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# History and Influence of Law Code of Manu

Charles J. Naegele
*Golden Gate University School of Law*

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Charles J. Naegele, JD, LLM

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SJD Committee

Professor Sompong Sucharitkul
Professor of Law Emeritus, Founder SJD and Int'l LLM Program
Golden Gate University School of Law
*----------

Professor Christian N. Okeke
Professor of Law, Director SJD and Int'l LLM Program
Golden Gate University School of Law
*----------

Judge Vichai Ariyanuntaka
Chief Justice & Adjunct Professor of Law
Chulalongkorn, Thammasat &
Ramkamhaeng Universities, Thailand

San Francisco, California

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# Acknowledgment

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# Dedication

I would like to dedicate this work to my family and friends who encouraged me to complete this SJD dissertation.

## Chapter One: Overview

The current legal-historical majority-view about the Law Code of Manu of ancient India is that it was probably formulated by one man in about 100 BC (2100 years ago) and its influence remained confined to mostly India and some parts of Southeast Asia; this view has not yet been revised, in spite of new scientific and archeological research findings and new progress towards ancient-script decipherment over the last 30 years. This paper will trace the history of the Law Code of Manu, its relationship to Rig Veda and the Indus/Harappa Civilization and offer a possible alternative view, that Code Manu may be older and may have influenced additional legal codes.

Europeans "discovered" the Law Code of Manu about the same time as the United States was adopting a Constitution, in the 1790's, when a British judge sent to India, Sir William Jones, learned the ancient Indian language of Sanskrit, translated the Law Code of Manu and published it.[1] (Other translations followed, the ones that will be used in this paper are by Jones (1794), Dutt[2] (1895), See Buehler[3] (1896), Jha[4] (1920), Doniger & Smith[5] (1991), and Olivelle[6] (2005).)

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[1] See Sir William Jones, *The Works of Sir William Jones (The Institutes of Hindu Law or The Ordinances of Manu According to the Closs of Caluuca),* Vol.3, 275 (1794, Reprint 1909)
[2] See M.N Dutt, *MANUSMRTI*, 314, (1895, Reprint 2003)
[3] See Buehler, G., *LAWS OF MANU*, 253, (1896)
[4] See Ganganath Jha, *Manusmrti With the Manubhaasya of Medhaatithi*, Vol. 6, 267 (1st ed.1920; 2nd 1999)
[5] See Wendy Doniger and Brian K. Smith, THE LAWS OF MANU, 152 (1991)
[6] See Patrick Olivelle, *Manu's Code Of Law, a critical edition and translation of the Maanava-Dharmashaastra,* 179 (2005)

Translations of other Sanskrit works from India followed over the next ninety years. In the year 1886, the process of translating Sanskrit to English was made easier by the publication of the British philologist, Sir Monier-Williams, of his very famous Sanskrit to English[7] and English to Sanskrit[8] dictionaries. These are the dictionaries which will also be used and in this paper.[9] (Sir William Jones also "discovered" that Sanskrit was similar to many other European languages and virtually "founded" the field of comparative linguistics.)

In 1786, in his famous address to the Asiatic Society of Bengal, Sir William Jones said: The Sanskrit language, whatever be its antiquity, is a wonderful structure, more prefect than the Greek, more copious than the Latin and more exquisitely refined than either: yet bearing to both of them a stronger affinity, both in roots of verbs, and in the forms of grammar, than could possibly have been produced by accident.[10]

In our quest to look for sophistication in the Law Code of Manu, a brief mention here will be made of the sophistication of the Sanskrit language. Until its translation, the Law Code of Manu was apparently composed and preserved in the Sanskrit language.

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[7] See Monier-Williams, *A Sanskrit-English Dictionary* (1886) (Motilal 1995)
[8] See Monier-Williams, *An English- Sanskrit Dictionary* (1886) (Motilal 1995)
[9] We will be focusing much of our analysis on Sanskrit words, their translations and definitions, in order to gain greater insight into the actual words used in the Law Code of Manu and what is written "between the lines".
[10] See Handa, Devendra, *Vedic vis-à-vis Harappan Culture*, n. 14, p. 75

Most individuals who study the Sanskrit language in depth consider it to be the most complex and precise of all human languages yet discovered.

The transliteration in this paper is based on the Harvard-Kyoto (HK) convention as follows:

Vowels:

a A i I u U

R RR lR lRR

e ai o au M H

Consonants:

| | |
|---|---|
| Guttural: | k kh g gh G |
| Palatal: | c ch j jh J |
| Cerebral: | T Th D Dh N |
| Dental: | t th d dh n |
| Labial: | p ph b bh m |
| Semi-Vowels: | y r l v |
| Sibilants: | z S s h |

(Note: Sanskrit words will appear first in their common current English spelling, followed by the word in parenthesis, underlined, using the above "Harvard-Kyoto" convention, for those readers who are searching for the correct pronunciation of Sanskrit words used here. For example, take the word Sanskrit

("saMskRta"), which has the definition: "constructed well or completely formed, perfected".

Also in the 1800s, after the Law Code of Manu was "discovered" by Europeans, the most ancient work of Indian philosophy and spirituality that pre-dated Code Manu, the "Rig Veda" was also translated.[11] The texts of both the Law Code of Manu and that of Rig-Veda give us much insight into the minds of the people of ancient India.

But there was a problem with both the Law Code of Manu and the Rig Veda, in that both of these works had not been written down when they were composed. In fact, it appeared that the people of ancient India either did not use a writing system to preserve the Law Code of Manu or Rig Veda or any of their other ancient compositions, or they wrote on paper or wood or other medium, none of which survived the bugs and heat of tropical India. This theory, by the way, may hold some weight. As shall be shown below, many wooden boats were constructed by the people living in ancient India. None of these wooden boats have survived until today. At least no wooden boats have been as of yet excavated by archeologists studying the remains of the cities and towns of ancient India.

Other theories are that the people of ancient India either knew that paper would be lost or that they wanted to control the flow of information for political or religious reasons. Whatever the case may have been, it is clear that a different

[11] Griffith, Ralph TH, *Hymns of the Rigveda*, (1889) Munishiram Manoharlal (1999)

method of preserving knowledge was discovered or invented. That method was the method of precise memorization. It required the lifelong dedication of certain individuals to commit to memory long passages of information, which had been rendered into a form that was easier to memorize and recite: a type of poetry or hymn that was chanted to a particular rhythm or beat.

Such hymns or poems were not only memorized and chanted daily, but also taught to the next generation. How many generations this was kept up is not known. And even today, with the advent of pencils, pens, paper, typewriters, printing and computers, there are individuals in India today who continue to memorize many of these hymns or poems, especially Rig Veda, recite them every day and teach them to the next generation.

These hymns or poems of the Law Code of Manu or Rig Veda were not "dated" in the conventional sense. Some parts of the Rig Veda are especially difficult to understand and difficult to determine what is factual and what is not factual. Other parts seemed beyond current human comprehension, saying apparently that the world, or world populations, have been created many times, stretching over a period of many tens of thousands of years.

