm.

Similarly,

2.07 gms. may be taken for one defective specimen of 2.15 gms.

3.03 gms. and 3.92 gms. may be taken for two defective specimens of 3.44 gms.

24.50 gms. may be taken for one defective specimen of 27.53 gms.

And 47.30 gms. may be taken for one defective specimen of 55.07 gms.

It is more logical to assume that the last two weights i.e. 24.50 gms. and 47.30 gms. are the defective specimens of the normal weights 27.36 gms. and 52.8 gms. respectively than to think that those above mentioned weights are different system of weights used in HM\* and they possess approximate resemblance with light Babylonian System. The exceptional system of Mr. Hemmy is a wishful selection of few defective weights among large number of Harappan weights placing one eye to the table of light Babylonian system. Still in the table "Approximation of the Indus valley weights to Babylonian system"<sup>3</sup> Mr. A. S. Hemmy will certainly deliver you some fun to find out the approximate similarity and make you think what Marshallians did to point out the imaginary resemblance of Harappa Culture with the civilization of Sumer and Assyria. This type of dogmatic attitude of explaining Harappa materials either to be Assyrian or to be sumerian by hook or by crook is a well known tradition of the Marshallians.

To prepare the tables "Excavations at Harappa" by M. S. Vats (Vol.II, pp.365 - 365) and "Mohenjodaro and the Indus civilization" by Marshall (Vol.II Marshall pp.589 - 598, Appendix II - List of Weights from Harappa) are consulted. When the same specimen of weights are tabulated in the reports with different weights, I have taken the results of the former. For the weights of Mohenjodaro, the same process described above is adopted. The description of weights are taken from "Mohenjodaro and the Indus civilization". Only perfect and slightly chipped weights of both the sites are taken into considerations. The weights which lack the descriptions of their condition are treated as perfect.

\*HM :- HM means Harappa and Mohenjodaro together.

## 31.

According to Manu Indian system of weighing silver, gold and copper are given below<sup>4</sup>.

S i l v e r

|            |              |              |
|------------|--------------|--------------|
| 2 Raktikas | = 1 Māsha    | .21510 gms.* |
| 16 Māshas  | = 1 Purīna   | 3.4417 gms.  |
| 10 Purīnas | = 1 Satamana | 34.417 gms.  |

Gold and Copper

|            |   |             |
|------------|---|-------------|
| 5 Raktikas | = 1 Māsha                                 | .53775 gms. |
| 16 Māshas  | = 1 Suvarna; Grshmapana (only for Copper) | 8.604 gms.  |
| 4 Suvarnas | = 1 Pala                                  | 34.417 gms. |
| 10 Palas   | = 1 Dharana                               | 344.17 gms. |

We see here that the Satamana (320 raktikas) in the Silver system has the same weight as the Pala (320 raktikas) in the Gold system. In the Gold and Copper systems, there is a higher unit, gold Dharana which is 10 times of a Pala and this unit is absent in the Silver system. From the tables I and II we may consider that for weightment of common articles, Harappan people would use Silver system. The general system of weightment of common articles of Harappan people, may be thought to have been based on the following system.

|                                    |                       |             |
|------------------------------------|-----------------------|-------------|
| 2 Raktikas                         | = 1 Raupya Māshaka    | .21510 gms. |
| 16 Raupya Māshakas                 | = Purīna (Silver)     | 3.4417 gms. |
| 10 Purīnas (Silver)                | = 1 Satamana (Silver) | 34.417 gms. |
| 10 Satamanas (Silver) <sup>5</sup> | = 1 Suvarna Dharana   | 344.17 gms. |

Harappan weights can easily be explained in terms of above unit weights of ancient India and the explanation is so clear that one is forced to infer that the weighing units of Harappa Culture were exactly the same as the prescribed weighing units of Manu (See Table I and II)

\*For various reasons I have taken 1 raktiki = .10755 gms.

Mr. H. D. Sankalia<sup>6</sup> thinks that the weight system of Nevasa, especially with regard to the ratios possessed closer resemblance with light Babylonian system than with the Harappan system.

But I think that the people of Nevasa used the same system of weightment (See Table III) as the people of Harappa, Mohenjodaro and Chanhudaro did.

From the following table, it will be apparent that Nevasa - people used cruder weights and so we may infer that Nevasa people were lesser advanced than the Harappan people in connection with the uses of weights.

The weights obtained from Chanhudaro<sup>7</sup> (See Table II) and the Buddhist site Taxila<sup>8</sup> (See table IV) also show unmistakable resemblance with the weights of Harappa and Mohenjodaro.

#### MEASUREMENT

Relations between the Harappan scale and the system of measurement of ancient India may be traced, by observation and comparison. But this method of observation and comparison of the Indus series with ancient Indian scales will give us no conclusive result. The weight system of ancient Hindoo India was unique, and as far as we know no peoples other than the Harappans used such system of weightment; and so definite conclusion can be drawn from the analysis.

But for measurement, the cubit system, was customary in many parts of ancient world e.g., Egypt, Asia Minor, Greece, Lachish, Syria etc.<sup>9</sup> It can be shown that like the people of ancient Hindoo India (also like other ancient peoples) the Harappan people used cubit system of measurement.

Indian systems of measurement are given

below as known from ancient literatures<sup>10</sup>. (Vridhā Manu).

|            |                    |
|------------|--------------------|
| 8 Yavas    | = 1 Āngulī         |
| 12 Āngulīs | = 1 Vitesti        |
| 2 Vitesti  | = 1 Hasti or cubit |

and

$$\ast 6 \text{ Yavas}^{11} = 1 \text{ Angula}$$

$$24 \text{ Angulas} = 1 \text{ Hasta}.$$

Whatever be the measure of 1 Yava, it is obvious that the length of 1 Angula was fixed. 1 Hasta of Indian scale varies from 18" - 19". So the length of 1 Angula will vary from .75" to .79125". One Yava, then, (if 6 Yavas = 1 Angula be customary one) will vary from .125" to .1318" and 2 Yavas will vary from .250" to .26275".

One 12<sup>th</sup> of the two scales of Harappan culture (found at Mohenjodaro) could easily be explained in the light of ancient Hindoo - scale. (See Table V).

Again the second scale<sup>13</sup> found at Harappa tallies well with the Indian system :- (See Table VI).

$$8 \text{ Yavas} = 1 \text{ Angula}$$

$$24 \text{ Angulas} = 1 \text{ Hasta (18")}$$

$$\text{Hence } 1 \text{ Yava} = .09375 \text{ inch.}$$

$$\frac{1}{2} \text{ Angula} = 4 \text{ Yavas} = .37500 \text{ inch.}$$

From the nature of the weights and measurement of Harappa culture and ancient Indian coins and scales, i.e. their basic unit the system of change of basic unit to higher units, I can not but think that the system of weights and measurement of HM and ancient Hindoo India was the one and the same (especially with regard to weights) and the conclusion which comes from the picture is rather shocking and I am afraid of stating that such strong similarity can hardly be explained by the borrowing theory. One reasonable explanation which can never be excluded is that, both the peoples were the one and the same and hence, the weights of Harappa Culture were not so old as the Marshallians think.

In all the tables F means Harappa, H Mohenjodaro, M Harappa and Mohenjodaro together, C Chanhudaro and T Taxila; & means at least some of the specimens of the group are defective.

TABLE - I

A survey of the weights from Harappa and Mohenjodaro

| Group | Size<br>of specimens | No.<br>specimens | Range<br>(in grams) | Average<br>weight<br>(in gram) | Relevant<br>Indian<br>weight | Theoretical<br>weight of the<br>relevant Indian<br>weight (in gram) | Relevant average<br>weight from other<br>Indian sites (in<br>gram) |
|-------|----------------------|------------------|---------------------|--------------------------------|------------------------------|---|--|
| Mau 1 | H                    | 1                | .550                | .550                           | 1 māsha<br>(Gold)            | 1 māsha (Gold)<br>= 5 raktikas<br>= .10755 gm x 5<br>= .53775 gm    | C = .58  |
| Mau 4 | H                    | 1                | .950                | .950                           | 4 māshas<br>(Silver)         | 1 māsha (Silver)<br>= 2 raktikas<br>= .10755 x 2 gm<br>= .21510 gm  | C = .861   |
| Mau 4 | M                    | 6                | .813-.980           | .887                           | 4 māshas<br>(Silver)         | 4 māshas (Silver)<br>= .21510 x 4 gm<br>= .8604 gm                  |  |
| Mau 8 | H                    | 12               | 1.150-1.320         | 1.220                          | 8 māshas                     | 8 māshas  | C = 1.352  |
| Mau 4 | M                    | 4                | 1.552-1.801         | 1.750                          | (Silver)                     | = .21510 gm x 8<br>= 1.7208 gm                                      |  |
| Mau 4 | H                    | 4                | 2.5 - 2.9           | 3.86                           | 4 māshas<br>(Gold)           | 4 māshas (Gold)<br>= .53775 gm x 4<br>= 2.151 gm                    | C = 2.46   |

TABLE - I (contd.)

## A survey of the weights from Harappa and Mohenjodaro

| Group | Site<br>or<br>specimens | No.<br>(in<br>grams) | Average<br>weight<br>(in gram) | Relevant<br>Indian<br>weight    | Theoretical<br>weight of the<br>relevant Indian<br>weight (in gram) | Relevant average<br>weight from other<br>Indian sites (in<br>gram) |
|-------|-------------------------|----------------------|--------------------------------|---------------------------------|---|--|
| PAG 1 | HM                      | 52                   | 3.030-3.950                    | 3.450<br>= 1 Purāṇa<br>(Silver) | 16 Māshas<br>= 1 Purāṇa<br>(Silver)                                 | C = 3.82<br>—  |
| PAG 2 | HM                      | 68                   | 6.310-7.310                    | 6.805                           | 2 Purāṇas<br>(Silver)<br>= 3.417 gms.<br>x 2 = 6.834 gms.           | C = 6.78<br>N = 6.78<br>T = 7.06                                   |
| PAG 4 | HM                      | 68                   | 13.000-15.000                  | 13.760                          | 4 Purāṇas<br>(Silver)<br>= 3.417 gms.<br>x 4 = 13.7668 gms.         | C = 13.82<br>N = 15.4<br>T = 13.25                                 |
| 35.   | -                       | 16                   | 25.354-29.225                  | 27.385                          | 8 Purāṇas<br>(Silver)<br>= 3.417 gms. x 8<br>= 27.5336 gms.         | C = 27.92<br>T = 27.10   |
| PAG 8 | H                       | 60                   | 25.050-29.500                  | 27.057                          |   |  |
| SAG 1 | H                       | 4                    | 36.79-39.40                    | 37.21                           | 10 Purāṇas<br>(Silver)<br>1 Satamāṇa<br>(Silver)                    | C = 32.74<br>N = 34.89<br>T = 35.96                                |

TABLE - I (Contd.)

A survey of the weights from Harappa and MohenJodaro

| Group   | Site | No<br>of specimens | Range<br>(in grams) | Average<br>weight<br>(in gram) | Relevant<br>Indian<br>weight | Theoretical<br>Weight of the<br>relevant Indian<br>weight (in gram) | Relevant average<br>weight from other<br>Indian sites<br>(in gram) |
|---------|------|--------------------|---------------------|--------------------------------|------------------------------|---|--|
| PAC 16  | H    | 16                 | 40.750-56.000       | 53.521                         | 16 Purāṇas<br>(Silver)       | 16 Purāṇas<br>(Silver)<br>= 3.4417 gms x 16<br>= 55.0672 gms        | C = 53.33  |
| SAC 2   | H    | 10                 | 53.810-54.456       | 54.441                         | 2 Savāmāṇas<br>(Silver)      | 2 Savāmāṇas<br>(Silver)<br>= 34.417 gms x 2<br>= 68.834 gms.        | H = 54.82  |
| SU Auto | H    | 3                  | 80.7 - 89.7         | 85.53                          | 10 Suvarṇas<br>(Gold)        | 10 Suvarṇas<br>(Gold)<br>= 3.604 gms x 10<br>= 36.04 gms            | T = 53.45  |
| SAC 3   | M    | 1                  |                     | 96.476                         | 3 Savāmāṇas<br>(Silver)      | 3 Savāmāṇas<br>(Silver)<br>= 24.417 gms x 3<br>= 73.251 gms         | N = 105.32   |
| SAC 4   | H    | 10                 | 131.4-135.9         | 130.65                         | 4 Savāmāṇas<br>(Silver)      | 4 Savāmāṇas<br>(Silver)<br>= 24.417 gms x 4<br>= 137.68 gms         | C = 131.45   |
|         | M    | 6                  | 136.5-137.81        | 137.97                         |                              |   | H = 126.3  |

TABLE - I (contd.)

A survey of the weights of Harappa and Mohenjodaro

| Group                    | Site<br>or specimens | No.<br>of specimens | Range<br>(in grams) | Average<br>weight (in<br>grams) | Relevant<br>Indian<br>weight                             | Theoretical weight<br>of the relevant Indian<br>weighn (in grams)   | Relevant average<br>weight from other<br>Indian sites<br>(in grams) |
|--------------------------|----------------------|---------------------|---------------------|---------------------------------|--|---|---|
| SAG 5                    | H                    | 3                   | 151.424-185.500     | 170.308                         | 5 Satamāpas<br>(Silver)                                  | 5 Satamāpas<br>= 34.417 gms x 5<br>= 172.085 gms  | C = 267.06<br>N = 284.3   |
| SAG 8                    | H                    | 1                   |                     | 263.5                           | 8 Satamāpas<br>(Silver)                                  | 8 Satamāpas<br>= 34.417 gms x 8<br>= 275.336 gms  |   |
| SAG 16                   | H                    | 1                   | 270.70-275.20       | 273.61                          | 16 Satamāpas<br>(Silver)                                 | 16 Satamāpas (Silver)<br>= 34.417 gms x 16<br>= 550.672 gms   | C = 544.77  |
| SAG 40<br>or<br>DHAU 4   | H                    | 1                   |                     | 1375                            | 40 Satamāpas<br>(Silver)<br>or<br>4 Dharanas<br>(Gold)   | 40 Satamāpas (Silver)<br>= 34.417 gms x 40<br>= 1376.68 gms<br>4 Dharanas (Gold)<br>= 344.17 gms x 4<br>= 1376.68 gms |   |
| SAG 80<br>or<br>DHAU 8   | H                    | 3                   | 1375-1445.85        | 1414.18                         | 80 Satamāpas<br>(Silver)<br>or<br>8 Dharanas<br>(Gold)   | 80 Satamāpas (silver)<br>= 34.417 gms x 80<br>8 Dharanas (Gold)<br>= 344.17 gms x 8<br>= 2753.36 gms                  |   |
| SAG 320<br>or<br>DHAU 32 | M                    | 1d                  |                     | 11467.58                        | 320 Satamāpas<br>(Silver)<br>or<br>32 Dharanas<br>(Gold) | 320 Satamāpas (Silver)<br>= 34.417 gms x 320<br>32 Dharanas (Gold)<br>= 344.17 gms x 32<br>= 11013.44 gms             |   |

TABLE - II

## A survey of the weights from Chembudaro

| Group<br>of specimens | No.<br>Range<br>(in gram) | Average<br>weight<br>(in gram) | Relevant<br>Indian<br>weight | Theoretical weight<br>of the relevant<br>Indian weight (in<br>gram)   | Relevant average<br>weight from other<br>Indian sites (in<br>gram) |
|-----------------------|---------------------------|--------------------------------|------------------------------|---|--|
| MAR 1                 | 2<br>.5695-.5985          | .58                            | 1 Māsha<br>(Gold)            | 1 Māsha (Gold)<br>= 5 raktikas<br>= 10755 gm x 5<br>= .53775 gm.  | H = .65  |
| MAR 4                 | 1d<br>.8861               |                                | 4 Māshas<br>(Silver)         | 1 Māsha (Silver)<br>= 2 raktikas<br>= 10755 gm x 2<br>= .21510 gm.<br>4 Māshas (Silver)<br>= 21510 gm x 4<br>= .8604 gm | H = .950<br>M = .887   |
| MAR 8                 | 3d<br>1.030-1.9355        | 1.820                          | 8 Māshas<br>(Silver)         | 8 Māshas (Silver)<br>= 21510 gm x 4<br>= 1.7208 gm  | H = 1.82<br>H = 1.76   |
| MAR 4                 | 3d<br>2.063-2.961         | 2.46                           | 4 Viśhas<br>(Gold)           | 4 Viśha (Gold)<br>= 5377 gm x 4<br>= 21510 gm   | H = 2.05   |
| PAS 1                 | 13d<br>3.3285-4.841       | 3.82                           | 1 Purāpa<br>(Silver)         | 1 Purāpa (Silver)<br>= 3.4417 gms   | HM = 3.45<br>T = 3.37  |
| PAS 2                 | 17d<br>5.471-7.457        | 6.78                           | 2 Purāpas<br>(Silver)        | 2 Purāpas (Silver)<br>= 3.4417 gm x 2<br>= 6.8834 gms   | HM = 6.005<br>T = 6.78<br>L = 7.65                                 |

TABLE-II

(contd.)

## A survey of the weights from Chanhudaro

| Group<br>of specimens | No<br>(in Grams) | Average<br>weight<br>(in gram) | Relevant<br>Indian<br>Weight | Theoretical weight<br>of the relevant<br>Indian weight (in<br>gram)                 | Relevant average<br>weight from other<br>Indian sites (in<br>gram) |
|-----------------------|------------------|--------------------------------|------------------------------|---|--|
| PAG 3                 | 4d               | 8.520-10.65                    | 9.30                         | 3 Purāgas<br>(Silver)<br>$= 3.4417 \text{ gms} \times 3$<br>$= 10.3251 \text{ gms}$ | N = 9.24   |
| PAG 4                 | 16               | 13.40-14.90                    | 13.82                        | 4 Purāgas<br>(Silver)<br>$= 3.4417 \text{ gms} \times 4$<br>$= 13.7668$             | T = 12.76<br>N = 15.4<br>T = 13.25                                 |
| PAG 6                 | 7d               | 18.10-23.70                    | 20.97                        | 6 Purāgas<br>(Silver)<br>$= 3.4417 \text{ gms} \times 6$<br>$= 20.6502 \text{ gms}$ |  |
| PAG 8                 | 21d              | 26.68-30.39                    | 27.92                        | 8 Purāgas<br>(Silver)<br>$= 3.4417 \text{ gms} \times 8$<br>$= 27.5336 \text{ gms}$ | H = 27.385<br>H = 27.057<br>T = 27.10                              |
| SAG 1                 | 2d               | 32.38-38.10                    | 32.74                        | 1 Satamāna<br>(Silver)<br>$= 10 \text{ Purāgas (Silver)}$<br>$= 34.417 \text{ gms}$ | H = 37.21<br>H = 34.89<br>T = 35.96                                |

TABLE - II.

(contd.)

## A survey of the weights from Chanhudaro

| Group<br>of specimens | No<br>of specimens | Range<br>(in gram) | Average<br>weight<br>(In gram) | Relevant<br>Indian<br>weight | Theoretical<br>weight of the<br>relevant Indian<br>weight (in gram) | Relevant average<br>weights from other<br>Indian sites (in<br>gram) |
|-----------------------|--------------------|--------------------|--------------------------------|------------------------------|---|---|
| PAG 13                | 2 <sup>d</sup>     | 44.88-45.55        | 44.22                          | 13 Purāgas<br>(Silver)       | 13 Purāgas (Silver)<br>= 3.4417 gms x 13<br>= 44.7421 gms           | E = 42.44   |
| PAG 16                | 11 <sup>d</sup>    | 49.69-57.17        | 53.32                          | 16 Purāgas<br>(Silver)       | 16 Purāgas (Silver)<br>= 3.4417 gms x 16<br>= 55.0672 gms           | H = 53.52<br>M = 54.44<br>N = 54.82<br>T = 53.45                    |
| ♀ SAG 2               | 2 <sup>d</sup>     | 60.93-69.61        | 65.27                          | 2 Savāmāgas<br>(Silver)      | 2 Savāmāgas (Silver)<br>= 34.417 gms x 2<br>= 68.834 gms.           | E = 64.4<br>H = 69.1<br>T = 69.67                                   |
| SAG 4                 | 8 <sup>d</sup>     | 126.88-136.65      | 131.45                         | 4 Savāmāgas<br>(Silver)      | 4 Savāmāgas (Silver)<br>= 34.417 gms x 4<br>= 137.668 gms.          | E = 136.65<br>H = 135.97<br>T = 126.3                               |

TABLE - II  
(contd.)

A survey of the weights from Chanhudro

| Group  | No<br>of specimens | Range<br>(in gms) | Average<br>weight<br>(in gram) | Relevant<br>Indian<br>weight | Theoretical<br>weight of the rele-<br>vant Indian Weight<br>(in gram) | Relevant average<br>weight from other<br>Indian sites (in<br>gram) |
|--------|--------------------|-------------------|--------------------------------|------------------------------|---|--|
| SAG 5  | 1 <sup>d</sup>     |                   | 185.04                         | 5 Satamānas<br>(Silver)      | 5 Satamānas (Silver)<br>= 34.417 gms x 5<br>= 172.085 gms             |  |
| SAG 8  | 2 <sup>d</sup>     | 260.52-273.59     | 267.06                         | 8 Satamānas<br>(Silver)      | 8 Satamānas (Silver)<br>= 34.417 gms x 8<br>= 275.336 gms             | H = 263.5<br>M = 273.61<br>N = 284.3                               |
| SAG 12 | 2 <sup>d</sup>     |                   | 392.76                         | 12 Satamānas<br>(Silver)     | 12 Satamānas (Silver)<br>= 34.417 gms x 12<br>= 413.024 gms           | T = 399.61   |
| SAG 16 | 1                  |                   | 544.77                         | 16 Satamānas<br>(Silver)     | 16 Satamānas (Silver)<br>= 16 x 34.417 gms<br>= 550.672 gms           | H = 546.7  |
| SAG 39 | 1 <sup>d</sup>     |                   | 1330.68                        | 39 Satamānas<br>(Silver)     | 39 Satamānas (Silver)<br>= 34.417 gms x 39<br>= 1342.263 gms.         |  |

TABLE - III

## A survey of the weights from Névasa

| Serial No.<br>of the group<br>as tabulated<br>by Sankalit | Group<br>of specimens | No<br>of specimens | Average<br>weight<br>(in gram) | Relevant<br>Indian<br>weight   | Theoretical weight<br>of the relevant<br>Indian weight (in<br>gram)   | Relevant average<br>weight from other<br>Indian sites (in<br>gram) |
|---|-----------------------|--------------------|--------------------------------|--|---|--|
| 17  | Ma 8                  | 3                  | 4.6                            | 8 Nāshas<br>(Gold)<br>$= \frac{1}{5}$ rākṣikas<br>$= 1.0755$ gm $\times$ 5<br>$= 5.3775$ gm<br>8 Nāshas (Gold)<br>$= 53775$ gm $\times$ 3<br>$= 4.302$ gms | 1 Nāsha (Gold)<br>$= 5$ rākṣikas<br>$= 1.0755$ gm $\times$ 5<br>$= 5.3775$ gm<br>1 Nāsha (Gold)<br>$= 53775$ gm $\times$ 3<br>$= 4.302$ gms | HM = 6.805<br>G = 6.78<br>T = 7.06                                 |
| 16  | PAG 2                 | 4                  | 6.78                           | 2 Purāṇas<br>(Silver)<br>$= 6.834$ gms.  | 2 Purāṇas (Silver)<br>$= 4.417$ gms $\times$ 2<br>$= 8.834$ gms.  | HM = 6.805<br>G = 6.78<br>T = 7.06                                 |
| 15  | PAG 3                 | 7                  | 9.24                           | 3 Purāṇas<br>(Silver)  | 3 Purāṇas (Silver)<br>$= 3.417$ gms $\times$ 3<br>$= 10.321$ gms  | G = 6.30   |
| 14  | PAG 4                 | 5                  | 15.4                           | 4 Purāṇas<br>(Silver)  | 4 Purāṇas (Silver)<br>$= 3.417$ gms $\times$ 4<br>$= 13.7668$ gms   | HM = 13.76<br>G = 13.82<br>T = 13.25                               |

TABLE - III (Contd.)

## A survey of the weights from Nevada

| Serial No.<br>of the group<br>as tabulated<br>by Sankalia | Group  | No. of specimens | Average weight<br>(in gram) | Relevant Indian weight  | Theoretical weight<br>of the relevant Indian weight (in gram) | Relevant average weight from other Indian sites (in gram) |
|---|--------|------------------|-----------------------------|-------------------------|---|---|
| 13  | PAG 7  | 2                | 22.16                       | 7 Purāṇas<br>(Silver)   | 7 Purāṇas (Silver)<br>= 3.417 gms x 7<br>= 24.0918 gms        | H = 37.21<br>M = 32.74<br>C = 35.96<br>T = 35.96          |
| 12  | SAG 1  | 6                | 34.89                       | 1 Šatamāṇa<br>(Silver)  | 1 Šatamāṇa (Silver)<br>= 10 Purāṇas (Silver)<br>= 34.417 gms  | H = 53.52<br>M = 54.44<br>C = 53.33<br>T = 53.45          |
| 43.   | PAG 16 | 3                | 54.82                       | 16 Purāṇas<br>(Silver)  | 16 Purāṇas (Silver)<br>= 3.417 gms x 16<br>= 55.0672 gms      | H = 64.4<br>M = 65.27<br>C = 69.67<br>T = 69.67           |
| 10  | SAG 2  | 4                | 69.1                        | 2 Šatamāṇas<br>(Silver) | 2 Šatamāṇas (Silver)<br>= 34.417 gms x 2<br>= 68.834 gms      |   |

TABLE - III (contd.)

A survey of the weight from Nevass

| Serial No.<br>of the group<br>as tabulated<br>by Sankalia | Group<br>of specimens | Average<br>weight<br>(in gram) | Relevant<br>Indian<br>weight | Theoretical weight<br>of the relevant<br>Indian weight (in<br>gram) | Relevant average<br>weight from other<br>Indian sites (in<br>gram) |
|---|-----------------------|--------------------------------|------------------------------|---|--|
| 9   | SAG 3                 | 5                              | 105.32                       | 3 Satamānas<br>(Silver)   | H = 96.476   |
| 8   | SAG 3                 | 2                              | 110.11                       | 3 Satamānas<br>(Silver)   | M = 96.476   |
| 7   | SAG 4                 | 2                              | 126.3                        | 4 Satamānas<br>(Silver)   | N = 135.97   |
| 6   | SAG 6                 | 3                              | 198.8                        | 6 Satamānas<br>(Silver)   | O = 126.3  |
| 5   | SAG 8                 | 2                              | 281.8                        | 8 Satamānas<br>(Silver)   | P = 263.5  |
|   |                       |                                |                              |   | M = 273.61   |
|   |                       |                                |                              |   | Q = 267.06   |

TABLE - III

(Contd.)

## A survey of the weights from Nevass

| Serial No.<br>of the group<br>as tabulated<br>by Sankalia | Group<br>of specimens  | No.<br>of specimens | Average<br>weight<br>(in gram) | Relevant<br>Indian<br>weight                           | Theoretical weight<br>of the relevant<br>Indian weight (in<br>gram)   | Relevant average<br>weight from other<br>Indian sites (in<br>gram) |
|---|------------------------|---------------------|--------------------------------|--|---|--|
| 4   | Sāg 9                  | 2                   | 314.3                          | 9 Śatamānas<br>(Silver)                                | 9 Śatamānas (Silver)<br>= 34.417 gms x 9<br>= 309.753 gms   |  |
| 3   | Sāg 10<br>or<br>Dhāu 1 | 2                   | 346.3                          | 10 Śatamāpas<br>(Silver)<br>or<br>1 Dharana<br>(Gold)  | 10 Śatamāpas (Silver)<br>= 34.417 gms x 10<br>= 344.17 gms or<br>1 Dharana (Gold)<br>= 10 Palas (Gold)<br>= 34.417 gms x 10<br>= 344.17 gms |  |
| 45*   |                        |                     |                                |  |   |  |
| 2   | Sāg 14                 | 2                   | 488.07                         | 14 Śatamāpas<br>(Silver)                               | 14 Śatamāpas (Silver)<br>= 34.417 gms x 14<br>= 481.838 gms.  |  |
| 1   | Sāg 20<br>or<br>Dhāu 2 | 1                   | 678.3                          | 20 Śatamānas<br>(Silver)<br>or<br>2 Dhārenas<br>(Gold) | 20 Śatamāpas (Silver)<br>= 34.417 gms x 20<br>= 688.32 gms<br>2 Dhārenas (Gold)<br>= 344.17 gms x 2<br>= 688.34 gms                         |  |

## TABLE - IX

A survey of the weights from Taxila

| Group<br>of specimens | Range<br>(In grain) | Average weight<br>(In grain and<br>in gm) | Relevant<br>Indian<br>weight         | Theoretical weight<br>of the relevant<br>Indian weight (In<br>gram) | Relevant average<br>weight from other<br>site (in gram) |
|-----------------------|---------------------|---|--------------------------------------|---|---|
| M&G 5                 | 1d                  | 19.96 grains<br>= 1.26 gms                | 6 Māshas<br>(Silver)<br>= 12 rākukas | 6 Māshas (Silver)<br>= 2.1510 gm x 6<br>= 1.25060 gms               |   |
| M&G 1                 | 2d                  | 51.5-52.38                                | 1 Purāna<br>(Silver)                 | 1 Purāna (Silver)<br>= 3.4417 gms                                   | Dm = 3.45<br>C = 3.82                                   |
| M&G 2                 | 1                   | 109 grains<br>= 7.06 grams                | 2 Purānas<br>(Silver)                | 2 Purānas (Silver)<br>= 3.4417 gms x 2<br>= 6.8824 gms              | Dm = 6.805<br>C = 6.78<br>W = 6.78                      |
| M&G 4                 | 5d                  | 165-210                                   | 4 Purānas<br>(Silver)                | 4 Purānas (Silver)<br>= 3.4417 gms x 4<br>= 13.768 gms              | Dm = 13.76<br>C = 13.82<br>W = 15.4                     |

TABLE - IV (contd.)

A survey of the weights from Taxila

| Group     | No<br>of specimens | Range<br>(in grains)        | Average<br>weight (in grains<br>and in gram)       | Relevant<br>Indian<br>weight                            | Theoretical weight<br>of the relevant<br>Indian weight (in<br>gram) | Relevant average<br>weight from other<br>site (in gram) |
|-----------|--------------------|-----------------------------|--|---|---|---|
| PAGE 5    | 409-430            | 418.2 grains<br>= 27.10 gms | 8 Purāpas<br>(Silver)                              | 8 Purāpas (Silver)<br>= 3.4417 gms x 8<br>= 27.5336 gms | M = 27.385<br>H = 27.057<br>C = 27.920                              |   |
| Sig 1     | 1                  | 555 grains<br>= 35.96 gms   | 10 Purāpas<br>(Silver)<br>= 1 Sātamaṇi<br>(Silver) | 1 Sātamaṇi (Silver)<br>= 34.417 gms                     | H = 37.21<br>C = 32.74<br>N = 34.89                                 |   |
| * PAGE 13 | 2                  | 669-671.5                   | 670.3 grains<br>= 43.44 gms                        | 13 Purāpas<br>(Silver)                                  | C = 44.22   |   |
| PAGE 16   | 54                 | 803-844                     | 824.8 grains<br>= 53.45 gms                        | 16 Purāpas<br>(Silver)                                  | H = 53.52<br>M = 54.44<br>C = 53.33<br>N = 54.82                    |   |

TABLE - IV (Contd.)

A survey of the weights from Taxila

| Group<br>of<br>specimens | No.<br>Range<br>(In grains) | Average<br>weight (in<br>grains and in<br>gram) | Relevant<br>Indian<br>weight<br>(in gram) | Theoretical weight<br>of the relevant<br>Indian weight (in<br>gram) | Relevant average<br>weight from other Indian<br>sites (in gram) |
|--------------------------|-----------------------------|---|---|---|---|
| SAG 2                    | 1                           | 1075 grains<br>= 69.67 gms                      | 20 Purāṇas<br>= 2 Satamāṇas<br>(Silver)   | 2 Satamāṇas (Silver)<br>= 34.417 gms x 2<br>= 68.834 gms            | R = 64.4<br>Q = 65.27<br>N = 69.1                               |
| SAG 3                    | 4d                          | 1678 grains<br>= 108.75 gms                     | 3 Satamāṇas<br>(Silver)                   | 3 Satamāṇas (Silver)<br>= 34.417 gms x 3<br>= 103.251 gms           |   |
| SAG 6                    | 7d                          | 2927-3362                                       | 3132.4 grains<br>= 203.01 gms             | 6 Satamāṇas<br>(Silver)   |   |
| SAG 12                   | 11d                         | 5430-6486                                       | 6166 grains<br>= 398.61 gms               | 12 Satamāṇas (Silver)<br>= 34.417 gms x 12<br>= 413.004 gms         | G = 392.76  |

TABLE - IV (Contd.)