In any case, whether for lack of certainty, or because the British with their colonial outlook of their then-current-colonial-world, a theory was made that the native people of India did not come up with the sophisticated language of Sanskrit

and did not come up with the sophisticated laws in the Law Code of Manu and did not compose the sophisticated Rig Veda, but that all of the above came from civilizations outside of India and that the unsophisticated native population of India was forced to submit to these sophisticated, intelligent invaders, inter-marry and gradually become overtaken by the invading army's thoughts, words and deeds.

In part, the British and other Europeans did not have far to look to find some support for their theories. Because in the Rig Veda itself, there are many references to battles between different forces, especially the "Arya versus the Dasyu", although nowadays some scholars are asking whether or not these battles are references to a never-ending fight between good and evil, and not a battle between real, living, human beings.

In any case, we turn back to the 1800s, the time of the translation of Rig Veda into English and other Western languages. The theory described above was developed by many European scholars that powerful warriors called "Aryans" from somewhere outside of the northwest of India (perhaps southern Russia, although numerous "origin" possibilities were put forward) invaded India in about 1500 BC, quickly developed the Sanskrit language and compiled the Rig-Veda in 1200 BC, etc. And even though the Sanskrit language shows such linguistic sophistication that modern scholars say took many, many years to develop, this

"Aryan Invasion Theory" said that almost no other type of sophistication was developed in ancient India until Alexander the Great came with his army in about 326 BC. Now, in light of recent scientific discoveries, most scholars are asking, is the Aryan Invasion Theory a myth?

It is difficult now for many scholars to believe that mighty warriors who had traveled for thousands of miles and conquered India would suddenly turn their swords into plowshares and switch from war to spirituality. It is difficult to believe that these supposedly "linguistically-super-sophisticated warriors" would never mention in their compositions like the Rig Veda where they came from or what their native language was prior to their suddenly invasion of India. And also there is no mention of how quickly and easily they developed the complicated and sophisticated Sanskrit language. Also there is no mention as to how they convinced the native population to quickly give up their native language, learn the complicated Sanskrit and recruit large numbers of unsophisticated native people to quickly become educated and sophisticated and dedicate their lives to learning, memorizing, reciting and teaching this new and difficult foreign language.

The invaders, as described above, were called "Aryan" and their native enemies "Dasa" or "Dasyu". But sometimes Rig-Veda references to some battles between Aryan and Dasa were confusing. For instance, the enemies of the Vedic king, Sudas, are described in the Rig-Veda as being both Aryans and Dasas. What

confusion for those advocating the Aryan Invasion Theory. Additionally, Dasyus were sometimes described as dark-skinned. This worked well for the British and European Aryan Invasion Theory. They reasoned that if the enemies were "dark" or "dark skinned", that could naturally refer to the native population of India, most of whom had a darker color of skin than the British and Europeans. Some of the British and Europeans in India claimed to be more directly related to the "Aryan sophisticated invaders".

Some scholars are now questioning whether the Rig-Veda really meant skin color, that is, did the Dasas or Dasyu have dark skin and the Arya light or white skin, or was the Rig Veda speaking of a symbolic battle between light and darkness, good and bad?[12]

The word, Arya ("Arya") is defined by Sir Monier-Williams in his Sanskrit to English dictionary as: "a respectable or honourable or faithful man, an inhabitant of Aryavarta; one who is faithful to the religion of his country; Name of the race which immigrated from Central Asia into Aryavarta (opposed to {an-Arya}, {dasyu}, {dAsa}.. a man highly esteemed, a respectable, honourable man... a master, an owner; a friend...of a good family; excellent; wise... [see Old German {era}; Mod(ern) Germ(an) {Ehre}; Irish {Erin}.][13]

[12] See Sethna, KD, *The Problem of Aryan Origins*, S&S Publishers (1980) p. 104
[13] See Monier-Williams, *A Sanskrit-English Dictionary*, n. 7

It seems that even Sir Monier-Williams, as a writer of a dictionary, had to document the "politically-correct" theory of his day.

The Sanskrit-English dictionary of Sir Monier-Williams is excellent in providing a root definition of each Sanskrit letter, since each Sanskrit letter actually is a root sound that makes up simple words and the roots of more complicated words. In the case of the Sanskrit word, Arya, it apparently comes from the following Sanskrit letters (note that there are two possibilities for spellings using one of two different "R" sounds):

A---a ... prefix of verbs, near, near to, towards

R--...in heaven, to go, move, rise, tend upwards (or)

ra–... acquiring…giving...fire, heat, love, brightness, splendor

ya– ... joining, restraining... attaining

Putting this all together, the roots seem to indicate: "one who is near towards acquiring and joining splendor or is rising upwards to attain heaven", which, one might suppose, could mean some type of spiritual or special or "heaven-oriented" people, but it is difficult to see how those root letters could add up to mean white foreign warriors.

In the 1920s, two extremely old archeological sites were "discovered" and excavated in northwest India, the ancient cities of Mohenjodaro and Harappa near the Indus River. The civilization was called the Indus or Harappa Civilization or

Indus/Harappa Civilization and was dated to about 2500 BC or about 4500 years before present.

At first this was a setback for the Aryan Invasion Theory proponents. It no longer could be claimed that the native population of India was totally unsophisticated in 2500 BC. There was conclusive proof of sophisticated and carefully planned out cities with streets and roads that ran according to Cardinal directions, North-South and East-West, with bathrooms in every house and the most sophisticated water-ways and drainage system in the then-known world. Such advanced drainage systems did not come again for another 2000 years until the time of Roman engineers and urban planners.

After the cities of Mohenjodaro and Harappa were "discovered", the theory of Aryan Invasion was changed to say that these cities were constructed by some other prior invaders who magically built the cities, lived in them for hundreds of years and then either left or were defeated by outsiders.

Now, after careful study for almost one hundred years, there appears to be no evidence of the Aryan Invasion Theory or any other such invasion. Probably the Indus/Harappa Civilization died out from over-use of the land, earthquakes which dried up the large river next to the Indus River, the River Sarasvati, and a drop in foreign trade.[14]

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[14] See Lal, BB, in Agrawal (editor), *In Search of Vedic-Harappan Relationship*, Aryan Books International (2005) p. 3

There also are possible new arguments that can be made from an examination of the text of the Law Code of Manu regarding the duties of Aryans. The new arguments do not support the idea of an Aryan Invasion. These so-called "Aryans", at least the ones referred to in the Law Code of Manu, seem to be non-material, extremely spiritually-oriented individuals. They do not sound like the fierce foreign fighters:

Law Code of Manu, Chapter 2, verse 108: "Let an Aryan who has been initiated, (daily) offer fuel in the sacred fire, beg food, sleep on the ground and do what is beneficial to this teacher, until (he performs the ceremony of) Samavartana (on returning home).

Law Code of Manu, Chapter 2, verse 165: An Aryan must study the whole Veda together with the Rahasyas, performing at the same time various kinds of austerities and the vows prescribed by the rules (of the Veda)."[15]

We will now examine in more depth some of the topics described above. Two things happened in the 1970's that changed completely modern analysis of the history of India. First, space satellite pictures were taken of the earth which showed the dried-up path of the River Sarasvati, which flowed in ancient India from the "mountains to the sea". The River Sarasvati, due to earthquakes, was mostly completely dried up by about 1900 BC.