A survey of the weights from Taxila

| Group  | No<br>of specimens | Range<br>(in grains) | Average<br>weight (in<br>grains and in<br>gm) | Relevant<br>Indian<br>weight | Theoretical weight<br>of the relevant<br>Indian weight (in<br>gram) | Relevant average<br>weight from other Indi-<br>an site (in gram) |
|--------|--------------------|----------------------|---|------------------------------|---|--|
| SAC 15 | 3d                 | 7896-8306            | 8060 grains<br>= 522.35 gms                   | 15 Satamānas<br>(Silver)     | 15 Satamāpas (Silver)<br>= 34.417 gms x 15<br>= 516.255 gms         |  |
| SAC 18 | 1d                 | 9304                 | 9304 grains<br>= 602.98 gms                   | 18 Satamānas<br>(Silver)     | 18 Satamāpas (Silver)<br>= 34.417 gms x 18<br>= 619.506             |  |

## TABLE - V

Comparison of a Mohenjodaro scale with ancient Indian scale

| No. of<br>Markings | Mohenjodaro Scale<br>Length from the<br>origin<br>(in inch.) | Relevant Indian Scale           | Remar k s   |
|--------------------|--|---------------------------------|---|
| 1                  | .264   | 2 Yavas                         | Considering 6 Yavas = 1 Ángula<br>and 24 Ángulas = 1 Hastha = 19" |
| 2                  | .528   | 4 Yavas                         | We have 2 Yavas = $\frac{19 \times 2}{24 \times 6}$ inch          |
| 3                  | .792   | 6 Yavas<br>= 1 Ángula           | = .264 inch. and 1 Ángula   |
| 4                  | 1.056  | 8 Yavas<br>= 1 Ángula 2 Yavas   | = .264 inch x 3 = .792 inch.                                      |
| 5                  | 1.320  | 10 Yavas<br>= 1 Ángula 4 Yavas  |   |
| 6                  | 1.584  | 12 Yavas<br>= 2 Ángulas         |   |
| 7                  | 1.848  | 14 Yavas<br>= 2 Ángulas 2 Yavas |   |
| 8                  | 2.112  | 16 Yavas<br>= 3 Ángulas 4 Yavas |   |
| 9                  | 2.375  | 3 Ángulas                       |   |

TABLE - VI

Comparison of a Harappan scale with ancient Indian scale

| Harappan scale<br>No. of<br>Markings | Length from the<br>origin (in Inch.) | Relevant Indian<br>scale | Exact length<br>of Indian<br>scale (in inch.) | Remarks  |
|--------------------------------------|--------------------------------------|--------------------------|---|--|
| 1                                    | .3780                                | 4 Yavas                  | .375  | Considering 8 Yavas = 1 Angula<br>and 24 Angula<br>= 1 Pasha |
| 2                                    | .7343                                | 8 Yavas<br>= 1 Angula    | .75   | = 18"  |
| 3                                    | 1.1063                               | 1 Angula<br>4 Yavas      | 1.125   | We have 4 Yavas<br>and 1                                     |
| 4                                    | 1.4705                               | 2 Angulas                | 1.500   | Angula<br>= .75 inch.  |

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REFERENCE

1. Mohenjodaro and the Indus civilization Vol.II. Systems of weights at Mohen-jodaro, p.590.
2. Mohenjodaro and the Indus civilization Vol.II. Systems of weights at Mohenjodaro, Hemmy, p.591.
3. Ibid, p.594
4. 1) Graves C.M. Manava-Dharma-Sastra  
Vol.I (for Sanskrit Text) Chapter Eighth. slokes  
- 134 - 137.

सर्वपाः षडयवोभ्युष्मित्रियवेद्येवत्कृष्णलम्।  
 पंचकृष्णलकीभाष्टते सुर्वर्णस्तुषीडश ॥  
 पलंस्तुषुपणीक्षम्भारः पलानधर्णहृश ।  
 देवकृष्पलेसमधृते विज्ञेयोर्प्रभाषकः ॥  
 नेषीडशस्याद्यरुणस्तुराणप्येवराजन्तः ।  
 काषीपणल्लु विज्ञेपत्त्वाभिकः काषीकः पजः ॥  
 धरणानि दश श्लोकः शनमानस्तुराजन्तः ।  
 पत्तुः श्लोकजित्तो निष्ठो विज्ञेयस्तुप्रभाजतः ॥

- ii) Asiatic Researches .. Vol.V  
 "On Indian Weights and Measures"
- iii) Numismata Orientalia - E Thomas  
 p.13, Table III
- iv) Antiquities of India - Barnett, p.206.
5. This is taken from the Gold Standard to explain the heavy weights of Mohenjodaro and Harappa. If the modification be avoided, those heavy weights can also be explained in terms of Satamnas.
6. From history to pre-history at Nevasa Sankalia H.D.  
 Dr. Ansari-Schrhardt, p.477.
7. Chanhudaro Excavations, Mackay, p.237.
8. Taxila Vo.II - Marshall, pp.508-512.
9. Excavations at Harappa M.S.Vats, p.365.
10. i) Asiatic Researches, Vol. V.  
 On Indian weights and Measures. Colebrooke, p.103.

ii) अङ्गुलः - "अङ्गुल-वर्तिमानम् । शूद्रय-  
- शैक्षणिकं वर्णनस्ति ।" cited from शैक्षण्यसंक्षेपः ।  
iii) अङ्गुल - "वर्णवाचोऽप्यत्रिलक्ष्यते अङ्गुलः ।"

iv) Yava - "A measure of length equal to 1/6 or 1/8 of an angula" The Student's Sanskrit Eng. Dictionary, V.B.Apte p.455.

11. Excepting the reference of Apte I have been unable to find out this relation in any standard literature. Yet I have considered this equivalence on account of the fact that one Indus Scale fits well with this description.

A Jain Ganita refers :- 4 Yavas = 1 angula;  
4 Angulas = 1 Mushti; 4 mushtis = 1 hasta.  
(Antiquities of India - Barnett p.218)

12. Further Excavation at Mohenjodaro - Mackay Vol.I, p.404;  
Excavations at Harappa - Vats MS, Vol.I, p.365.

13. Excavations at Harappa - Vats MS, Vol.I, pp.365-366.

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TENTATIVE DECIPHERMENT OF THE INSCRIPTIONS OF THE  
SEALS OF HARAPPA AND MOHENJOD.RO

(Abbreviations used in the decipherment tables. A, B, C and D:-

Mc = E. Mackay :- Further excavations at Mohenjodaro Vol.II.

M1 = Sir John Marshall - Mohenjodaro and the Indus civilization Vol.III.

The inscriptions marked with numbers alone indicate the museum numbers of the seals, as tabulated by Mr. M.S. Vats in the report 'Excavations at Harappa' Vol.II).

The language of the inscriptions of the seals of Harappa and Mohenjodaro is sanskritic. Generally Aryan personal names (and place names) are inscribed on the seals. Combinations of two names and more than two names are also found to a lesser extent.

Just like the ancient coins on which शशीराज महाराजस्य = Mahārājasya), शशीदेवसा (Bishnudevasa = Bishnudevasya) etc. are written these seals are also embodied with धर्मसासा धर्मस्या (Dharmasāsa = Dharmasya) धरासा धरास्या (Dharasa . - Dharasya) i.e. this is possessed by Dharmasāsa, this is possessed by Dhara etc.

The most important code for the decipherment of the Indus seals is the unnecessary repetition of the same alphabet twice, thrice or more times, most probably for decorative purpose :- e.g.

Б-132  
Б-1381  
Б-523  
Б-551

Mc 131 Mc 315 Mc 309 10137

18. 10  
F 44444; 11 50000; M 367  
F 11 Q " ⊗ ; F 18 ⊗ ; M 148  
M 367 F 11 Q " ⊗ ; M 578

## 1. compound alphabet from the seals of H and M

| No. | Compound<br>Constituent<br>Alphabet | Constituent | Constituent | Constituent |
|-----|-------------------------------------|-------------|-------------|-------------|
| 1   | 手                                   | 手           | 手           | 手           |
| 2   | 手                                   | 手           | 手           | -           |
| 3   | 手                                   | 手           | 手           | -           |
| 4   | 手                                   | 手           | ◎           | -           |
| 5   | 手                                   | 大           | 手           | -           |
| 6   | 大                                   | 大           | ○           | -           |
| 7   | 大                                   | 大           | ◎           | -           |
| 8   | ○                                   | ○           | ○           | -           |
| 9   | △                                   | △           | △           | -           |
| 10  | △△                                  | △           | △           | -           |
| 11  | △△                                  | △           | △           | -           |
| 12  | △△                                  | 大           | △           | -           |
| 13  | △△                                  | 大           | +           | -           |
| 14  | △△                                  | 大           | ○           | -           |
| 15  | △△                                  | △           | +           | -           |
| 16  | 手                                   | 手           | △           | -           |

2. Proposed Phonetic Values to the andes\* inscriptions

2. Proposed phonetic values to the order's inscriptions

| No | Indo-<br>Aryan<br>Alphabets | Variants  | Phonetic<br>Value | Remarks.  |
|----|-----------------------------|---|-------------------|---|
| 13 | ঘ                           | ঘ, (ঘ), ঘঁ, ঘঁ,<br>ঘঁ, ঘঁ, ঘঁ, ঘঁ, etc | YA(2)             | Sometimes, the<br>symbols have<br>been used for A<br>(ঘ). |
| 14 | ঞ                           | ঞ, ঞ, ঞ, ঞ,<br>ঞ, ঞ, ঞ  | RA(2)             |   |
| 15 | ঞ                           | ঞ, ঞ, ঞ   | RA(2)             |   |
| 16 | ঠ                           | ঠ, "ঠ, ঠ, ঠ,<br>ঠ, "ঠ, ঠ, ঠ, ঠ,<br>ঠ, ঠ, ঠ, ঠ, ঠ,<br>ঠ, ঠ, "ঠ, ঠ, ঠ,<br>ঠ, ঠ, "ঠ, ঠ, ঠ,<br>ঠ, ঠ, "ঠ, ঠ, ঠ,                            | SA(2)             |   |

### 3. A tentative resemblance with Brāhmī scripts

| Alphabet of<br>Harsabha and<br>Mathijodans | Developmental Stage        | Relevant<br>Brāhma<br>Alphabet |
|--|----------------------------|--------------------------------|
| ॥  | ३                          | ॥, ॥, ॥, ॥                     |
| ॥  | ४ (Imaginary stage)        | ॥ ॥ ॥                          |
| ◎  | ५                          | ५ ५ ५                          |
| ॥ ॥  | ६                          | ॥ ॥ ॥                          |
| ॥  | ७                          | ॥ ॥ ॥                          |
| ॥ ॥  | ८ → ९ (Imaginary<br>stage) | ॥ ॥ ॥ ॥                        |
| ॥  | ९ "                        | ॥ ॥ ॥                          |
| ॥  | १०                         | ॥ ॥ ॥                          |

|                 |         |               |               |          |              |
|-----------------|---------|---------------|---------------|----------|--------------|
| DHA-KMMA        | Mc CIII | DHARMMA       | Ā-NĀTTA-JA    | Mc       | आनन्दज       |
| धर्मा           | ५०७     | धर्मा         | आनन्दज        | १४७      | ĀNARTTA-JA   |
| धर्मा           | Mc      | धर्मा         | Ā-NĀTTA       | Mc       | आनन्द        |
| DHA-MMA         | १५४     | DHARMMA       | धर्मा         | १३९      | ĀNARTTA      |
| धर्मा           | Mc      | वर्मा         | DH-Ū-MA-JA    | १६८      | धुमाज        |
| VA-MMA          | ४२।     | VARMMA        | धुमाज         | Mc       | धुमाज        |
| धर्माविज        | १७८     | धर्माविज      | धुमाज         | २४४      | BHAYA        |
| DHA-RMMA-DVA-JA | १८१     | DHARMMA-DVAYA | BHA-YA        | Mc       | AGASYA       |
| धर्माविज        | २०।     | DHAKA         | ग्रो          | २८१      | अगस्य        |
| DHA-RA          | Mc      | धर्म          | A-GA-SA       | ३४८      | धर्मालाज     |
| धर्म            | २२      | DVA-JA        | DHA-RMMA-Ā-GA | ३४८      | DHARMMĀNA-GA |
| DHA-JA          | ३४।     | DHARMMAKĀJA   | धर्माकाज      | ४४४      | धनमय         |
| धर्माकाज        | १०२     | DHARMMASYA    | DHA-NA-HA-YA  | ५२।      | DHANAMAYA    |
| DHA-RMMA-SA     | ६५      | धर्मज         | DH-Ū-MA       | ३८०      | धूम          |
| धर्मज           | ८४      | DHARMMAJĀ     | A DHŪ-MA      | ४४४      | अधूम         |
| DHA-RMMA-JA     | ८५      | धर्मजा        | धर्मजा        | ५२।      | A DHUMA      |
| धर्मजा          | ८५      | DHARMMEĀNA    | DHA-NA-GA-JA  | ५२।      | DHANAGAJA    |
| DHA-RMMA-Ā-NA   | ८५      | अजगजा         | गण            | ५९०      | गणस्य        |
| अजगजा           | २६।     | RĀ-JĀ         | GA-NA-SĀ      | ६०४      | NARA         |
| A-JA            | २६।     | धन            | NA            | ५२       | अनार्यीज     |
| DHA-Ā-NA        | ६४४     | DHANA         | NA-A          | ६४४      | ANĀRYYA-JA   |
| धन              | ६४९     | धानज          | नाया          | ५२       | अभय          |
| DHA-YA-NA-JA    | ६४९     | DHYĀNA-JA     | A NA-YA-JA    | १५।      | ABHAYA       |
| धनया            | ७०२     | JAHADEVA      | ABHAYA        | १५।      | ABHAYA       |
| YAHĀ-DA-VĀ      | ७०२     | जाज           | DH-NA-GA-SA   | १५।      | DHANAKASYA   |
| जाज             | ५       | GAJĀ          | धनगासा        | २७२८     | DHARA-NA     |
| GA-JA           | २६      | GAĀNA         | DHA-RA-NA     | १२०१     | धात्रि       |
| गाना            | २६      | स्त्री        | धात्रि        | १०१८५(१) | DHĀRTTA      |
| GA-Ā-NA         | ६०      | भयस्य         | DHĀRTTA       | १०१८५(१) | दसनस्य       |
| BHA-YA-SA       | ६०      | BHAYASYA      | DHA-Ā-NA-SĀ   | १०१८५(१) | DAŚANASYA    |
| भयस्य           | ८१      | धरा           | YAHĀ          | १५       | VANA         |
| DHA-LA          | ८१      | DHARA         | DHA-Ā-NA-SĀ   | १२००२    | वन           |
| धरा             | १०।     | गाज           | वन            |          |              |
| गाज             | १०।     | GA-Ā-NA       |               |          |              |

|             |       |                      |                      |      |             |
|-------------|-------|----------------------|----------------------|------|-------------|
| गजसन        | ५१०१  | गजसेन                | ध-अ-त्रै             | MC   | DHARA-NARA  |
| GA-JA-SA-NA |       | GAJASENA             | DH-A- " "            | 697  | धर नर       |
| धन          | ४१४२  | धन                   | AN-DA-NA             | MC   | रणधन        |
| DVA-NA      |       | DVANA                | A-NA-DHA-NA          | 699  | RA-NADHANA  |
| नारदास्या   | ५१२१४ | NĀRADASYA            | अ-र-द-स्या           | MC   | अगदेन       |
| NA-R-DA-SA  |       | नारदस्या             | AGA-DA-NA            | 702  | AGADENA     |
| नारदस्या    | ५१४८३ | धर्षकासेन            | NĀDA-YA              | MC   | JANA        |
| धर्षकासेन   |       | DHARSAKASE           | AN-DA-YA             | 704  | जन          |
| गोधनका      | ५१३०  | गोधनका               | GA-DHA-NA- - GA      |      |             |
| गोधनका      | ३७    | JAG-NARASA           | ग-ध-न-क-ा            | MC   | GODHANAKA   |
| गोधनका      | ५१३१  | धुना                 | DHU-NA               |      |             |
| धुना        | १३१   | DHUNA                | DI-NA-YA- - NATTA    |      |             |
| धुना        | ५१३२  | भगवा                 | AN-DH-NA             | MC6  | अधन         |
| भगवा        | २४४   | BHAGA                | A-DHA-NA             |      |             |
| भगवा        | ५१३३  | धरास्या              | 31 त्रै              | MC   | NARA        |
| धरास्या     | २१८   | DHARASYA             | III त्रै             | 8    | नर          |
| धरास्या     | ५१३४  | अ-गणस्या             | A-NA                 |      |             |
| अ-गणस्या    | ५१३५  | BHAGASYA             | अ-ध-ध- -             | MC   | भयदा        |
| अ-गणस्या    | ५१३६  | ग-ग-य- -             | BHA-YA-DHA-          | 10   | BHAYADA     |
| ग-ग-य- -    | ५१३७  | अगज, अग्य            | ग-ग-य- ( - )         | MC   | धरास्य      |
| अगज, अग्य   | ५१३८  | AGAJA                | DHA-RA- - SA         | "    | DHARASYA    |
| अगज, अग्य   | ५१३९  | DĀSAYA               | ग-ग-र- - SA          | MC   | DĀSA        |
| अगज, अग्य   | ५१४०  | दासज                 | DHA-SA               | 12   | A DHA       |
| दासज        | ५१४१  | धरानस्याधज           | DHA-A                | MC   | अध ( : )    |
| धरानस्याधज  | ५१४२  | DHARADHANA           | ग- - ध               | MC   | गदा, गध     |
| धरानस्याधज  | ५१४३  | -SYA DVAYA           | GA- DHA              | 15   | GADA, GADHA |
| धरानस्याधज  | ५१४४  | वारसा ग-ना-ग-स- - या | VARSA GA-NA-GA-SA-YA |      |             |
| धरानस्याधज  | ५१४५  | वर्षकनश्च            | वर्षकनश्च            | MC18 |             |
| वर्षकनश्च   | ५१४६  | वर्षकनश्च            | वर्षकनश्च - य        |      | VARSAKA-    |
| वर्षकनश्च   | ५१४७  | वर्षकनश्च            | NAGASYA              |      | NAGASYA     |
| वर्षकनश्च   | ५१४८  | " शः ॥ ११ ११         | MC                   | शु   |             |
| वर्षकनश्च   | ५१४९  | वर्षकनश्च            | NA- GA               | 44   | GA-NA       |
| वर्षकनश्च   | ५१५०  | वर्षकनश्च            | वर्षकनश्च            | MC   | धरानस्याधज  |
| वर्षकनश्च   | ५१५१  | वर्षकनश्च            | वर्षकनश्च            | 22   | DHARA-TANA  |
| वर्षकनश्च   | ५१५२  | वर्षकनश्च            | DHA-A-TA-NAYA-DA     |      | -YAYA       |
| वर्षकनश्च   | ५१५३  | वर्षकनश्च            | DHVA-NA- - YA        | MC   | धवनज        |
| वर्षकनश्च   | ५१५४  | वर्षकनश्च            | वर्षकनश्च            | 23   | DHVANA)A    |
| वर्षकनश्च   | ५१५५  | वर्षकनश्च            | NA- A- SA            | MC   | नरस्य       |
| वर्षकनश्च   | ५१५६  | वर्षकनश्च            | वर्षकनश्च            | 25   | NARASYA     |
| वर्षकनश्च   | ५१५७  | वर्षकनश्च            | वर्षकनश्च            | MC29 | द्वासा      |
| वर्षकनश्च   | ५१५८  | वर्षकनश्च            | वर्षकनश्च            |      | DĀSASA      |





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|-----|-------------------------|--------------------------|------------------------|
| 161 | गण<br>GA-NA             | ३०४५८१८<br>ATA NA DHA-3A | रत्ना<br>RATNA         |
| 162 | धरणा<br>DHARANA         | ३०४५८१८<br>ATA NA DHA-3A | रत्ना<br>RATNA         |
| 163 | धरा-भय<br>DHARA-BHAYA   | ३०४५८१८<br>ATA NA DHA-3A | यना<br>YANA            |
| 164 | धरा-नमा<br>DHARA-NA-MMA | ३०४५८१८<br>ATA NA DHA-3A | यासा<br>YASA           |
| 165 | धरा-नमा<br>DHARA-NAMMA  | ३०४५८१८<br>ATA NA DHA-3A | नर्तका<br>NARTAKA      |
| 166 | धरा-नमा<br>DHARA-NAMMA  | ३०४५८१८<br>ATA NA DHA-3A | नर्तका<br>NARTAKA      |
| 167 | अरणा<br>ARANA           | ३०४५८१८<br>ATA NA DHA-3A | नर्तका<br>NARTAKA      |
| 168 | धरवा-<br>DHARAVA-       | ३०४५८१८<br>ATA NA DHA-3A | ग्रन्थारा<br>GRANTHARA |
| 169 | धरवा-<br>DHARAVA-       | ३०४५८१८<br>ATA NA DHA-3A | तानना<br>TANANA        |
| 170 | धरवा-<br>DHARAVA-       | ३०४५८१८<br>ATA NA DHA-3A | ग्रन्थना<br>GRANTHENA  |
| 171 | गणा<br>GANNA            | ३०४५८१८<br>ATA NA DHA-3A | धरणा<br>DHARANA        |
| 172 | गणा<br>GANNA            | ३०४५८१८<br>ATA NA DHA-3A | गणजा<br>GANAJA         |
| 173 | गणा<br>GANNA            | ३०४५८१८<br>ATA NA DHA-3A | धना<br>DHANA           |
| 174 | गणा<br>GANNA            | ३०४५८१८<br>ATA NA DHA-3A | धरणी<br>DHARANI        |
| 175 | गणा<br>GANNA            | ३०४५८१८<br>ATA NA DHA-3A | धरणी<br>DHARANI        |
| 176 | गणजा<br>GANAJA          | ३०४५८१८<br>ATA NA DHA-3A | गणजा<br>GANAJA         |
| 177 | ग्रन्थारा<br>GRANTHARA  | ३०४५८१८<br>ATA NA DHA-3A | तानमया<br>TANMAYA      |
| 178 | ग्रन्थारा<br>GRANTHARA  | ३०४५८१८<br>ATA NA DHA-3A | तानमया<br>TANMAYA      |
| 179 | ग्रन्थारा<br>GRANTHARA  | ३०४५८१८<br>ATA NA DHA-3A | ग्रन्थना<br>GRANTHENA  |
| 180 | ग्रन्थारा<br>GRANTHARA  | ३०४५८१८<br>ATA NA DHA-3A | ग्रन्थना<br>GRANTHENA  |
| 181 | धरा<br>DHARA            | ३०४५८१८<br>ATA NA DHA-3A | धरा<br>DHARA           |
| 182 | गणा<br>GANNA            | ३०४५८१८<br>ATA NA DHA-3A | गणा<br>GANNA           |
| 183 | गणमया<br>GANAMAYA       | ३०४५८१८<br>ATA NA DHA-3A | गणा<br>GANNA           |
| 184 | धराणा<br>DHARANA        | ३०४५८१८<br>ATA NA DHA-3A | धराणा<br>DHARANA       |

|                                    |          |                     |                               |           |           |
|------------------------------------|----------|---------------------|-------------------------------|-----------|-----------|
| धर्वा य                            | MC 220   | धवजज                | धर्वा य                       | MC 243    | धनज       |
| DHAR YA                            | DHVAJAJA | DHA - RA - YA       | DHA - NA - YA                 | DHANAJA   |           |
| धर्वा ना                           | 222      | धनज                 | धर्वा त्ता                    | 246       | दत्तेन    |
| DHA - NA                           | DHANAJA  | DHA - TTA - NA      | DATTENA                       |           |           |
| धर्वा रा -                         | 224      | धराना               | धर्वा न                       | 248       | ध्यान     |
| DHA - RA - NA - SA                 | DHARAÑA  | DHA - YA - NA       | DHYANA                        | DHYANA    |           |
| धर्वा या -                         | 219      | ध्यानज              | धर्वा गा                      | 250       | गण        |
| DHA - YA - NA - DHA - YA           | DHYANA   | DHYANA              | DHA - RA - DHA                | DHAKADA   |           |
| धर्वा ना -                         | 221      | धनेन                | धर्वा गा                      | 253       | गादा      |
| DHA - NA - NA                      | DHANENA  | DHA - SA - DHA      | DHA - DA                      | DADA      |           |
| का ना                              | 225      | रा ना               | का ना                         | 254       | गो        |
| KA - NA                            | RAÑA     | GA - DHA -          | GA                            | SUNASA    |           |
| धर्वा ना                           | 227      | धन                  | SA - NA - SA                  | 256       | सुनसा     |
| DHA - NA                           | DHANA    | DHA - SA - DHA - YA | DHANA - YA                    | DASA      |           |
| गा -                               | 229      | गण                  | गा धा                         | 257       | दासा      |
| GA - NA -                          | GAÑA     | GA DHA - LA         | DHANA - YA                    | DHAYA     |           |
| धर्वा ना मया न                     | 231      | धरानमयेन            | गोधनज                         | ADHARA    |           |
| DHA - RA - NA - MA - YA - NA       | DHARANA  | DHARANA - MAYENA    | GO DHANAJA                    | 258       | अधरा      |
| धर्वा ना                           | 233      | गोधनज               | धर्वा ज -                     | 260       | दासेन     |
| DHARANA                            | YA       | GO DHANAJA          | DHA - SA - NA -               | DASENA    |           |
| ना - NA DHA                        |          |                     | GA - DHA -                    |           |           |
| धर्वा ना                           | 234      | धनेन                | DHA - SA - DHA -              | 262       | धरस्या    |
| DHA - YA - NA                      | DHANENA  | DHANENA             | Y                             | DHARASYA  |           |
| धर्वा ना                           | 236      | ध्यान               | DHA - NA - GA - DHA - MA - SA | 263       | धनकधनसा   |
| DHA - YA - NA                      | DHYANA   | DHYANA              | DHA - NA - GA - DHA - MA - SA | DHANAKA   |           |
| धर्वा ना नाया ना धा                | 237      | दासनाया             | DHA - NA - GA - DHA - MA - SA | DHANASYA  |           |
| DHA - SA - NA - YA - NA - DHA - SA | DASANA   | DASANA              | DHA - NA - GA - DHA - MA - SA | DHANASYA  |           |
| धर्वा ना ना धा                     | 238      | धराना               | DHA - NA - GA - DHA - MA - SA | DHANASYA  |           |
| DHA - RA - NA - GA - DHA           | - GADA   | - GADA              | DHA - NA - GA - DHA - MA - SA | DHANASYA  |           |
| वा - ना                            | 239      | वन                  | DHA - YA - DA                 | 264       | गादा-गादा |
| VA - NA                            | VANA     | DHA - YA - DA       | GA DHA - SA                   | GADA-GADA |           |
| स्वर्ग                             | 240      | स्वर्गी             | GA DHA - SA                   |           |           |
| SSA GA                             | SVARGA   | DHA - YA - DA       |                               |           |           |
| नागसारा                            | 241      | नागसारा             | NA - TTA                      | 267       | नराज      |
| NA - GA - SA - LA                  | NAGASARA | NA - TTA            | NA - TTA                      | NARAJA    |           |
|                                    |          |                     |                               | 268       | धवजज      |
|                                    |          |                     |                               | DHVAJAJA  |           |
|                                    |          |                     |                               | 270       | नर्त्ता   |
|                                    |          |                     |                               | NARTTA    |           |

|   |                                  |                                 |                              |
|---|----------------------------------|---------------------------------|------------------------------|
| द्वा-सा-ना-ग-स-ज<br>DHA-SA NA - - NAGA-SA | दसन-नगेशाज<br>DASENNA - NAGESAJA | स्त्र-ग-अ-ध-ग<br>SSA-GAA-DHA-NA | स्वर्ग-ग-द<br>MC SVARGA-GADA |
| 271                                       | 272                              | 273                             | 292                          |
| ध-स-व-र-म-म-न-ा-<br>DHA-KMMA-NA           | धर्म-म-म-व-य-ा-<br>DHARMMAMAVAYA | ध-स-स-<br>DHA-SA-SA             | व-ज-<br>VAJRA                |
| अ-य- ध-ज-स-<br>BHA-YA    DHA-NA-NA-YA     | अ-य-ध-न-म-य-<br>DHANAMAYA        | त-ध-न-<br>TA-NA                 | दा-स-स-य-<br>DASASYA         |
| अ-ग- ॥<br>AGA                             | अ-ग- ॥<br>AGA                    | य-न-ध-न-<br>YANA-DHA-NA         | ज-न-ध-न-<br>JANADHA-NA       |
| ग-ध-ज-ग-<br>GA-DHA-NA-NA                  | गो-ध-न-ेन-<br>GODHANENA          | अ-ग-ग-<br>AGA-NA-SA             | अ-ग-ण-स-य-<br>AGANASYA       |
| ग-ध-क-स-<br>GA-DHA-GA-SA                  | ग-ध-क-स-<br>GANDHAKA-SYA         | त-अ-ध-<br>TA-DHA                | न-र-द-<br>NARADA             |
| ध-य- ध-न-ा-<br>DHA-YA-DHA-NA-SA           | ध-य- ध-न-ा-<br>BHAYADHA-NASYA    | न-<br>NA-A-<br>NA               | दृ-श-ध-न-स-<br>DASADRA-NAKA  |
| ध-ल-न-म-य-<br>DHA-LA-NA-MA-YA             | ध-र-ण-म-य-<br>DHARANA-MAYAS      | ध-स-ध-न-<br>DSHA-NA             | अ-ध-व-ग-स-य-<br>ADHYAGA-SYA  |
| ध-स-ग-<br>DHA-SA-GA-                      | द-श-ग-व-<br>DA-SAGA              | ध-स-ध-न-<br>DSHA-NA             | ध-न-ज-<br>DHANAJA            |
| ध-स- द-न-<br>DHA-SA-<br>-DHA              | द-श-ध-न-<br>DASHANA              | अ-भ-य- स-<br>ABHYASA            | ग-ण-<br>GANNA                |
| ध-य- ल-न-ा-<br>DHA-YA-LA-SA               | ध-ज-ल-स-य-<br>DHVAYALA-SYA       | ग- न-<br>GA-NA                  | ग-ण-<br>GANNA                |
| अ-ग- ॥<br>AGA-SA                          | अ-ग-स-<br>AGASYA                 | ध-व-न-ध-न-<br>DHVANA-DHA-YA     | ध-व-न-ध-न-<br>DHVANA-DHA-YA  |
| ध-र-ण-न-ा-<br>DHARA-NA-SA                 | ध-र-ण-न-ा-<br>DHARANA            | ध-व-न-ध-न-<br>DHVANA-DHA-YA     | ध-व-न-ध-न-<br>DHVANA-DHA-YA  |
| ध-ल-न-<br>DHA-LA-NA                       | ध-र-ण-<br>DHARANA                | 301                             | ध-व-न-ध-न-<br>DHVANA-DHA-YA  |