[15] See Buehler, G., *LAWS OF MANU*, n. 3

The river Sarasvatii was structurally controlled by enechelon faults; for this reason even relatively minor tectonic movements caused big changes in the configuration of the palaeo-channels.[16]

As was explained above, before the excavations of the 1920s of Mohenjodaro and Harappa, most Western scholars believed that India had no civilization prior to 326 BC when Alexander (the Great) invaded India.[17] But after that discovery and those excavations, the theory of "no-prior-civilization" had to change.

This change was made enough more pronounced by the discovery and excavation of the even-more-ancient city of Mehrgarh.

When archeologists discovered the city of Mehrgarh, which was located in ancient India not too far from the Indus/Harappa Civilization city of Mohenjodaro (present-day Pakistan), they dated Mehrgarh to about 8500 BC. The discovery of Merhgarh changed the idea of what type of civilizations existed in the Indian subcontinent. Mehrgarh was now seriously competing for the title, "Cradle of Civilization".

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[16] See Lal, BB, *The Sarasvati flows on*, n. Aryan, (2002), p. 14

[17] Id., p. 25

Within the past ten years, evidence of the world's first dental drilling of tooth decay (approximately 7,000 to 9,000 years ago) has been found in Merhgarh[18], as well as the first use of cotton fiber (6th millennium BC).[19]

In addition to farming, as will be discussed below, Merhgarh was found to have artifacts that were sophisticated and there is ample evidence of long-distance trading.

Prior to the discovery and excavation of Mehrgarh and prior to the picture from space of the path of the dried-up River Sarasvati, the proponents of the Aryan Invasion Theory did not know what to do with references to the sister-river of the Indus River, the River Sarasvati, sometimes spelled "Sarasvatii".

Since both the Rig Veda and the Law Code of Manu refer to the Sarasvatii River as a "great and mighty river" in the present tense, which seems to mean that the composers of both the Rig Veda and the Law Code of Manu experienced the River Sarasvatii as a great and mighty river that, as Rig Veda says, "flowed from the mountains to the sea". It appears that both the Rig Veda and the Law Code of Manu were composed before the Sarasvati River dried up in 1900 BC, providing strong evidence to the idea that the Law Code of Manu was composed prior to 1900 BC and therefore is one of the oldest law codes in the world.

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[18] See Coppa, A., et al, *Early Neolithic tradition of dentistry, Nature*, p.775-756 (6 April 2006)

[19] See Moulherat, Tengberg, Haquet, Mille, Journal of Archaeological Science, First Evidence of Cotton at Neolithic Mehrgarh, Pakistan; Analysis of Mineralized Fibres from a Copper Bead, p.1393-1401 (Dec. 2002)

Additionally, the term "Cradle of Civilization" in Western scholarly circles, has come to mean the first location and time in human history where nomadic hunter-gatherers switched to farming and produced sufficient crops to allow some members of the society to work on developing a culture, a civilization.

Historians and archeologists conjecture that the hunter-gatherers noticed wild grains growing without human help, usually on the fertile land of a large river that regularly overflowed, depositing a soil rich in nutrients for wild grains, near the river. The seeds of wild grains were deposited on this rich and fertile soil by birds picking up the seeds in their beaks, flying to the fertile ground and dropping the seeds to be planted without human intervention to grow "naturally". The wind also performed this task, thus enabling the wild grains to sprout in the fertile land and grow.

At several places throughout the world, at different times, the switch to farming came next, when the people gradually stopped hunting-gathering to picking the wild grains and planting them in the fertile soil. After some period of time, whether hundreds or thousands of years, there was sufficient excess food crops to allow some of the members of the farming community to turn their attention to other pursuits, such as trading excess food crops of one kind or variety for another from another farming community located at increasingly far distances

from the original farming community. This was followed by the development of towns and cities, the division of labor and the beginning of "civilization".

The phrase "fertile crescent" has been the name given by Western researchers to the crescent-moon shaped area in the Middle East that incorporated ancient Mesopotamia (mostly modern-day Iraq), the Levant (and in some cases) ancient Egypt.

But, there existed other large rivers in the world that regularly had overflow and had a type of crescent shape, so one could say that more than one "fertile crescent" or evidence of a "past fertile crescent" has been found. These were the sites of ancient farming communities, some of which later became towns, cities and later civilizations, in China and India, just to name two areas other than what Westerners called the "cradle of civilization" in the Middle East.

The fertile crescent that is of interest to us in this work is the one pre-1900 BC surrounding the Sarasvatii River in northwest India, that has been found to have been the home to many cities and towns of the Indus/Harappa Civilization.

The River called "Sarasvati" or "Sarasvatii" in India can also be used as a kind of historical marker. As described above, the river was mentioned many times in the most ancient "book" from India, the Rig Veda. It was also mentioned in the Law Code of Manu.

In both instances, especially in the Rig Veda, the River Sarasvati is mentioned as being a "mighty and wide river" that flows from the "mountains to the ocean".

In the seventh chapter or seventh "mandala" (since chapters are called "mandalas" or "circles"), of Rig Veda, Hymn 95, verses 1 and 2, the River Sarasvatii is spoken of as "surpassing...all other waters...pure in her course from mountains to the ocean..."[20]

Space satellites have been taking pictures of the earth for the last 40 years. The "now dried up path" of a great river, most likely the River Sarasvatii mentioned in the Rig Veda and the Law Code of Manu, has been photographed from space.

We know now that International Trade and Investment began in India thousands of years ago because of foreign objects found in India and Pakistan and Indus/Harappa Civilization remains found in Egypt and Iraq. The latest archeological research shows the city referred to above, Mehrgarh, which was in existence in from at least 8000-7000 BC, shows evidence of being a large city of about 30,000 persons. As described above, it was located in what was northwest India, but since the partition of India in 1947, Mehrgarh is now located in Pakistan.

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[20] (1). THIS stream Sarasvatī with fostering current comes forth, our sure defense, our fort of iron.
As on a car, the flood flows on, surpassing in majesty and might all other waters.
(2) Pure in her course from mountains to the ocean, alone of streams Sarasvatī hath listened.

Foreign objects have been found in Mehrgarh that are dated even prior that of the so-called Indus/Harappa Civilization (named after the Indus River of Northern India) of 4300 - 3200 BC in the Indus/Harappa chalcolithic period (Copper Age). There exist ceramic similarities (clay pots and other vessels) in Mehrgarh and the Indus/Harappa Civilization with southern Turkmenistan and northern Iran, which suggest considerable mobility and trade.

There are other indications that the River Sarasvatii mentioned in the Rig Veda and the Law Code of Manu was an often-used transportation route for shipping Indus/Harappa Civilization goods internationally to Egypt and Mesopotamia.

Archeologists have found the remains of stone anchors from shipwrecks that relate to ancient India (Indus/Harappa Civilization) in the Gulf States, such as in Bahrain. One type of stone-anchor is the "ring-stone" anchor, which is a large stone shaped like a doughnut. These anchors have also been found off the coast of India and in the sister-city of Harappa, Mohenjo-daro.[21]

Ancient India (Indus/Harappa Civilization) was famous for its boats and international trade. One boat was called the Dhow. The Dhow was a popular boat of ancient India. The Dhow was originally built in India, with the wood used for the making of the boat cultivated and grown in India. Later on, some of the wood

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[21] See Ray, Himanshu Prabha, *The Archaeology of Seafaring in Ancient South Asia*, p. 80-81, Cambridge University Press (2003)

grown in India was exported to Mesopotamia and Egypt and the boats were made there.

The Dhow is actually a "sewn boat", that is, the planks of wood are actually sewn or lashed together, not nailed, even though nails were available at that time. After the River Sarasvatii dried up in 1900 BC, international trade originating in India also fell off for more than 1500 years. The Dhow then became associated with Arab traders, and continued to be used for many centuries after that.

Procopius, a Greek historian writing somewhat later, in the sixth century AD, recorded that ships used in the Indian Seas are not covered with pitch or any substance, and the planks are fastened together, not with nails but with cords.

Sewn boats seem totally unusual to us in our modern times with steel ships and their ultra-modern engines. That is also true when we compare sewn-boats with jet airplanes. It is amazing to think about how ancient sailors and merchants transported themselves and their goods.

Other indications of International Trade by Ancient India (Indus/Harappa Civilization) involve "weights and measures". Weights and Measures of Ancient India (Indus/Harappa Civilization) were clearly either derived from other parts of the then-known world or given to other part of the then-known world and were a direct product of International Trade of India. Two different sets of weights have

been found at some Indus/Harappa Civilization sites, one set for trade within the Indus/Harappa Civilization and one set for international trade, outside the Indus/Harappa Civilization. These differences will be described more fully below.

Some of the weights and measures that were preserved for posterity in the text of the Law Code of Manu will be also examined below. It appears that the weights from the Law Code of Manu were similar to, if not exactly the same as the weights from the Indus/Harappa Civilization.

In the southern part of the Indus/Harappa Civilization, in the current Indian state of Gujarat, is where historian believe was where the now dried up Sarasvatii River ran into the sea. One of the ancient places where an important port city of the Indus/Harappa Civilization was found in Gujarat was what is now called Lothal.

I have had the opportunity of personally visiting the Indus/Harappa Civilization port-city of Lothal, several hours south of the modern city of Ahmedabad. In the Indus/Harappa Civilization museum in Lothal, I personally viewed Indus/Harappa Civilization stone cubes of standard weights. Lothal was one of the Indus/Harappa Civilization sites that had another series of weights conforming to the Heavy Assyrian standard for international trade.

This is then clear evidence that the ancient Indus/Harappa Civilization conducted trade of an international nature. Sir William Jones was of opinion that

the Hindus must have been navigators in the age of the writing of the Law Code of Manu, because the Law Code of Manu mentions bottomry (The lending of money for marine insurance).

D.P. Sharma, Ph.D was one of the Directors of the National Museum of India and an author of many scholarly books on the Indus/Harappa Civilization. In a personal interview with me on March 22, 2007, in the National Museum of India in New Delhi, India, Dr. Sharma told me of some of his research. Dr. Sharma has researched extensively on the ancient cultures of India, especially the Indus/Harappa Civilization culture at the Harappan sites. Many of the objects found from Indus/Harappa Civilization have been carbon dated from 3500 BC to 1900 BC.[22]

Dr. Sharma said that he believed that the evidence shows that Rig Veda and possibly the Law Code of Manu (Manusmriti) are both older than many scholars today believe, evidenced by the references to the mighty River Sarasvati, which dried up in 1900 BC, references to sea voyages and international trading.

Dr. Sharma concurred with the idea that the Harappan golden "necklaces" on display in the National Museum may not necessarily just "necklaces" at all, but could possibly be strings of individual disks that were used as coins in the Indus/Harappa Civilization culture. Each disk weighs the same amount as every other disk, even if the size is slightly different. This seems to be

[22] DP See Sharma, *Early Harappans and Indus-Sarasvati Civilization*, Vol. 1 (2006)

in line with ancient references that refer to the weights and measures of coins used during that Indus/Harappa Civilization period, which is very interesting. Dr. Sharma further said that the weights and measures found at the Harappan sites were extremely accurate.

The Aryan Invasion Theory continues on the path of being disproved, especially since the time that the two important archeological sites of Mohenjodaro and Harappa were "discovered" in northwest India (now Pakistan) and serious archeological excavations were begun.

It is also of interest to note that even though those sites had been "found" by other Western explorers previously, it was less than one hundred years ago, in the 1920s when the first real excavations were ordered to begin.

When Alexander (the Great) invaded India in 326 BC, he took along historians who documented in writing his campaigns. Since those particular writings were the writings that most Western scholars relied upon, it is of no surprise that most Western scholars believed that India had no civilization prior to the campaign of Alexander. [23]

After the beginning of the discovery of those two sites of Mohenjodaro and Harappa and the excavations of the 1920s, there came to be a realization and acceptance that those sites of Mohenjodaro and Harappa were ancient cities. Different levels of digging in Mohenjodaro and Harappa yielded dates of at least

[23] See Lal, BB, *The Sarasvati flows on*, n. 16, p. 25

3000 BC and new names were thought up for the area and the civilization that had been discovered to be contemporaneous with the civilization of ancient Egypt and Mesopotamia.

Some called it the "Indus Civilization", named for its proximity to the Indus River in present-day Pakistan; others thought it should be also known as the Harappa Civilization after the type site Harappa. Many scholars now use the term the "Indus/Harappa Civilization". And now, many scholars believe that the "Indus/Harappa Civilization" made substantial contributions to the progress of man in the material and (perhaps) spiritual fields.[24]

Even though now we have the archeological remains of the "Indus/Harappa Civilization", the sparse written script of that civilization is not yet completely deciphered. Therefore, there is, as of yet, no consensus as to the "contemporaneousness" of other culture, such as the Rig Veda culture.

When Sir William Jones translated the Law Code of Manu, followed by the translation of the older work, the Rig Veda, a term was coined by Western scholars to describe the Rig Vedic Civilization: "Vedic Culture".

One commentator summed it up: at first, the Vedic Culture was praised by many British and Europeans who postulated that India was the original home of the entire human race and the cradle of civilization; then other scholars advanced the Aryan Invasion Theory, which became popular; now that Aryan Invasion

[24] See Rao, SR, *New Frontiers of Archaeology*, Popular Prakashan (1994) p. 2

Theory has become discredited.[25]

Some other scholars still say that the Aryan invasion of India happened in 1500 BC and that the people of India "forgot" about this after about 200 years and that the Rig Veda was composed in 1200 BC. This seems improbable in light of the fact that other groups coming to India, for instance, the Parsis from Iran, remember coming to India after nearly 1300 years.[26]

Rig Veda, the oldest "book" from India, was handed down by oral memorization and recitation and first translated into English by Max Mueller, a German-born Cambridge Professor in the 1800s. Max Mueller at first made a guess that the age of Rig Veda was 1200 BC. This was in due in part to the discovery by Western scholars that the Buddha was born in approximately 600 BC. Soon after, many people in India had taken up Buddhism and that therefore, Rig Veda must have been written before that time. Max Mueller and other Western scholars did not know of the discovery of the Indus/Harappa Civilization, since excavations did not begin until the 1920s, when this "discovery" was published in England.