|                |     |                        |
|----------------|-----|------------------------|
| मा दा आ        |     | गोधुम-स्या             |
| ० ३१ ४१ ५१ ६१  | ८   | ३३८ GOBHUMA<br>NASYAA  |
| MAYA DHA-NA-SA |     |                        |
| ० ४१ ४१ ५१ ६१  | ८   |                        |
| ८ - DHA-YA-YA  | 307 | ३३९ DHVAJAA<br>YASA    |
| ८ - DHA-SA     | 308 | ३४० नय जन<br>NAYA-JANA |
| ८ - DHA-NA-SA  | 309 | ३४१ DHARAJA            |
| ८ - DHA-NA-SA  | 310 | ३४२ ADHVAGA            |
| ८ - DHA-NA-SA  | 311 | ३४३ DHVANADA<br>-SYA   |
| ८ - DHA-NA-SA  | 312 | ३४४ SVARGEI            |
| ८ - DHA-NA-SA  | 313 | ३४५ ADANA              |
| ८ - DHA-NA-SA  | 314 | ३४६ ADANA              |
| ८ - DHA-NA-SA  | 315 | ३४७ AGAMAA             |
| ८ - DHA-NA-SA  | 316 | ३४८ SVARGADA           |
| ८ - DHA-NA-SA  | 317 | ३४९ AGAMAA             |
| ८ - DHA-NA-SA  | 318 | ३५० GODASAKA           |
| ८ - DHA-NA-SA  | 319 | ३५१ NARASYA            |
| ८ - DHA-NA-SA  | 320 | ३५२ DHANADA            |
| ८ - DHA-NA-SA  | 321 | ३५३ DHANADA            |
| ८ - DHA-NA-SA  | 322 | ३५४ DHANADA            |
| ८ - DHA-NA-SA  | 323 | ३५५ DHANADA            |
| ८ - DHA-NA-SA  | 324 | ३५६ DHANADA            |
| ८ - DHA-NA-SA  | 325 | ३५७ DHANADA            |
| ८ - DHA-NA-SA  | 326 | ३५८ DHANADA            |
| ८ - DHA-NA-SA  | 327 | ३५९ DHANADA            |
| ८ - DHA-NA-SA  | 328 | ३६० DHANADA            |
| ८ - DHA-NA-SA  | 329 | ३६१ DHANADA            |
| ८ - DHA-NA-SA  | 330 | ३६२ DHANADA            |
| ८ - DHA-NA-SA  | 331 | ३६३ DHAKATRA<br>-SYA   |
| ८ - DHA-NA-SA  | 332 | ३६४ DHANA<br>DHANA     |
| ८ - DHA-NA-SA  | 333 | ३६५ DHANA<br>DHANA     |
| ८ - DHA-NA-SA  | 334 | ३६६ DHANA<br>DHANA     |
| ८ - DHA-NA-SA  | 335 | ३६७ DHANA<br>DHANA     |
| ८ - DHA-NA-SA  | 336 | ३६८ DHANA<br>DHANA     |
| ८ - DHA-NA-SA  | 337 | ३६९ DHANA<br>DHANA     |
| ८ - DHA-NA-SA  | 338 | ३७० DHANA<br>DHANA     |



|                                |             |                   |            |                      |             |                         |               |                    |        |                    |            |                    |               |                    |             |                     |                     |                         |           |                         |                 |                         |           |                         |               |                         |               |                         |                |                        |               |                       |               |                       |             |                     |           |                     |          |                     |           |                     |          |                     |           |                     |          |                     |           |                     |           |                     |          |                     |           |                     |          |                     |           |                     |             |                     |                |                        |            |                    |            |                    |          |                  |           |                   |           |                   |             |                     |             |                     |             |                     |                       |                               |              |                      |                   |                           |             |                     |             |                     |              |                      |            |                       |          |                  |             |                     |          |                  |           |                   |
|--------------------------------|-------------|-------------------|------------|----------------------|-------------|-------------------------|---------------|--------------------|--------|--------------------|------------|--------------------|---------------|--------------------|-------------|---------------------|---------------------|-------------------------|-----------|-------------------------|-----------------|-------------------------|-----------|-------------------------|---------------|-------------------------|---------------|-------------------------|----------------|------------------------|---------------|-----------------------|---------------|-----------------------|-------------|---------------------|-----------|---------------------|----------|---------------------|-----------|---------------------|----------|---------------------|-----------|---------------------|----------|---------------------|-----------|---------------------|-----------|---------------------|----------|---------------------|-----------|---------------------|----------|---------------------|-----------|---------------------|-------------|---------------------|----------------|------------------------|------------|--------------------|------------|--------------------|----------|------------------|-----------|-------------------|-----------|-------------------|-------------|---------------------|-------------|---------------------|-------------|---------------------|-----------------------|-------------------------------|--------------|----------------------|-------------------|---------------------------|-------------|---------------------|-------------|---------------------|--------------|----------------------|------------|-----------------------|----------|------------------|-------------|---------------------|----------|------------------|-----------|-------------------|
| ME धर्मज<br>DHA-YA-SA-SA-SA-GA | 401 DASA NA | ME धृसन<br>DHYANA | 410 DHYANA | ME धृत्यज<br>DHADAJA | 411 DHADAJA | ME धृगणस्य<br>DHARMASHA | 412 DHARMASHA | ME धृमाण<br>DHARMA | 413 SU | ME धृमाण<br>DHARMA | 414 DHARMA | ME धृमाण<br>DHARMA | 415 NAYAKASYA | ME धृमाण<br>DHARMA | 416 DHANAGA | ME धृमाण<br>DHANAGA | 417 GODHANABADA-SYA | ME धृमाण<br>DHANADA-SYA | 418 DHANA | ME धृमाण<br>DHANADA-SYA | 419 DHANADA-SYA | ME धृमाण<br>DHANADA-SYA | 420 DHANA | ME धृमाण<br>DHANADA-SYA | 421 YASA JANA | ME धृमाण<br>DHANADA-SYA | 422 YASA JANA | ME धृमाण<br>DHANADA-SYA | 423 DHARADHAMA | ME धृमाण<br>DHARADHAMA | 424 DHYANASYA | ME धृमाण<br>DHYANASYA | 425 VANADASYA | ME धृमाण<br>DHYANASYA | 426 DURJANA | ME धृमाण<br>DURJANA | 427 SENNA | ME धृमाण<br>DURJANA | 428 NARA | ME धृमाण<br>DURJANA | 429 BHAYA | ME धृमाण<br>DURJANA | 430 GAGA | ME धृमाण<br>DURJANA | 431 SENNA | ME धृमाण<br>DURJANA | 432 NARA | ME धृमाण<br>DURJANA | 433 BHAYA | ME धृमाण<br>DURJANA | 434 SENNA | ME धृमाण<br>DURJANA | 435 GAGA | ME धृमाण<br>DURJANA | 436 SENNA | ME धृमाण<br>DURJANA | 437 GAGA | ME धृमाण<br>DURJANA | 438 SENNA | ME धृमाण<br>DURJANA | 439 GRANAYA | ME धृमाण<br>GRANAYA | 440 GANADA-SYA | ME धृमाण<br>GANADA-SYA | 441 JANENA | ME धृमाण<br>JANENA | 442 MARTTA | ME धृमाण<br>MARTTA | 443 DEVA | ME धृमाण<br>DEVA | 444 AGAJA | ME धृमाण<br>AGAJA | 445 AGAJA | ME धृमाण<br>AGAJA | 446 JANASYA | ME धृमाण<br>JANASYA | 447 DHUMANA | ME धृमाण<br>DHUMANA | 448 DHUMANA | ME धृमाण<br>DHUMANA | 449 DHARA-DHANAKA-SYA | ME धृमाण<br>DHARA-DHANAKA-SYA | 450 DHARASYA | ME धृमाण<br>DHARASYA | 451 DHANAJA-JANKA | ME धृमाण<br>DHANAJA-JANKA | 452 DHANAJA | ME धृमाण<br>DHANAJA | 453 DHUMAKA | ME धृमाण<br>DHUMAKA | 454 ADHASENA | ME धृमाण<br>ADHASENA | 455 SVARGA | ME स्वर्गधन<br>SVARGA | 456 DANA | ME धृमाण<br>DANA | 457 JANASYA | ME धृमाण<br>JANASYA | 458 NAYA | ME धृमाण<br>NAYA | 459 DHANA | ME धृमाण<br>DHANA |
|--------------------------------|-------------|-------------------|------------|----------------------|-------------|-------------------------|---------------|--------------------|--------|--------------------|------------|--------------------|---------------|--------------------|-------------|---------------------|---------------------|-------------------------|-----------|-------------------------|-----------------|-------------------------|-----------|-------------------------|---------------|-------------------------|---------------|-------------------------|----------------|------------------------|---------------|-----------------------|---------------|-----------------------|-------------|---------------------|-----------|---------------------|----------|---------------------|-----------|---------------------|----------|---------------------|-----------|---------------------|----------|---------------------|-----------|---------------------|-----------|---------------------|----------|---------------------|-----------|---------------------|----------|---------------------|-----------|---------------------|-------------|---------------------|----------------|------------------------|------------|--------------------|------------|--------------------|----------|------------------|-----------|-------------------|-----------|-------------------|-------------|---------------------|-------------|---------------------|-------------|---------------------|-----------------------|-------------------------------|--------------|----------------------|-------------------|---------------------------|-------------|---------------------|-------------|---------------------|--------------|----------------------|------------|-----------------------|----------|------------------|-------------|---------------------|----------|------------------|-----------|-------------------|

|                                 |                              |                             |                                |
|---------------------------------|------------------------------|-----------------------------|--------------------------------|
| ग - ध<br>४३३८७८५६२८             | ME गदस्य<br>470 GA-DASYA     | ग - ध -<br>४३४८५७५६२८       | ME गदा<br>501 GADA             |
| ध - स<br>४३४८५७५६२८             | ME धवाजस्य<br>471 DHVAJASYA  | ध - स - न<br>४३४८५७५६२८     | ME दसन<br>502 DASANA           |
| ध - आ अ - स<br>४३४८५७५६२८       | ME धुमस्य<br>476 DHUMASYA    | ग - न - स<br>४३४८५७५६२८     | ME गणस्य<br>504 GANASYA        |
| ध - अ - स<br>४३४८५७५६२८         | ME दासस्य<br>478 DASASYA     | ध - स - न<br>४३४८५७५६२८     | ME दसन<br>501 DASANA           |
| ध - अ - न<br>४३४८५७५६२८         | ME धनाय<br>480 DHANAYA       | ध - य - य<br>४३४८५७५६२८     | ME धवाय<br>505 DHVAYA          |
| ध - अ - स<br>४३४८५७५६२८         | ME धुलोत्त<br>481 DHULOTTA   | ग - ध - न - स<br>४३४८५७५६२८ | ME गोधनस्य<br>507 GODHANA-SYA  |
| ग - अ - स<br>४३४८५७५६२८         | ME श्रामस्य<br>485 SHRAMASYA | ग - ध - न - व<br>४३४८५७५६२८ | ME धनाद<br>517 DHANADA         |
| ध - र - य - य<br>४३४८५७५६२८     | ME धरत्रय<br>486 DHARATTRAYA | ग - न - द<br>४३४८५७५६२८     | ME नदध्याय<br>522 NADADHYA-SYA |
| ध - न - क<br>४३४८५७५६२८         | ME धनक<br>487 DHANAKA        | ग - ध - न<br>४३४८५७५६२८     | ME गोधन<br>529 GODHANA         |
| ध - अ - ध - य<br>४३४८५७५६२८     | ME धरा<br>492 DHARA          | ग - न - स<br>४३४८५७५६२८     | ME ग्रामस्य<br>523 GRAMASYA    |
| ध - य<br>४३४८५७५६२८             | ME धवाय<br>493 DHVAYA        | ग - न - स<br>४३४८५७५६२८     | ME नरा<br>525 NARA             |
| ध - न - ग - न - स<br>४३४८५७५६२८ | ME सुनगस्य<br>495 SUNAGNA    | ग - न - स<br>४३४८५७५६२८     | ME धनना<br>526 DHANNA          |
| ध - न - ग - न - स<br>४३४८५७५६२८ | ME ध्यान<br>496 DHYANA       | ग - न - स<br>४३४८५७५६२८     | ME जनसेन<br>528 JANASENA       |
| ध - य - न - य<br>४३४८५७५६२८     | ME धानेन<br>498 DHANENA      | ग - न - स<br>४३४८५७५६२८     | ME धनमस्य<br>530 DANMASYA      |
| ध - न - य<br>४३४८५७५६२८         | ME धरा<br>499 DHARA          | ग - न - य<br>४३४८५७५६२८     | ME धनेन<br>531 DHANENA         |
| ध - न - य<br>४३४८५७५६२८         |                              | ग - न - य<br>४३४८५७५६२८     | ME गणाय<br>532 GANAYA          |



|                                       |                               |                        |                                     |
|---------------------------------------|-------------------------------|------------------------|-------------------------------------|
| ME धान्य -<br>584 DHYANA<br>SA        | ME धान्यस्या<br>- SYA         | ME धारा -<br>DHA-RA-NA | ME गदेन<br>608 GADENA               |
| ME नरा<br>585 NARA                    | ME अध्या<br>ADHYA             | ME धा -<br>DHA         | ME ग्रन्थ 10<br>613 GRANDHAR        |
| ME नाशस्या<br>587 NASHSYA             | ME नाशस्या<br>NASHSYA         | ME धा -<br>DHA         | ME गाना-धनस्या<br>614 GANA-DHANASYA |
| ME धास<br>616 DASA                    | ME धासना<br>DASANA-SYA        | ME धासना<br>DASANA-SYA | ME धनेन<br>617 DHANENA              |
| ME धानला<br>588 SANMAGENADHA-SA NA SA | ME धानला सेना<br>DHANALA SENA | ME धारा -<br>DHA-RA-NA | ME धासना<br>618 DASANA-SYA          |
| ME धानला<br>589 GADENA                | ME धानला सेना<br>DHANALA SENA | ME धारा -<br>DHA-RA-NA | ME अध्या<br>620 A DHA               |
| ME धानयज<br>593 DHYANAJAGA-NA-        | ME धानयज<br>DHYANAJAGA-NA-    | ME धारा -<br>DHA-RA-NA | ME धारा धन<br>621 DHARA-DHANA       |
| ME धानया<br>594 DHANAYA               | ME धानया<br>DHANAYA           | ME धारा -<br>DHA-RA-NA | ME धान<br>622 GANA                  |
| ME धानाका<br>600 DHANAKA              | ME धाराम<br>DHARAM            | ME धारा -<br>DHA-RA-NA | ME धानयस्या<br>623 DHVASYA          |
| ME धाराम<br>605 DHARAM                | ME वनगढा<br>VANAGADA          | ME धारा -<br>DHA-RA-NA | ME धाना<br>625 GANA                 |
| ME धारा -<br>609 VANAGADA             | ME धारा<br>DHARA              | ME धारा -<br>DHA-RA-NA | ME नरास्या<br>626 NARASYA           |
| ME धारा<br>616 DHARA                  | ME गदा<br>GADA                | ME धारा -<br>DHA-RA-NA | ME धुम<br>627 DHUMA                 |
| ME गदा<br>607 GADA                    | ME गदा<br>GADA                | ME धारा -<br>DHA-RA-NA | ME गदास्या<br>631 GADASYA           |
| ME गदा<br>633 ADHVARA-SYA             | ME गदा<br>GADA                | ME धारा -<br>DHA-RA-NA | ME अध्वरास्या<br>ADHVARASYA         |