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[25] See Singh, Shivaji, *Vedic Culture and its Continuity Paradigm and Dimensions*, in Dube, Sita Ram, Editor, *Vedic Culture and Its Continuity*, Pratibha Prakashan (2006) p. 22-23

[26] See Sethna, KD, *Karpasa in Prehistoric India*, Biblia Impex (1981) p. 9

Max Mueller died in the year 1900. Near the end of his life, he admitted that no one knew if the Rig Veda or other Vedic hymns were composed in 1000, 2000 or 3000 BC.[27]

Little did he know, nor suspect, that less than 25 years later, the Indus/Harappa Civilization would be "discovered" and add a great piece of missing information to the puzzle that Max Mueller was trying to put together.

Soon after the Indus/Harappa Civilization cities of Mohenjodaro and Harappa were "discovered" and excavated and the slightly different theory of Aryan Invasion was crafted and made more popular by Westerners, especially in Germany prior to World War II. That theory of "Aryan superiority" began to lose credibility after Germany lost World War II.

Following World War II, more careful study was begun and the majority-consensus now is that there appears to be no evidence of any such Aryan Invasion. Now, most scholars agree that probably the Indus/Harappa Civilization died out from over-use of the land, the earthquakes which dried up the River Sarasvati and a corresponding drop in foreign trade.[28]

The additional evidence of lack of an Aryan Invasion includes some of the following thoughts. The composers of Rig Veda, sometimes called "poets" or "hymn makers" (since the Rig Veda is "sung" or "chanted" daily still throughout

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[27] See Lal, BB, *Search for Vedic-Harappan Relationship*, n. 14, p. 1
[28] See Lal, BB, *Search for Vedic-Harappan Relationship*, n. 14, p. 3

some parts of India) often referred to themselves as "Aryan". The Westerners translated the word "Aryan" as being "white skinned", did so, even though there is no firm basis for such a translation, just because in Rig Veda, the enemies of the Aryans were sometimes described as "dark".

As described above, the names of the "dark" enemies of the "Aryans" were "Daasas" or "Dasyus". After World War II, Western scholars began to give more credibility to scholars from India, like Sri Aurobindo, who believed that Daasas were not human beings at all, but "dark" spirits as versus spirits of light; even (the British scholars) MacDonnell and Keith said that the word "Dasyu" is clearly applied to "superhuman enemies" and that the word "Daasa sometimes denotes enemies of a demoniac character in the Rigveda".[29]

In Rig Veda, the god of fire, "Agni", is often portrayed as bringer of the Light, one who killed the Dasyus, the dark (spirits).[30] Rig Veda, Book V, Chapter 14, Verse 4, says: "Agni (the god of fire) shone bright when born, with light killing the Dasyus and the dark."[31]

Max Mueller, the German-born scholar who became a professor in England and translated the entire Rig Veda into English, in 1881 suggested that the term "Arya" may have evolved from the term "iraa", earth; in historical times

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[29] See Sethna, KD, *The Problem of Aryan Origins*, n. 12, p.104
[30] Id., p.109
[31] See Buehler, G., LAWS OF MANU, n. 3

it was regularly being used in the sense "sir" is used in English.[32] For example, one character from the Rig Veda, Trasadasyu, was dark skinned or syaava ("zyAva"), even though he was an Aryan.[33] Sir Monier-Williams also defines that word used in the Rig Veda, Syaava ("zyAva"), to be "brown, dark-colored, dark".[34]

In Rig Veda I.96.3, the term "aria" is used, not "arya", it is "viza ArIrAhutam", even though it is translated in English as "Aryan": "Praise him, ye Aryan folk"; the correct word should be "aindra", which means "belonging to or sacred to (the Vedic god) Indra, coming or proceeding from Indra."[35] Sir Monier-Williams defines "ari" as "attached to faithful; a faithful or devoted or pious man" and "ArI" as "to pour, let drop, to trickle or flow upon; to flow over." This seems very different from "light-skinned" or "white-skinned" invaders called Aryans.

Some scholars who have studied the word "Aryan" have come to the conclusion that it might mean "those speaking the same language" and does not necessarily mean those that belong to the same racial or ethnic stock; many scholars think now that that the word "Aryan" might refer of a Proto-Indo-European language rather than a single race.[36] This perhaps makes more sense,

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[32] See Singh, Bhagwan, *The Vedic Harappans*, Aditya Prakashan (1996) p. 27-29
[33] See Dhavalikar, MK, *The Aryans Myth and Archaeology*, Munshiram Manoharlal (2007) p. 46
[34] See Monier-Williams, n. 8
[35] See Shendge, Malati, *The Aryas: Facts Without Fancy and Fiction*, Abhinav Publications (1996) p. 26
[36] See Sharma, RS, *Looking for the Aryans*, Orient Longman (1995) p. 1

that the division between "Arya" and "Dasyu" is either a mythological one, a spiritual one or a linguistic one.

In any case, there is no direct evidence of a recorded Aryan invasion of India. This "Aryan Invasion Theory" is not recorded in any written document and cannot be traced archeologically.[37]

Aryan Horse

In the Rig Veda horses also are prominent in many of the hymns, although the most often-mentioned animals are cattle. During the initial archeological excavations at Mohenjodaro or Harappa, no horse bones were found. This led some scholars to immediately conclude that the Indus/Harappa Civilization came and went before the Vedic culture began and that therefore the Rig Veda was composed after the decline of the Indus/Harappa Civilization. If that were the case, the original "guess" of Max Mueller that the Rig Veda was composed in about 1200 BC might have been correct. (Later evidence shows that this was not correct.)

Additionally, thousands of soapstone or steatite "seals" of various sizes were carved in the Indus/Harappa Civilization, the majority with pictures of male bulls and Indus/Harappan Civilization written "characters" also carved on them. No seals have yet been found with the carving of a horse, although there are carvings of magical or mystical horses, some that are "unicorns" with one horn.

[37] See Sethna, KD, *Karpasa in Prehistoric India*, n. 26, p. 7

Since the plain horse was never pictured in Indus/Harappan Civilization seals, this same school of scholars believed that was another indication of no horse belonging to or known to the Indus/Harappan Civilization and therefore no possibility of Rig Veda coming before or being composed during the Indus/Harappa Civilization period.

Finally, after many more excavations of many more Indus/Harappan Civilization sites, horse bones were found and dated to at least 2000 BC. Since then, other horse bones have been found. Also small figures of horses made from terra cotta clay have been found.

Still, many questions remain about Indus/Harappan Civilization horses and how they compare and contrast with the horses mentioned in the Rig Veda. In Rig Veda, the horses mentioned there were horses with thirty-four ribs instead of the European horse with thirty-six ribs. Were the Rig Vedic "horses" really closer to the so-called "pony" version of the horse, like the Shetland pony or the North American Mustang?

Other questions remain unanswered. If there was a relationship or perhaps an intimate relationship between the Indus/Harappan Civilization and Rig Veda, why was the horse never depicted on the thousands of Indus/Harappa Civilization seals? But one could also ask a counter-question: even though other animals were known, why were the majority of the seals of (male) humped bulls, yet cows were

never represented? It is impossible to believe that there were no cows.[38]

We do not yet know why there were no horses on the seals, although, as described above, there were frequently represented another type of horse. It was a magical horse, a unicorn. And its body was not the usual body of a common horse. Sometimes it was a combination of a horse body with a bull body and then had the unicorn-type single horn.

Other clues are available to us linguistically. The Sanskrit word for "horse", as used in the Rig Veda was "asva" ("azva"), which many scholars say also meant the cousin to the horse, the "ass". In Rig Veda, as was pointed out above, the horse or we should say ("azva") is mentioned often. As noted above, the Rig Veda says that the horse or ("azva") had thirty-four ribs, as opposed to the European horse with thirty-six ribs (Rig Veda I.64.18).[39] The passage just cited specifically talks about the horse with thirty-four ribs.

Even though there has been this disagreement among scholars about the presence of horses in ancient India, especially at the time of the Indus/Harappa Civilization, such disagreement is rapidly disappearing. This is due to not only the terracotta horse figurines that have been discovered, but also the horse bones themselves, with the afore-mentioned thirty-four ribs. Also apparently horse sacrifices were especially important for the investiture of a king.

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[38] See Sethna, KD, *Karpasa in Prehistoric India*, n. 26, p. 14

[39] See Dhavalikar, MK, *The Aryans Myth and Archaeology*, n.33, p. 64

There is another possibility of additional understanding on this matter, especially if the theory is true that the people of the Indus/Harappa Civilization spoke Sanskrit. That theory revolves around a tree.

Not many scholars have focused on this tree from ancient India, whose leaves were depicted early and often on objects made in the Indus/Harappa Civilization and mentioned in Rig Veda; the tree is called in the West "Pippali" or "Ficus Religiosa", in Sanskrit it is called the Asvattha ("azvattha") tree. The name of this tree, this leaf, by itself, should shed light on the subject matter in question and help our understanding of this matter.

This leaf of this tree "Pippali" or "Ficus Religiosa", Asvattha ("azvattha"), was the most popular leaf in the entire Indus/Harappa Civilization, at least in pictorial and character-writing form. The leaf appears on pottery and on sign-posts, as well as on many seals and sealings. The importance of this leaf has survived though time. Even today in India, spiritual figures are often pictured with a leaf from the "Pippali" or "Ficus Religiosa", Asvattha ("azvattha") tree behind them.

The name Asvattha ("azvattha") comes from the Sanskrit word which was introduced above, "asva" ("azva") or horse. The end of the word, the "tha" can

mean "a location". Therefore, the Pippali or Ficus Religiosa, the Asvattha ("azvattha") tree is usually translated as the tree "under which horses stand".[40]

It is not the tree under which cows or peacocks stand, but specifically "the tree under which horses stand". Although the Indus/Harappa Civilization script is not yet fully deciphered, it strongly appears that the language of the script is a type of ancient Sanskrit. If this is true, then there must have been horses in the Indus/Harappa Civilization, since the people of the Indus/Harappa Civilization were so enchanted by "Pippali" or "Ficus Religiosa", Asvattha ("azvattha") leaves as to paint them and inscribe them frequently. Even if the language of the Indus/Harappa Civilization is not ancient Sanskrit, many of the practices of the Indus/Harappa Civilization have survived in India and Pakistan. As will be shown below it is very likely, even if the script is not Sanskrit, that the tree was known as "the tree that the horses stand under".

Dr. Vasant Lad is a well known author of books on the subject of the healthcare that comes from ancient India, Ayurveda. In Dr. Lad's book, that he co-wrote with Dr. David Frawley on Herbs, it says that according to Ayurveda, the herb, Pippili, (or ("azvattha")) is good for breathing difficulties and asthma.[41]

If this is true, then horses must have known this instinctively or found it out by trial and error and probably had a practice of wanting to stop and rest

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[40] See Monier-Williams, A Sanskrit-English Dictionary, n. 7

[41] See Frawley, David & Lad, Vasant, *The Yoga of Herbs*, Lotus Press (1986) p. 180-181

underneath the leaves of that tree so that they could breathe better after a long ride. If the people that composed Rig Veda noticed such an occurrence, then that is probably why the tree was so named, the ("azvattha") tree, the tree "under which horses stand".[42] If horses were important in the Indus/Harappa Civilization, that could have been the reason that so many "Pippali" or "Ficus Religiosa", Asvattha ("azvattha") leaves were painted and inscribed so frequently.

One piece of the puzzle that we do not know is why horses just by themselves were not carved onto Indus/Harappa Civilization seals. Perhaps it was unlucky to carve pictures of horses. Perhaps when one wanted to carve a horse it was considered luckier to carve the magical horse-bull unicorn. We just don't know, at least as of yet. What we do know is that the most revered tree in all of the Indus/Harappa Civilization was named in Sanskrit, "The-tree-that-horses-like-to-stand-under".

Previously, some Western scholars mistakenly said that ancient books of India mention Indo-European words for trees such as birch, Scotch pine, linden, alder and oak. This is not true. In Rig Veda there are many mentions of the azvattha tree and other trees that one would expect to grow only in the tropical climate of India. The most frequently mentioned tree in the Rig Veda is the tree described above, the Pippila tree, which, as mentioned above, is known as the piipala tree in Hindi and in Rig Veda, it is called the asvattha ("azvattha") ("the

[42] See Monier-Williams, A Sanskrit-English Dictionary, n. 7

tree that the horses stand under"). In addition to being the holy Fig tree, it is quite interesting to note that it was also used in another religious capacity: its wood was used to make vessels which would hold the spiritual intoxicating drink, Soma (Rig Veda 1.135.8 and 10.97.5).[43]

The asvattha ("azvattha") holy Fig tree grows in India, Burma (Myanmar), Sri Lanka, Pakistan and Afghanistan; it has been painted on Early Harappan pottery since about 3000 BC.[44] The Sanskrit word for horse, "asva" ("azva") in addition to the translation of "horse", also means "the fast animal". In additional to the Shetland pony theory or thirty-four ribs, other scholars believe that Rigveda suggests that the word "asva" ("azva") applied to both the horse and the ass, or to the wild-ass that was native to India.[45]

The details of the horse bones finds of the Indus/Harappa Civilization are thus: horse bones have been found in Surkotada, an Indus/Harappa Civilization site about 100 miles north-east of Bhuj, in the district of Kutch, Gujarat; this refutes the notion that the Harappans did not know the horse.[46] The excavations of 1965-68 under JP Joshi at Harappan Surkotada in the Kutch show not only the ass (Equus onager indicus), but also the horse (Equus caballus Linn.). The possession