MC अधनका  
635 ADHANAKA  
- SYA

अंध न ग स  
८८४ यु ग  
A-DHA-NA-GA-SA  
A ROMA-GA

MC अधनका  
660 ADHANAKA  
- SYA

MC नरस्या  
636 NARASYA

अंध ग  
ध सु स  
DHA-SA-SA

MC धास्या  
663 DASASYA

MC नरस्या  
(42) NARASYA DHA-A-DHA-YA

अंध ग  
ध सु स  
DHA-SA-SA

MC धरका  
664 DHAKRA DHVA  
- YA

MC दसना  
643 DASANA DHA-A-SA  
GADA

अंध ग  
ध सु स  
DHA-SA-SA

MC दरस्या  
(65) DHARASYA

MC अनरस्या  
644 ANARASYA DHA-YA-NA-GA

अंध ग  
ध सु स  
DHA-SA-SA

MC ध्वजानग  
666 DHVAJA -  
NAGA

MC अश गज  
651 YASA GAJA DHA-YA

अंध ग  
ध सु स  
DHA-SA-SA

MC धवज  
671 DHVAJA

MC धया  
652 BHAYA DHA-RA

अंध ग  
ध सु स  
DHA-SA-SA

MC धर  
672 DHARA

MC धरस्या  
653 DHARASYA DHA-YA-NA  
DHARASYA DHA-YA-NA

अंध ग  
ध सु स  
DHA-SA-SA

MC ध्यान  
676 DHYANA

MC धरणेन  
655 BHARA DHANENA

अंध ग  
ध सु स  
DHA-SA-SA

MC वर्षा  
(78) VASRA

MC धरण  
656 DHARAN

अंध ग  
ध सु स  
DHA-SA-SA

MC धरस्या  
679 DHARASYA

MC नरगढेन  
(57) NARA GARDENA

अंध ग  
ध सु स  
DHA-SA-SA

MC धरणधज  
685 DHYANA DHVAJA

MC धरा  
659 DHARA

अंध ग  
ध सु स  
DHA-SA-SA

PLATE - C

MC नरा  
658 NARA

अंध ग  
ध सु स  
DHA-SA-SA

DHARASYA  
धरस्या



|              |          |           |        |          |             |           |        |       |       |
|--------------|----------|-----------|--------|----------|-------------|-----------|--------|-------|-------|
| A-DHA-GA     |          | अधग       | E-F-II | 10614(A) | ADHAGA      | अधग       | E-F-II | 1419  | अधसेन |
| अ-ध ग        | 10614(A) | अधग       | E-F-II | 11998    | ADHAGA      | अधग       | E-F-II | 1419  | अधसेन |
| अ-ध ग        | 10059    | अधस्या    | E-F-II | 10059    | ADHASYA     | अधस्या    | E-F-II | 1419  | अधसेन |
| A-DHA-SSA    |          | अधस्सा    | E-F-II | 10614(A) | ADHANAKA    | अधनका     | E-F-II | 1419  | अधसेन |
| अ-ध स्सा     | 10614(A) | अधनका     | E-F-II | 10614(A) | ADHANAKA    | अधनका     | E-F-II | 1419  | अधसेन |
| A-DHA-NANA   |          | अधनना     | E-F-II | 10928(A) | ADHANA      | अधनना     | E-F-II | 1419  | अधसेन |
| अ-ध नना      | 10928(A) | अधनना     | E-F-II | 10928(A) | ADHANA      | अधनना     | E-F-II | 1419  | अधसेन |
| A-DHA-NENA   |          | अधनेना    | E-F-II | 1235     | ADHARSA     | अधर्षा    | E-F-II | 11064 | अधर्ज |
| अ-ध नेना     | 1235     | अधर्षा    | E-F-II | 11266(C) | GODHANA     | गोधना     | E-F-II | 11064 | अधर्ज |
| A-DHA-RSA    |          | अधर्षा    | E-F-II | 11266(C) | GODHANA     | गोधना     | E-F-II | 11064 | अधर्ज |
| अ-ध र्षा     | 11266(C) | गोधना     | E-F-II | 11715    | ADHARA      | अधरा      | E-F-II | 11064 | अधर्ज |
| A-DHA-LA     |          | अधरा      | E-F-II | 11715    | ADHARA      | अधरा      | E-F-II | 11064 | अधर्ज |
| अ-ध रा       | 10185(C) | अधरा      | E-F-II | 11715    | ADHARA      | अधरा      | E-F-II | 11064 | अधर्ज |
| A-DHA-LA     |          | अधरा      | E-F-II | 12357    | ADASA       | अदासा     | E-F-II | 11064 | अधर्ज |
| अ-ध रा       | 12357    | अदासा     | E-F-II | 12185    | NADASYA     | नदास्या   | E-F-II | 11064 | अधर्ज |
| A-DHA-SA     |          | अदासा     | E-F-II | 12185    | NADASYA     | नदास्या   | E-F-II | 11064 | अधर्ज |
| अ-ध सा       | 12185    | नदास्या   | E-F-II | 11291    | ADHA        | अध(०)     | E-F-II | 11064 | अधर्ज |
| A-DHA        | "        | अध(०)     | E-F-II | 11291    | ADHA        | अध        | E-F-II | 11064 | अधर्ज |
| A-DHA-NA-SA  |          | अधनसा     | E-F-II | 2868     | ADHANA-SYA  | अधनस्या   | E-F-II | 11064 | अधर्ज |
| अ-ध नसा      | 2868     | अधनस्या   | E-F-II | 11291    | ADHANA-SYA  | अधनस्या   | E-F-II | 11064 | अधर्ज |
| A-DHA-TTA    |          | अधनस्या   | E-F-II | 11291    | ADHANA-SYA  | अधनस्या   | E-F-II | 11064 | अधर्ज |
| अ-ध नस्या    | 11291    | अधनस्या   | E-F-II | 4080     | ADHARSALA   | अधर्षला   | E-F-II | 11064 | अधर्ज |
| A-DHA-RSA-LA |          | अधर्षला   | E-F-II | 4080     | ADHARSALA   | अधर्षला   | E-F-II | 11064 | अधर्ज |
| अ-ध र्षला    | 4080     | अधर्षला   | E-F-II | 4631     | ADHARSA-SYA | अधर्षस्या | E-F-II | 11064 | अधर्ज |
| A-DHARSA-SA  |          | अधर्षस्या | E-F-II | 4631     | ADHARSA-SYA | अधर्षस्या | E-F-II | 11064 | अधर्ज |
| अ-ध र्षस्या  | 4631     | अधर्षस्या | E-F-II | 5634     | GODHANA     | गोधना     | E-F-II | 11064 | अधर्ज |
| A-DHA-NA     |          | गोधना     | E-F-II | 5634     | GODHANA     | गोधना     | E-F-II | 11064 | अधर्ज |

|   |        |                     |               |       |             |
|---|--------|---------------------|---------------|-------|-------------|
| अधनगणन अधनगणीन                                | ८५३    | 11853               | धन<br>DHANA   |       |             |
| ईर्ष्याद्धरि ① ADHANAGANENA S388 DHA- NA      |        |                     |               |       |             |
| A-DHA-NA-GA-NA-NA                             |        |                     |               |       |             |
| अध द्व ग - न अध ॥ धनेन ८५३ ॥ ४४               | ४४     | ३-३०                | धरा<br>DHARA  |       |             |
| ईर्ष्याद्धरि ३३३३ ADHA ॥ DHANENA DHA-A        |        |                     |               |       |             |
| A-DHA - DHA-NA - NA 10997                     |        |                     |               |       |             |
| अध द्व ग - न अधसेनन ८५३ ॥ ११४४                | ४४     | १-४४                | धन<br>DHANA   |       |             |
| ईर्ष्याद्धरि ३३३३ ADHASENA DHA-NA             |        |                     |               |       |             |
| A-DHA-SA-NA - NA ADHASENA 12538 -> A          |        |                     |               |       |             |
| मध्य द्व ग - न अध धनसेन ८५३ ॥ ११४४            | ४४     | १-४४                | दास<br>DASA   |       |             |
| BHAYA-DHA- NA MA YAYA DHANAHAYAJA ८५३ ॥ ११-२१ |        |                     |               |       |             |
| DHAYA-DHA- NA MA YAYA DHANAHAYAJA ८५३ ॥ ११-२१ |        | A-703               | दत्त<br>DATTA |       |             |
| अध द्व ८१                                     | G 104  | धवा<br>DHVAJA       | DHA-TTA       |       |             |
| DHA-YA  |        |                     | DHA-GA        |       |             |
| अध द्व ८१                                     | B 1341 | धर्म<br>DHARMMA     | ८५३           | १२१३२ | दास<br>DASA |
| DHA-MMA                                       |        |                     |               |       |             |
| अध अ ८१ ॥ १११                                 | 10361  | धरा<br>DHARA        | DHA-SA        |       |             |
| DHA-A   |        |                     |               |       |             |
| अध द्व ८१ ॥ १११                               | 10818  | धवा<br>DHVAJA-      | DHA-RSA-GA    |       |             |
| DHA-YA  |        |                     |               |       |             |
| अध द्व ८१ ॥ १११                               | 11757  | दास<br>DASA         | अध अ ८१ ॥ १११ |       |             |
| DHA-SA  |        |                     | DHA-A-SA      |       |             |
| अध द्व ८१ ॥ १११                               | 2531   | धवा<br>DHVAJA       | ८५३           | १२१३२ | दास<br>DASA |
| DHA-YA  |        |                     | DHA-RA-GA     |       |             |
| अध द्व ८१ ॥ १११                               | 3409   | धरा<br>DHARA        | धरा य न       |       |             |
| DHA-LA  |        |                     | ८५३ ०५ ६७     |       |             |
| अध द्व ८१ ॥ १११                               | 4276   | धवा<br>DHVAJA       | DHA-LA-YA-NA  |       |             |
| DHA-YA  |        |                     |               |       |             |
| अध द्व ८१ ॥ १११                               | H 463  | धवा<br>DHVAJA       | अ - ज ा ज     |       |             |
| DHA-YA  |        |                     | ८५३ ०५ ६८     |       |             |
| अध स ८१ ॥ १११                                 | AS 113 | दासास्या<br>DASASYA | DHA-NA-JA     |       |             |
| DHA-SA-SA                                     |        |                     |               |       |             |
| अ - ज ा ८१ ॥ १११                              | 1004   | अ-ज- -DHARA         | अ - ज - ज - ा |       |             |
| DHA-A   |        |                     | ८५३ ०५ ६९     |       |             |
| अध ना ग ८१ ॥ १११                              | 10162  | धरा-                | DHA-NA-SA     |       |             |
| DHA-NA-GA                                     |        |                     |               |       |             |
| अध ना ग ८१ ॥ १११                              | 11461  | धवा<br>DHVAJA       | अ - म न ८५३   |       |             |
| DHA-YA -                                      |        |                     | ८५३ ०५ ७०     |       |             |







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| धन धा-                      |                        |                        |             |             |
| र्फ्युक्ष्मू 12164          | धन गदा                 | ध् र्फ्यु              | 12099       | दास         |
| DHA-NA-GA-DHA-              | DHANA GADA             | DHA-SA                 |             | DĀSA        |
| वा-ना- DHA-RA               |                        |                        |             |             |
| वर्णमित्र ॥८०४०५०११ वनदत्त  | VANADATTA              | ध् र्फ्यु              | 11220       | DHARANA     |
| व न - ध स                   | DHA-LA-NA-DHA-SA       | DĀSA                   |             |             |
| धन धा                       |                        |                        |             |             |
| र्फ्यु ४६३                  | धनधा                   | ध् र्फ्यु              | 5383        | धरक         |
| DHA-NA-DHA-RA               | DHANA                  | GA - RA DHA            |             | DHARAKA     |
| धन धा न धा                  | DHARA.                 |                        |             |             |
| र्फ्यु ४६४ ४६४              | धनधा धनकस्य            | ध् र्फ्यु              |             |             |
| DHA-NA-GA-DHA-NA-GA-SA      | DHANAKA                | र्फ्यु                 |             |             |
| ग ज अ मध                    | DHANAKASYA             | DHŪNA DHA-RA           | DHŪNA DHARA |             |
| र्फ्यु ४६५ ४६५              |                        |                        |             |             |
| GA-JA V-MA SA GA-JA V-MA    | SADHA                  | ध् र्फ्यु              | 474         |             |
| ध कुण धा                    | DASYA.                 | र्फ्यु                 |             |             |
| र्फ्यु ४६६ ४६६              | धूनधा                  | र्फ्यु                 | 11852       | धन DHANA    |
| DHŪNA DHARA -               | NADHA                  |                        |             |             |
| DHA-SA                      | DHŪNA DHARA            | ध् र्फ्यु              | 474         |             |
| र्फ्यु ४६७ ४६७              | DHA-SA                 | र्फ्यु                 | 5275        | धर          |
| DHA-SA                      | DASA, DĀSA             | DHA-LA                 |             | DHARA.      |
| ध र्फ्यु ४६८                |                        |                        |             |             |
| र्फ्यु ४६९                  | जीधन                   | ध् र्फ्यु              | 9045        | धरगाज       |
| NA DHAGA                    | GODHANA                | DHA-A-GA-JA            |             | DHARAGAJA   |
| ध न ग - धा?                 |                        | र्फ्यु                 | 1213        | धवजदत्त     |
| र्फ्यु ४७० ४७०              | धनकास्ये ध(न)          | DHA-YA-DA-SA           |             | DHYAJADASYA |
| DHA-NAGA-SA DHA             | DHANA KASYA            | ध् र्फ्यु              |             |             |
| स ध-                        | DHA(NA).               | र्फ्यु                 | 10625       | UHARANA     |
| र्फ्यु (४७१) ४७१            |                        |                        |             |             |
| SA DHA A                    | DHA DHARA DĀSA         | DHA-RA-NA-             |             | धरण         |
| र्फ्यु ४७२ ४७२              |                        | र्फ्यु                 | 11230       | DHARSASE    |
| DHA-NA-GA-NA - - DHA-GANADA |                        | DHA-RA-RSA-SANA        |             | धरसेन       |
| व न ग ध ल                   |                        | - व ध स                |             |             |
| र्फ्यु ४७३ ४७३              | वनक वर्षा              | र्फ्यु                 |             |             |
| VA-NA-GA-DHA-SA-DA          | VANAKA                 | - VA-DHA-SA            |             | DHASYA      |
| व न ग ध ल ध ल               | DĀSADA                 | - ध स                  |             |             |
| र्फ्यु ४७४ ४७४              |                        | र्फ्यु                 |             |             |
| DHA-YA-KA-NA-DHA-GA         | धन गण                  | र्फ्यु                 | 12377       | धवसेन       |
| र्फ्यु ४७५ ४७५              |                        |                        |             |             |
| 12066 DHYAJA                | DHANA-GA-NA - - DHA-NA | DHANA-GA-NA - - DHA-NA |             | गच्छा       |
| र्फ्यु ४७६ ४७६              | RANDHAKA               | र्फ्यु                 | 12273       | DHANA       |
| DHŪNA DHA-LAGNA             | धूनधर्वा               | र्फ्यु                 |             | GANDHĀRA    |
| 8650 (4) DHYAJA             | GA - DHA               | र्फ्यु                 | 11233       | गच्छे       |
|                             |                        |                        |             | GĀDA.       |



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|------------|------------------|-----------|------------------|----------|----------|----------|-------------|--------|
| नाय भय न - | NA-YA-BHA-YA-NA- | नयभन्य    | NAYA BHA-YANASYA | गणना     | GA-NA-NA | 5498     | गणेन        | GANENA |
| 3725       | -SA              |           |                  |          |          |          |             |        |
| य न        | YA-NA            | पो ६०     | जन               | YANA     | ८६५० (१) | अवन      | AVANA       |        |
| ग न        | GA-NA            | ११७१४     | अगना             | AGANA    | १००७     | गणेन     | GANENA      |        |
| भ य न      | BHA-YA-NA        | १०१५      | भयेन             | BHAYENA  | ४३९६     | गणेन     | GANENA      |        |
| ग न -      | GA-NA-YA         | ११३६९     | गणज              | GANAJA   | ११३८१    | गणज      | GANAJA      |        |
| ग न        | GA-NA            | ११०२७     | गना              | GANNA    | ५२७०     | गणनस     | GANANASA    |        |
| भ य न      | BHA-YA-NA        | १०१५      | भयेन             | BHAYENA  | ५५८०     | वन       | VANA        |        |
| ग न -      | GA-NA-SA         | १०८३५ (१) | गनक्ष्य          | GANAKSYA | २७८६     | नरका     | NARAKA      |        |
| ग न        | GA-NA-SA         | ५५१       | जनक्ष्य          | JANAKSYA | ३२७४     | अग्रिनेन | AGRINENA    |        |
| ग न        | GA-NA-SA         | ८०८०      | गण               | GANNA    | १२००२    | वन       | VANA        |        |
| ग न        | GA-NA-NA         | ५४९८      | गणेन             | GANENA   | ३९८      | नयनेन    | NAYANENA    |        |
| ग न        | GA-NA-NA         | ३९६१      | गण               | GANNA    | ११७७     | भयन्य    | BHAYANA-SYA |        |
| ग न        | GA-NA-NA         | १०२२४     | अन               | ANA      | ३२७४     | अगणेन    | AGANENA     |        |
| ग न        | GA-NA-NA         | २३९०      | नन्य             | NANNASYA | ४३९६     | गणेन     | GANENA      |        |

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| NA-RA-GA           | 278     | नरका<br>NARAKA.                             | गा ना रा ॥ १      | 11304 | गान<br>GANNA         |
| NA-YA-BHA-YA-NA-SA | 3125    | नयनस्य<br>NAYA<br>NA - YA - BHAYA - NA - SA | गा ना रा या ॥ २   | 5082  | नागाया<br>NAGAYA     |
| NA-NA-VA           | 10831   | ननेन<br>GANENA                              | गा ना वा ॥ ३      | 10929 | अजन<br>AJANA         |
| VA-NA              | 2254    | वन<br>YANA.                                 | वा ना ॥ ४         | 94    | नरस्या<br>NARASYA    |
| A-YA-NA-           | 10242   | अजेन<br>AJENA                               | आ या ना ॥ ५       |       | नरस्या<br>NARASYA    |
| A-DHVA-NA          | 11390   | अध्वेन<br>ADHVENA                           | आ ध्वा ना ॥ ६     |       | ग्रदस्या<br>GRADSYA  |
| A-DHVA-NA          | 10830   | अध्वेन<br>ADHVENA                           | आ ध्वा ना ॥ ७     | 10716 | दत्तस्या<br>DATTASYA |
| NA-R               | 4765    | ना<br>NARA                                  | आ ना ॥ ८          | 4179  | नरा<br>NARA          |
| A-DHVA-NA-YA       | 10103   | अध्वनया<br>ADHVANAYA                        | आ ध्वा ना या ॥ ९  | 5975  | नरा<br>NARA          |
| YA-NA              | 4432    | या<br>JANA                                  | या ना ॥ १०        | 4015  | नरस्या<br>NARASYA    |
| DHVA-NANA          | 7098    | ध्वनेन<br>DHVANENA                          | ध्वा ना ना ॥ ११   | 3481  | नरस्या<br>NARASYA    |
| A-DHVA-NA-NA       | 2630    | अध्वनेन<br>ADHVANENANA                      | आ ध्वा ना ना ॥ १२ | 4015  | नरस्या<br>NARASYA    |
| NA-DHA             | 8650(2) | धन<br>DHANA                                 | ना धा ॥ १३        |       |                      |

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| वनज<br>VA-NA-JA             | 2463    | वनज<br>VANA-JA             | गणज<br>GANAJA          |
| सुनस<br>SA-NA-SA            | PI-39   | सुनस<br>SUNASA             | अध्यग<br>ADHYAGA       |
| अशनस्या<br>A-SHNA-SYA       | 11758   | अशनस्या<br>ASHNASYA        | अध्यग<br>ADHYAGA       |
| गजस्या<br>GA-GA-SYA         | B(3)7   | गजस्या<br>GAGASYA          | गज<br>GAJA             |
| यसगज<br>YA-SAGAJA           | A(2)106 | यसगज<br>YASAGAJA           | मधज<br>BHAYAJA         |
| अध्यास्या<br>A-DHYA-SYA     | J283    | अध्यास्या<br>ADHYASYA      | वनज<br>VANA-JA         |
| अजस्या<br>A-YA-SYA          | 2187    | अजस्या<br>AJASYA           | वर्तमान<br>VARTAMANA   |
| गदस्या<br>GA-DHA-SYA        | J-274   | गदस्या<br>GADASYA          | भय<br>BHAYA            |
| स्वप्न<br>SVAPNA            | II 415  | स्वप्न<br>SVAPNA           | ध्यज<br>DHYAJA         |
| भय गगस्या<br>BHA-YA SHGA-GA | 2731    | भय गगस्या<br>BHAYA GAGASYA | D                      |
| गज<br>GAJA                  | II 751  | गज<br>GAJA                 | धूनज<br>DHUNAJA        |
| अगम्य<br>A-GAMYA            | 7155    | अगम्य<br>AGAMYA            | गोधनस्या<br>GODHAN-SYA |
| गज<br>GAJA                  | 3951    | गज<br>GAJA                 | गज<br>GAJA             |





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| वनज                                  | VANAJA       | धनज                  | DHA-NA-YA |
| VA - NA M 79 JA                      |              | DHA-NA-YA 95 DHANAJA |           |
| तन्त्रजय                             | NARTTANASYA  | भयन्त्र              | M 96      |
| NA-TTA-NA-SA M 80                    |              | BHA-YA-NA-SA BHAYA   |           |
| धन  धनका                             |              | धनास्या              |           |
| DHA NA DHA NAGA DHANAI  DHANAKA M 81 |              | धनामन्त्र            |           |
| धन धन धन  धन धन                      |              | DHA-RMMA-NA-SA       |           |
| DHA-SANA SA DASANASYA M 82           |              | धरणास्य              |           |
| DHA-YA- DHARNA M 83                  | धर्ज         | DHA-RA-NA-SA DHARANA | M 98      |
| धर्मास्य                             | DHYAJA       | धर्मास्य             |           |
| DHA-YA-SA M 84                       | धर्मास्य     | धूसद्वलास्य          | M 99      |
| DHA-YA-SA                            | DHYAJASYA    | धर्म                 |           |
| धन धन -                              |              | धर्मज                |           |
| धर्मास्य  धर्मास्य                   | DHA-NA-YA    | 100                  | DHANAJA   |
| DHA-YA-NA M 85                       | -NAGASSA     | अज                   |           |
| धाननागस्य                            |              | M 102                | AJA       |
| DHYANA M 86                          | NAGASYA YA A |                      |           |
| DHYANA M 87                          | गणज          | गणादास्य             | M 103     |
| DHA-NA-JA M 88                       | गणजा         | GANADA               |           |
| गणाजा                                | GA-NA-DA-SA  | -SYA                 |           |
| धर्मास्य                             |              | धर्मधन               |           |
| DHA-RA-SA NA M 89                    | धर्मास्य     | DHA-RMMA             |           |
| DHARA SENNA                          | DHA-NA-SA    |                      |           |
| धर्मास्य                             | M 104        | DHARMMA              |           |
| NA-A-SA M 90                         | नारास्य      | धर्मास्य             |           |
| नारास्य                              | M 91         | धर्मास्य             |           |
| धर्मास्य                             |              | गोपनज                |           |
| धर्मास्य                             | GA-DHA-NA-JA | GO.DHANA             |           |
| धर्मास्य                             |              | धर्मास्य             |           |
| DHA-A-DHA-NA-GASA M 92               | धर्मास्य     | धर्मास्य             |           |
| धर्मास्य                             | M 93         | धर्मास्य             |           |
| धर्मास्य                             |              | धर्मास्य             |           |
| DHA-YA-NA M 94                       | धर्मास्य     | DHA-LADHYANA         |           |
| DHARA M 95                           | धर्मास्य     | DHARA                |           |
| धर्मास्य                             |              | धर्मास्य             |           |
| DHYAJA M 96                          | धर्मास्य     | DHA-RA-NA DA-DHARA   |           |
| DHANADHARA M 97                      | धर्मास्य     | M 105                |           |

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| ग ध ग -               | अगधनज                         | ग ध ग न द्वा न | दास          |
| GA-DHA-NA-JA          | AGADHANA JADHA-SA-GA-NA-DA-NA |                | गणदेन        |
| ध-स                   |                               |                |              |
| ग ध ग                 | ग ध ग                         | ग ध ग          | ग ध ग        |
| DHA-SA -              | 103 DASA                      | 130            |              |
| ग ध ग                 | ग ध ग                         | ग ध ग          | ग ध ग        |
| DHA-SA-NA-JA          | 114 DASANA JAJA               | 131            | NARASYA      |
| ग ध ग                 | ग ध ग                         | ग ध ग          | ग ध ग        |
| DHA-SA-NA-DA          | 132 DHYANAKA                  |                |              |
| ग ध ग                 | ग ध ग                         | ग ध ग          | ग ध ग        |
| GA-DHA-NA-DHA-SA      | 115 AGADHANA                  | 133            | NARA         |
| ग ध ग                 | ग ध ग                         | ग ध ग          | ग ध ग        |
| YA-DHA-NA-DHALA-DHARA | 119 ADHANA DHA-YA-NA-JA       | 134            | DHYANA JAJA  |
| ग ध ग                 | ग ध ग                         | ग ध ग          | ग ध ग        |
| DHA-SA-NA             | 120 DASENA                    | 135            | AJANA        |
| व न य च               | व न य च                       | व न य च        | व न य च      |
| YA-NA-YA-SA           | 121 VANAJASYA DHU NA          | 136            | DHUNA        |
| ग ध ग                 | ग ध ग                         | ग ध ग          | ग ध ग        |
| DHA-NA-DHA-A          | 122 DHANA                     |                | ग्रान-       |
| -DHARA                |                               |                | तुण्ड्य दाश  |
| ग अ                   | ग अ                           | ग अ            | ग अ          |
| DHA-A-SA              | 123 DHARASYA                  | 137            | DHARSA       |
| ग अ                   | ग अ                           | ग अ            | ग अ          |
| YA-YA-SA              | 140 YAGRASYA                  | 141            | GADA         |
| व न                   | व न                           | व न            | व न          |
| NA-A-SA               | 143 NARASYA                   |                |              |
| ग ध ग                 | ग ध ग                         | ग ध ग          | ग ध ग        |
| DA-NA-DHA             | 128 DHANADA                   | 145            | DHARA        |
| ग ध ग                 | ग ध ग                         | ग ध ग          | ग ध ग        |
| DHYA-YA               | 129 DHVAJA                    | 146            | DHARTTA-SYA. |



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| गणमय        | ML 198 | गणमय                 | ग न द ध म                       |
| GA-NA-MA-YA |        | GANAMAYA             | ३८ य॒८  ३८ धनदृ॥८८              |
| ध-य         |        |                      | DHA-NA-DA DHANADA               |
| ३८ य॒८      | ML 199 | ध्यान                | DHA-SA-NA M 222 DHABHA          |
| DHA-YA-NA   |        | DHYANA               | M 222 DHABHA                    |
| ४-र-दृ      | ML 201 | धरदृ                 | ३८ य॒८ दृसन                     |
| ३८ य॒८      |        | DHARADA              | M 224 DASANA                    |
| DHA-RA-DA   |        |                      |                                 |
| ग-ध-अ-      |        |                      |                                 |
| ३८ य॒८      | ML 202 | अधन                  | M 225 गण                        |
| NADHAA      |        | ADHANA               | GA-NA-                          |
| अ-त-र-      |        |                      | अ-त-र-                          |
| ३८ य॒८      | ML 204 | अनृण                 | ३८ य॒८ म अनृण्य                 |
| ३८ य॒८      |        | ANRANA               | A-NA-A-SA 227 ANARA             |
| ३८ य॒८      | ML 207 | नरज                  | ३८ य॒८ SYA                      |
| NA-A-YA     |        | NARAJA               | ३८ य॒८ म धवजस्या                |
| ३८ य॒८      | ML 208 | दसन                  | ३८ य॒८ 228 DHVA-YA-SA DHVAJASYA |
| DHA-SA-NA   |        | DASANA               | ३८ य॒८ NA-A-SA 229 NARASYA      |
| ध-अ-म्      | DHA    |                      | ३८ य॒८ म धर                     |
| ३८ *३८  ४   | ML 209 | धूमधव                | ३८ (1111) M 230 DHARA           |
| DHUMA MA    |        | DHUMA DHAVA          | DHA-A 231 DHARA                 |
| ३८ य॒८      |        |                      | ३८ य॒८ ३८ अगधार                 |
| DHA SA-NA   |        | DANA                 | ३८ य॒८ AGADHAR                  |
| ३८ य॒८      |        | ३८ य॒८ दशनादेन       | ३८ य॒८ GA DHATTA M 230          |
| DHA SA-NA   |        | DASANADENA           | ३८ य॒८ ३८ M 232 DHARA           |
| ३८ य॒८      | ML 210 | धनेन                 | ३८ य॒८ धरुण्य                   |
| DHA-NA-NA   | 243    | DHANENA              | ३८ य॒८ DHA-LA-SADHARASYA        |
| ३८ य॒८      |        | DHA-RA-YA            | ३८ य॒८ M 233 DHARAJA            |
| ३८ य॒८      |        |                      | ३८ य॒८ धर्मधर                   |
| ३८   ३८     |        | ३८ य॒८ धार्त्रधर्मधर | ३८ य॒८ ३८ धर्मधर                |
| DHA-TTA     |        | DHARTTA              | ३८ य॒८ DHARMASYA                |
| DHA-YA-SA   |        | DHAYASA              | ३८ य॒८ DHARMA                   |
| ३८ य॒८      | ML 211 | धन                   | ३८ य॒८ -DHARA                   |
| DHA-NA      |        | DHANA                | DHA-NA 236 DHA NA               |
| ३८ य॒८      |        |                      |                                 |
| ३८ य॒८      | ML 212 | जनस्य                | ३८ य॒८ -M 238 अय                |
| YA-NA-SA    | 249    | JANASYA              | BHA-YA                          |
|             |        |                      | ३८ य॒८ BHAYA                    |
|             |        |                      | M 243 NARA                      |

|          |       |              |           |             |
|----------|-------|--------------|-----------|-------------|
| भा-ग     | M 244 | भग           | भग        | गणदे        |
| धा-सा-या | M 245 | दासज         | DA NA GA  | 265 GANADA  |
| ना-अ-सा  | M 246 | नरस्य        | NA SA     | 266 GAYA    |
| वा-रम्मा | M 247 | ध्वज रुणदि   | VA - MMA  | VARMMA.     |
| भा-या-या | M 248 | अद्यस्य      | BHA-YA-   | 269 BHAYENA |
| दा-सा-सा | M 249 | ADASSYA.     | NA-A      | M 270 NARA  |
| ना-रा    | M 250 | NARA.        | NA-A      | M 275 धरा   |
| धा-रा    | M 251 | अग ॥ धन      | DHA-A     | DHARA.      |
| गा-धा    | M 252 | AGA ॥ DHANA. | M 279 धरा | DHARA       |
| धा-या    | M 253 | DHANA.       | DHA-LA    |             |
| धा-रा    | M 254 | धर्म         | Y    अ    | M 281 NABA. |
| धा-रा    | M 255 | धर्मस्य      | NA-A      | M 282       |
| धा-रा    | M 256 | DHARA        | DHA-YA-SA | 285 धर्मस्य |
| गा-ना    | M 257 | GADASYA      | M 286     | DHVAJASYA   |
| धा-त्ता  | M 258 | दत्त         | DHA-YA-SA | M 287 अद्य  |
| गा-ना    | M 259 | DATTA.       | DHARMA-SA | ADHYA       |
| धा-ना    | M 260 | गण           | DHARMA-SA | 294 DHARMA  |
| गा-ना    | M 261 | गण           | DHARMA-SA | -SYA.       |
| धा-ना    | M 262 | धनस्य        | DHARMA-SA | M 298 DHARA |
| धा-ना-सा | M 263 | DHANASYA     | DHARMA-SA | -SYA.       |
|          |       | DHA-NA-SA    | DHARMA-SA | M 299 धन    |

|                        |                 |                       |
|------------------------|-----------------|-----------------------|
| धनाग्न                 | धनाग्न          | गद्यज्ञ               |
| DHA-NA-GA-NA           | M 300           | DHANAGHNA             |
| नरक                    | नरक             | जन                    |
| NA-A-GA                | M 301           | NARAKA                |
| दशकृष्ण                | M 305           | DASHAKRISHNA          |
| DHA-SA-GA-SA           | DASHAKASYA      | जनेन                  |
| या-द्वय-ना-या-सा       | YANA-KA         | ANENA                 |
| ADHYĀNAJASYA अध्यानज्ञ | YANA-KA         | DHYAJA                |
| द्वय-ना-या-सा          | DHA-YA-DHA-SAYA | DASA-JA               |
| दशकृष्ण                | DASHAKRISHNA    | दशकृष्ण               |
| द्वय-ना-नात्ता         | DHA-SA-GA-SA    | DASHAKASYA            |
| मथनज                   | M 315           | धज्ञ                  |
| BHA-YA-NA-YA           | BHAYANA         | DHYAJA                |
| धरणी                   | M 319           | DHARA                 |
| धरणी                   | DHARNE          | M 320                 |
| गरा                    | GARA            | DHARA                 |
| धरणी                   | DHARNE          | SYA GAJJA             |
| धरणी                   | M 323           | नरकज्ञ                |
| DHA-NA-NA              | DHANENA         | NARAKA                |
| गणज्ञ                  | M 324           | -SYA                  |
| गणज्ञ                  | GANASYA         | गणज्ञज्ञ              |
| गणज्ञ                  | M 325           | GANADHYA              |
| गावः                   | M 325           | GA-NA-DHA-YA-SA JASYA |
| धूमद्वेष               | M 325           | अमैनेन                |
| गावः                   | A-BHA-YA-NA-NA  | ABHAYA                |
| गावः                   | M 325           | NENA                  |
| गावः                   | DHA-NA-SA       | दसनज्ञ                |
| गावः                   | M 326           | DASANA                |
| गणज                    | M 327           | -SYA                  |
| गणज                    | GANAJA          | NARA                  |