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[43] See Lal, BB, *The Homeland of the ARYANS, Evidence of Rigvedic Flora and Fauna & Archaeology*, Aryan Book International (2005) p. 1-4
[44] See Lal, BB, *The Homeland of the ARYANS, Evidence of Rigvedic Flora and Fauna & Archaeology*, n. 42, p. 5-6
[45] See Singh, Bhagwan, *The Vedic Harappans*, n. 32, p. 57
[46] See Sethna, KD, *The Problem of Aryan Origins*, n. 12, p.36

of horses by the Gandhaara Grave Culture cannot distinguish the people as Aryan invaders; they may have been Indian borderlanders on the move.[47]

One thing is certain: that there is still much to learn form these ancient artifacts, ancient bones and ancient texts. In speaking about the words in the Rig Veda, Colin Renfrew in 1987 quoted A.B. Keith that, "taking the linguistic evidence too literally, one would conclude that the original Indo-European speakers knew butter but not milk, snow and feet, but not rain and hands".[48]

Even in *The Cambridge History of India*, the same scholar, A.B. Keith, in commenting on the idea of the Aryan Invasion Theory, said that the bulk of Rig-Veda was composed near the Sarasvatii River; that the Rig-Veda not only has the omission of movement into India, but tells its story from the point of view of inlanders not invaders.[49] That is a very important distinction: telling the story of one's history from the point of view of inlanders, not invaders. One would suppose that if a more sophisticated people came from "outside" and with force took over the less sophisticated land and population, then the story would abound with details of the glorious "invasion" and the glories of the country of origin of the invaders, their Motherland or Fatherland. No such mention is made in the Rig Veda.

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[47] See Sethna, KD, *The Problem of Aryan Origins*, n. 12, p.9
[48] See Dhavalikar, MK, *The Aryans Myth and Archaeology*, n.33, p. 9
[49] See Sethna, KD, *The Problem of Aryan Origins*, n. 12, p.11

There are other means to support the "No-Aryan-Invasion-Theory". Sometimes the order of certain items in a category can give valuable clue to scholars looking to piece together past history. We know that rivers were very important to the people who composed the Rig Veda. Some rivers annually overflowed, such as the River Sarasvatii, providing the people with rich soil to sow their crops. The rivers allowed for trade with local and international trade with distant people.

It is extremely telling, according to some archeologists, that the Rig Veda, when mentioning the rivers that were of utmost importance to them, lists rivers of what we now call northwest India and Pakistan (not Afghanistan, as some early historians thought), but more importantly, lists the rivers from east-to-west, not west-to-east as we should expect of people (or invaders) who are claimed to have traveled form west to east.[50] This is another major clue as to the "origin" of the Aryan people. If they were "invaders" coming in from the West to the East, they would have seen the rivers also West to East and recorded them as they passed them. The "invasion order" of the rivers would be opposite the way in which they were chronicled in Rig Veda, east-to-west, especially since the East was an important direction to the people of the Rig Veda and also the people of the Indus/Harappan Civilization.

[50] See Sethna, KD, *The Problem of Aryan Origins*, n. 12, p.13

Other clues can be gathered from skeletal remains. Anthropologists who have examined skeletons in the Indus/Harappan Civilization cities of both Harappa and Lothal and modern-day Indian skeletons have concluded that the population has remained same to the present day; it is as if there was no invasion by the Aryans at all to make any difference.[51]

If there had been an "Aryan Invasion", modern scientists examining skeletons should have found a distinct difference at the "invasion" time-point when the skeletal remains changed. The fact that no change can be detected speaks volumes regarding the lack of new blood or a new race entering India. This is yet another fact that is difficult to explain for those who still cling to the Aryan Invasion Theory in spite of this scientific evidence.

Not only have no biological discontinuities have been found in India between 4500 BC and 800 BC; the North and South Indian gene pool is the same and differ markedly from the gene pool of Western Eurasia.[52]

These are two very important facts that should be given more attention. The first is that the North and South Indian gene pool is the same. Previously, some Western scholars held the theory that the people from the southern part of India were both darker-skinned and of a different race than those people

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[51] Id., p.19

[52] See Singh, Shivaji, *Vedic Culture and its Continuity Paradigm and Dimensions*, in Dube, SR, Ed, *Vedic Culture and Its Continuity*, n. 25, p. 27

originating from the northern part of India. This is difficult for me, as a frequent visitor to India, to believe. In general, people throughout India look very similar. There are some individuals throughout India that have lighter skin color and some individuals throughout India that have darker skin color. Now the scientific findings that the gene pool from the North and the South of India is the same, verifies what the observer can see with one's own eyes, that they are from the same gene pool.

The second scientific finding of interest to this discussion is that the gene pool of the people from India is different than the gene pool of the people of Western Eurasia. This is yet another marker to help prove the invalidity of the Aryan Invasion Theory. If Aryan Invasion Theory was correct, one would expect to find a similar gene pool between the people of India and the "Aryan Invaders" who supposedly came from outside of India to take over.

Even the great American archeologist, George Dales, wrote in 1966 that the Aryans have not yet been identified archeologically.[53]

Chariot—Wheels With Spokes In Rig Veda

Other scholars who have championed the Aryan Invasion theory have stated that Rig Veda mentions chariots with wheels that had spokes and that no such wheels with spokes have been found in the excavations of the Indus/Harappa Civilization.

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[53] See Sethna, KD, *The Problem of Aryan Origins*, n.12, p.4

The first thing to consider is that most wheels with spokes were made out of wood. And wood is one thing that did not seem to survive from the Indus/Harappa Civilization.

It could easily be that the climate of India destroyed all of the wheels, especially if they were all made of wood. There is evidence of the use of wood for chariot wheels; in fact, it is very likely that all of the chariot wheels were made out of wood. Some chariots that were made in India during the Indus/Harappa Civilization were shipped to Egypt and Mesopotamia; these chariots were able to be preserved and these chariots had wheels made of wood. In 1926, a famous archeologist, Gordon Childe, cited a chariot, which he found in Florence, dating from the eighteenth Egyptian dynasty of 1550 BC, whose axle is birch bark, which most likely came from what is now the India state of Kashmir.[54]

Many of the Harappan seals have pictures of wheels with spokes, including one from Lothal, which reminds one of a charioteer riding a two-wheeled chariot with spokes.[55] A "spoked wheel" is depicted on the underside of the flat covers of Cemetery H, and around the shoulders of jars.[56] Harappan terra cotta wheels with either painted or low relief spokes have been found in Banawali, Halibangan and Rakhigarhi.[57]

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[54] See Dhavalikar, MK, *The Aryans Myth and Archaeology*, n.33, p. 6
[55] See Sethna, KD, *The Problem of Aryan Origins*, n. 12, p.47
[56] See Sankalia, HD, *Pre-Historic Art in India*, Carolina Academic Press (1978) p.18-19
[57] See Lal, BB, *The Sarasvati flows on*, n. 16, p. 74

Also many terracotta wheels have been found from Indus/Harappa Civilization excavations. I myself have seen a few at the National Museum of India in New Delhi and at the site museum next to the ancient ruins of the Indus/Harappa city of Lothal. But one can imagine that if a model out of clay (terracotta) is being fashioned, it is fairly difficult to actually make a wheel with spokes.