|               |           |           |             |           |             |
|---------------|-----------|-----------|-------------|-----------|-------------|
| GA-NA         | ME<br>365 | गण        | NA-YA-GA-   | ME<br>410 | नायक        |
| DHA-TTA       | ME<br>366 | दत्त      | DHATTA      | ME<br>412 | DHVAJA      |
| DHA-TTA NASA  | ME<br>369 | धर्त्तनसा | DHARTTANASA | ME<br>414 | DHARA DHANA |
| DHA-YA-NA NA  | ME<br>370 | धयना      | DHYANENA    | ME<br>415 | DHARANA     |
| DHA-RMM-NA    | ME<br>374 | धर्मना    | DHARMMANA   | ME<br>416 | DHARAKASYA  |
| DHA-NA        | ME<br>376 | धना       | DHANA       | ME<br>418 | अधनङ्ग      |
| DHA-YA        | ME<br>378 | धया       | DHYAJA      | ME<br>420 | DHYAJA      |
| GA-NA NA      | ME<br>380 | गना       | GANENA      | ME<br>422 | NARA        |
| DHA-RA        | ME<br>385 | धरा       | DHARA       | ME<br>424 | SVARGASYA   |
| AG-NA SA      | ME<br>387 | अग्नसा    | AGNASYA     | ME<br>425 | NAYA        |
| DHA-YA-GA-SA  | ME<br>393 | धयगसा     | DHYAJAKASYA | ME<br>428 | NAYAKA      |
| NA-A - NA DHA | ME<br>395 | ना धा     | NARA-DHANA  | ME<br>429 | DHANAGNA    |
| NA-A - NA DHA | ME<br>400 | ना धा     | DHANAGADANI | ME<br>430 | DHANAGNA    |
| DH-U-NA - JA  | ME<br>401 | धुना      | DHUNAJA     | ME<br>431 | DHUNAJA     |
| DH-U-NA - JA  | ME<br>402 | धुना      | DHUNAJA     | ME<br>432 | DHUNAJA     |
| DH-U-NA - JA  | ME<br>403 | धुना      | DHUNAJA     | ME<br>433 | DHUNAJA     |
| DH-U-NA - JA  | ME<br>404 | धुना      | DHUNAJA     | ME<br>434 | DHUNAJA     |
| DH-U-NA - JA  | ME<br>405 | धुना      | DHUNAJA     | ME<br>435 | DHUNAJA     |
| DH-U-NA - JA  | ME<br>406 | धुना      | DHUNAJA     | ME<br>436 | DHUNAJA     |
| DH-U-NA - JA  | ME<br>407 | धुना      | DHUNAJA     | ME<br>437 | SVARGA      |
| DH-U-NA       | ME<br>408 | धुना      | DHUNAJA     | ME<br>438 | SVARGA      |
| DH-U-NA       | ME<br>409 | धुना      | NARTTENA    | ME<br>439 | SVARGA      |

|                           |                         |                        |                   |
|---------------------------|-------------------------|------------------------|-------------------|
| वृ॒ अ॑ स॒                 | गा॑ द्वा॒               | गा॑ द्वा॒              | गा॑ द्वा॒         |
| वृ॒ अ॑ द्वा॒ मे॑          | गा॑ द्वा॒               | गा॑ द्वा॒              | गा॑ द्वा॒         |
| NA-A-DHA-SA 439           | NARADĀSA                | गा॑ द्वा॒              | गा॑ द्वा॒         |
| वृ॒ अ॑ मे॑                | द्वा॒                   | द्वा॒                  | द्वा॒             |
| वृ॒ अ॑ मे॑ 441            | NARA.                   | DHA-RA                 | DHARA             |
| मय॑ ना॑ य॑                | मे॑ अयनज                | अ॒ द्वा॒               | अ॒ द्वा॒          |
| वृ॒ अ॑ य॑ ना॑ य॑          | BHAYANAJA 441           | A-DHA-TTA-NA           | ADATTENA          |
| वृ॒ अ॑ य॑ ना॑ य॑          | मे॑ नयदास               | अ॒ द्वा॒               | मे॑ अगानज         |
| NA-YA-DHA-SA 448          | NAYADĀSA                | AGA-NA - YA            | 834 AGAÑAJA       |
| वृ॒ अ॑ य॑ ना॑ य॑          | मे॑ नविनमय              | गा॑ द्वा॒              | द्वा॒             |
| NA-TTA-NA-MA-YA 458       | NARTTANA - MAYA.        | NA-DHA                 | 535 DHANA         |
| वृ॒ अ॑ मे॑ य॑             | मे॑ अविनका              | अ॒ अ॒ द्वा॒            | अ॒ अ॒ द्वा॒       |
| वृ॒ अ॑ मे॑ य॑             | 460 DHARA.              | A-A-DA-NA-A            | ARODANAKA         |
| वृ॒ अ॑ द्वा॒              | मे॑ धर्जका              | द्वा॒                  | द्वा॒             |
| वृ॒ अ॑ द्वा॒              | 463 DIVĀJAKA.           | DHATTAA-DHAYA          | DHĀRTTA           |
| वृ॒ अ॑ द्वा॒              | मे॑ धमस्य <sup>14</sup> | द्वा॒                  | द्वा॒             |
| DHA-NA-SA 465             | DHAMASYA.               | DHA-SA - DHA-NA-SAGAYA | 835 DASHAGAYA     |
| वृ॒ अ॑ द्वा॒              | मे॑ धरूष्य              | मे॑ 553                | DAŚA DHANASYAGAJA |
| DHA-A-SSA 466 DHARASYA.   | मे॑ गणस्य               | मे॑ 554                | GAÑASYA           |
| वृ॒ अ॑ द्वा॒              | मे॑ नविनेन              | GA-NA-SA               | 551               |
| NA-TTA-NA-NA 467          | NARTTANENA              | मे॑ 555                | DAŚA DHANASYAGAJA |
| वृ॒ अ॑ द्वा॒              | मे॑ धूलज                | DHA-YA-RA-NA-DHA-NA-GA | 555               |
| DH-NA-CA 468 DHUNAJA      | द्वा॒ धूलज              | द्वा॒ धूलज             | द्वा॒ धूलज        |
| वृ॒ अ॑ द्वा॒              | मे॑ धूमर                | DHNAJA-RANA-DHANAKA    | DHĀNAKA           |
| DH-NA-MADHA 469 DHUMADA   | मे॑ धूमर                | द्वा॒ धूमर             | द्वा॒ धूमर        |
| वृ॒ अ॑ द्वा॒              | मे॑ ध्यानेन             | DHA-SA - III DHA-NAYA  | DHĀNAJA           |
| DHA-YA-NA-NA 470 DHYĀNENA | मे॑ ध्यानेन             | मे॑ 556                | PL CXVI           |
| वृ॒ अ॑ द्वा॒              | मे॑ दर्शन               | A-DHA-NA-GR-NA-NA      | 15                |
| DHA-RA-NA 474             | DHARĀNA                 | ADHANAGMENI            | ADHANAGMENI       |
| वृ॒ अ॑ द्वा॒              | मे॑ अद्वा॒              | द्वा॒ द्वा॒            | द्वा॒ द्वा॒       |
| वृ॒ अ॑ द्वा॒              | 475 ADHVARA             | III DHUMENA            | DHUMENA           |
| DHNALA                    | मे॑                     | द्वा॒                  | द्वा॒             |
| वृ॒ अ॑                    | मे॑                     | द्वा॒                  | द्वा॒             |
| DHR-LA 481                | DHARA                   | द्वा॒                  | द्वा॒             |
| वृ॒ अ॑                    | मे॑                     | द्वा॒                  | द्वा॒             |
| DHA-RA 482                | DHARA                   | द्वा॒                  | द्वा॒             |
| वृ॒ अ॑ द्वा॒              | मे॑                     | द्वा॒                  | द्वा॒             |
| DHA-JA-JA 490             | DHVAJA                  | द्वा॒                  | द्वा॒             |
| वृ॒ अ॑ द्वा॒              | मे॑                     | द्वा॒                  | द्वा॒             |
| वृ॒ अ॑ द्वा॒              | 494                     | DHARMADHAR             | DAHMADA           |

|        |          |           |    |
|--------|----------|-----------|----|
| ଧାତ୍ତା | ଧାର୍ତ୍ତା | Plate XVI | 28 |
| ଧାତ୍ତା | ଧାର୍ତ୍ତା | "         | 29 |
| DHĀTTA | DHĀRTTA  |           |    |

PL. CXVII

|            |    |          |
|------------|----|----------|
| ଧାସା       | ମେ | ଦାସଶ୍ୟ   |
| DHA-SA-SA  |    | DASASYA  |
| ଧାରା       | ମେ | ଧାରଶ୍ୟ   |
| DHA-RA-SSA | 8  | DHARASYA |
| ଧାରା       | ମେ | ଧାରଶ୍ୟ   |
| DHA RA SSA | 12 | DHARASYA |
| ନା         | ମେ | ନାରୀ     |
| NA RA      | 14 | NARA     |
| ଧାରା       | ମେ | ଧାରା     |
| DHA-RA     | 15 | DHARA    |

PL CXVIII

१ नाश  
 २ धर्म  
 ३ नग  
 ४ शरण  
 ५ धराण्य  
 ६ धरास्या  
 ७ नर्तनम्  
 ८ नर्तनम्  
 ९ धारेन  
 १० धारेन  
 ११ धारेन  
 १२ गदास्या  
 १३ गाना

1. श्री - राजा, राजा, राजा' राजा राजा:

श्री (राजा) - Rock Edict I - Girnar ('so-called Inscription) - Line 6.

2. नृत्तः "3 No. of a king of the solar race - 4 N. of a country or its inhabitants, or its king. (It was also called sūrīstra and may be identified with the modern Kathewar. Dwārakā was its capital, which is called Dvārakāgiri. There was also an important town called Valabhi - which afterwards became its capital. The celebrated Tirtha called Prabhāsa also stood in the same peninsula.) Prof. V. S. Apte's "The practical Sanskrit - English Dictionary - Vol.I - p.334".

"नृत्ता is the last of the 'three characteristics' (त्रिलक्षणं) or the general characteristics (साम्बन्धिकाः लक्षणाः) of the universe and everything in it ..... Etymologically, नृत्ता consists of the negative prefix न plus त्ता (cf. Vedic Sanskrit त्ता). The truth of नृत्ता by Dr. G. P. Malleswara (Prefatory Note).

3. धैत्य - 'Dhātī' (or dhvāntī ?), mystical N. of the letter न, A. Sans.Eng.Dic. H. Monier Williams - p.515. Dhātīty - 'Yridhi form of dhātī', in comb. Ibid. p.516.

Dhātīteya - 'N. of a war like tribe; sg. ~ prince of this tribe', Ibid. p.516.

4. धूप - 'burned, smitten, distressed by heat or thirst', A. Sans.Eng. Dic. Monier-Williams p.517.

4a. भूग्र - "N. o' शत्रुघ्नि (bestowing wealth and presiding over love and marriage, brother of the Dawn, regent of the Nāshatra Uttara-Phalgunī; Yaska enumerates him among the divinities of the highest sphere; according to a later legend his eyes were destroyed by Rudra) ib. c & c; the Nāshatra U<sup>c</sup>- Ph, MBh.vi, 81; the sun, ib. iii, 146; the moon, L; N. of Rudra, MBH"; Monier Williams. A Sans.Eng.Dic. p.743.

Bṛhma :- "They are the seven sons of the Visṛti, the lord of creation. They are symbolized in the seven Ṛdityas (sons of Ṛditi), Mitr, Aryaman, Bhaga, Varuna, Dāsa, Āśa and Vivasvān (Rgveda, x, 72,9) and the seven priests, Hotr, Potr, N-str, Agnih, Prostr, Adhvaryu and Brahman". Rgveda and the Indus Valley civilization - Dr. B. ddha Prakash p.35.

Bhaga - "A Vedic god and aditya, regarded chiefly as dispensing fortune; brother of Ushas" Antiquities of India, p.19.

5. अगदा - 'अगदा' ३३३ मेरिनी - अगदा क्षमा ।

6. Agada :- 1. A medicine, a medicinal drug. 2. Health, freedom from disease.

Prin. V.S. Apte's The Prac. Sans. Eng. Dic. Vol. I, p.12, Aggada, m. Skr. agada drug, antilote" Sakh - Studies "Sten Konow" - p.114.

7. Gada :- "N. of a son of Vasu-deva and younger brother of Krishna M.R., Hariv.; BhP.; of another son of Vasu-deva by a different mother, ix, 24; 51"; a Sans. Eng. Dic. M. Monier Williams, p.344. "Of Kubera" Prin. V. S. Apte's - 'The Prac. Sans. Eng. Dic. Vol. II' - p.546.

Gadha :- 'ground for standing on in water' (N. of a people) A Sans. Eng. Dic. M. Monier Williams, p.353.

- 7a. Anana :- Pinatthapaitthambhanana = pinastanatthambhitānana. R. Fischel - Comparative Grammar of the Prakrit languages 260.

- 7b. 8, 8a, 10 :- Gadhara, Gandhara, Gandha, Gadhala :- An interesting thing is to be stated here that in the inscriptions of HI, there are words like Gadhara, Gadhala, Gadharyya etc. These words I think most probably mean Gandhāra. "There are five columns at Behistan containing the inscriptions of the Achaemenid King Darius, the great .....

In column I Darius gives a list of 25 countries "then came to" him. In this list we find two names that are Indian viz., Ga (n) dara or Gundhara and Qatagus or Sattagydia". The Achaemenids in India by Sudhakar Chattopadhyaya, p.6. "The South Tomb at Parsipatis is usually assigned to Artaxerxes II (404-356 B.C.) on artistic grounds. Here is/inscription" - a portion of which reads - "iam qataguviya (this is a Sattygidian); iyan oā (n) dariya (this is a Gandharian); iyan hi (n) duviya (this is a HI (n) dn)" Ibid. p.14. This word "Gadarīya" means Gandharian. So Gadhara in the Indus inscription has strong similarity with the Indo-Iranian word Gadarīya which means an inhabitant of Gandhāra.

Gandhara :- "Of a people" A Sans. Eng. Dic. M. Monier Williams, p.346.

- 8b. Agastya :- 'mountain', 'a tree'. A Sans.Eng.Dic. M. Monier Williams, p.4.
9. Dharm "N. of a Vāsu, MSh.; of a follower of the Pāndavas, ib.; of the king of the tortoises; L.; of the father of Padmaprabha (6th rāhat of pros. Avn-Sarpini)". A Sans.Eng.Dic. M. Monier Williams, p.510. Tod says that Mañdhāta was a king of central India 'whose capitals were Dhar and Ujaïin', I.R.A.S.I. 1871-73, p.163.
- 9a. Gagasya :- One seal with the inscription Gagasa was obtained from Bhitā Excavation. "Excavation at Bhitā" I.R.A.S.I., 1911-12, p.57.
- 9b. Sa. Gadha, 'a kind of arrow, Hariv.8865'. A Sans.Eng.Dic. M. Monier Williams, p.353.
11. Dattā :- "The word for a ruined city or settlement was अर्मा or अर्माका ..... Pāṇini and the शिल्प mentions the following - अर्मा-ending place names. Bhūतर्मा, अधितर्मा, संजिवतर्मा, मद्रतर्मा, इमर्मा, कम्जितर्मा, दत्तर्मा, गुप्तर्मा, लक्ष्मतर्मा, वायसिर्मा, ब्रह्मतर्मा, नवर्मा, etc." 33b. Beyond the Indus Valley civilization Dr. Sudah Prakash, p.83.
- Foot note :- "39b. T. Burrow. 'On the significance of the term अर्मा-र्माका in the Early Sanskrit Literature', Journal of Indian History, XLI (1963) 159-66.
12. Dhann :- One seal with the inscription Dhannasya was obtained from Bhitā Excavation. Excavation at Bhitā. I.R.S.S.I. 1913-1914, p.145.
13. Aga - 1. A tree. 2. A mountain. 3. A Sanhā. 4. The sun. Prin. V. S. Apte's. "The practical Sans.Eng.Dic. Vol.I, p.11.
14. Dhama :- One inscription inscribed with अस्ति- Dharmadevasya (अस्ति- Dharmadevasya) was obtained from Bhitā excavation. I.R.A.S.I. 1911-12. Excavation at Bhitā, p.53. Dhama - "m. (only L.) the moon; N. of Brahman; of Yama; of Krishn". M. Monier Williams - A Sans.Eng.Dic. p.509.



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