It is much easier to make a model of a chariot or bullock cart with wheels that are all one piece. And that is exactly what I saw in both museums relating to the Indus/Harappa Civilization: models of terracotta with wheels that were all in one piece, without spokes. One other distinction needs to be emphasized. Even the photographs of wheels with either painted or low relief spokes that have been found in Banawali, Halibangan and Rakhigarhi definitely show that the artists making the wheels meant to show spokes.

The photographs reveal that "spokes" on those terracotta wheels do not at all look like just simply a half-hearted attempt at a fantasy vehicle that did not exist at the time. These were real attempts to represent what was very difficult to fashion in clay: real, thin, spokes on a bulky model made of terra cotta. The fact also that such "spoked" wheel models have been found in more than one Indus/Harappa Civilization site, indicates the possibility of more universality

throughout the civilization; it is not as if just one model in one city was found and no other model existed throughout the realm.

Iron in the Rig Veda

There is another topic that has puzzled scholars for many years and that is the Sanskrit word that has, for the past two hundred and fifty years, been translated into English as "iron". The Sanskrit word is "ayas" and when Sir William Jones translated the Law Code of Manu and other Europeans translated the Rig Veda, they must have asked Sanskrit speakers and scholars in India what each word meant. When the word "ayas" came up, the English word "iron" must have come back as then then-accepted-translation of the word.

Current theory is that smelted, man-made iron had become widely available in India between the sixth and eighth century, BC.[58] What we really do not know is whether or not the metallurgists of the Indus/Harappa Civilization were able to occasionally use their well-developed heating techniques to produce a type of iron later known as pig iron or occasionally use iron from fallen meteors. We do know now that some translations of some words in Rig Veda are incorrect.

With regard to high-temperature technology, especially in the craft of making "artistic beads" and particularly faience, the Indus/Harappa Civilization faience was different than in then in any other part of the known world at that time, which meant Mesopotamia and Egypt. The technological know-how must

[58] See Sethna, KD, *The Problem of Aryan Origins*, n. 12, p.37

have been tremendous in order to produce a controlled heat which was above twelve hundred degrees Centigrade, which is almost twenty-two hundred degrees Fahrenheit.

To make faience-beads, the Indus/Harappa Civilization craftsmen heated their ground rock crystal and colored stones, which they again cooled, ground-up, combined with other things and fired a second time at high temperature.[59]

Another high-temperature product in addition to the faience of the Indus/Harappa Civilization was white micro beads. I personally have seen some of the white micro beads at the museum in Lothal. At the Lothal museum, a magnifying glass was actually fixed by tape to a display window, because that is the only way that the average museum visitor could actually see and appreciate the white micro beads.

The white micro beards are only one millimeter across and one to three millimeters long. One millimeter equals 0.00328 feet or 0.04 inches. It was astonishing for me to personally view these white micro beads in the glass case through the magnifying glass. The easiest way to describe the white micro beads to someone that has not seen them is to ask the person to imagine a large white plastic pipe that is used for modern-day plumbing. If one imagines that white pipe, with the hole in the center of the pipe, cut into small pieces and then

[59] See McIntosh, Jane, *A Peaceful Realm*, Westview Press (2002), p. 71

somehow shrunk down into small pieces that in width are 1/25 of an inch and in length only a little bigger, than one can begin to grasp the idea.

Some modern-day scholars now believe that it would have been impossible for the Indus/Harappa Civilization craftsmen to have made the white micro beads and then to have drilled a hole in them. These scholars believe that the material used in making the white micro beads was ground into powder, mixed to a paste, extruded with a fine copper wire for a hole, cut with a horsehair, then fired at around nine hundred degrees Centigrade, more than sixteen hundred degrees Fahrenheit.[60]

In any case, the point is that the Indus/Harappa craftspeople were experts at heating and high-fire technology. Given that expertise with such controlled heating processes, it is not that much of a stretch to imagine that various kinds of smelting were going on simultaneously.

Of course, various possibilities exist: one that the original term "ayas" meant "metal" or a particular type of metal, such as copper or bronze, or a special blend of metal that was especially strong; another possibility, as mentioned above, is that iron was available in small quantities from meteors that had fallen from space, crashed into earth and were found and used by people of Rig Vedic time. In most passages of the Rig Veda, the word "ayas" seems to mean "metal", not the later-in-time translation, "iron", because it is said that the people of Rig Veda

[60] See McIntosh, Jane, *A Peaceful Realm*, n. 58, p. 73

times had forts that were made of this "ayas". Well, even if some iron has been discovered in ancient India, certainly not a sufficient quantity has been discovered so as to actually make complete forts out of iron.

Generally the Sanskrit term "ayas" has been taken to indicate copper and the meanings "bronze" and "iron" are seen as later semantic developments.[61] Sir Monier-Williams defines "ayas" as both "iron" and also just as "metal"; sometimes "ayas" even meant "gold".[62]

It has also been shown that bronze was well known in the Indus/Harappa Civilization. Since bronze is copper with differ alloys added, usually tin, the craftsmen of the Indus/Harappa Civilization exhibited great skill in their bronze-making art.

In certain Indus/Harappa Civilization sites, bronze objects have been found that have different percentages of tin in their composition, not just a single uniform percentage. This process of combining different percentages of tin seems to be another indication of the sophisticated knowledge of the processes of making such different types of bronze and the effect that one would achieve by using such different techniques.

Other scholars have found instances of the word "ayas" really meaning bronze or copper and not iron. Some scholars do not even find literary evidence of

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[61] See Sharma, RS, *Looking for the Aryans*, n. 36, p. 62
[62] See Monier-Williams, n. 8

iron. They say that no conclusion can be drawn form the word "ayas", (which, as mentioned above, can also mean gold, etc.) and a copper razor for shaving and cutting hair is called "aluhaayasa kshura" or "razor of red ayas"; what is taken for iron turns out to be brass.[63]

Another piece of evidence regarding bronze in the Indus/Harappa Civilization is the bronze saw. Bronze saws were used in the Indus/Harappa Civilization technology of jewelry making, especially bracelets that are called bangles. In India today, bracelets that are not flexible are often called bangles. And in the Indus/Harappa Civilization times, bangles were often made out of sea-shells and shipped either inside the Indus/Harappa Civilization realm or internationally. What is interesting about the Indus/Harappa Civilization sea-shell bangle making technology was that the bronze saw that was used was able to cut the shells for bangle-making as efficiently as modern-day steel saws, which means that Indus bronze workers were able to produce a bronze as hard as steel.[64]

If bronze could be produced that was a hard as modern steel, it is no wonder as to the linguistic confusion regarding the Sanskrit word "ayas".

Other scholars have reported that iron, which may have been meteoric, has been reported from some sites in West Asia belonging to the third millennium

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[63] See Sethna, KD, *Karpasa in Prehistoric India*, n. 26, p. 54

[64] See Kenoyer, JM, Ancient Cities of the Indus Valley Civilization, Oxford University Press (1998), p. 96

BC; but now it is believed that the term "ayas" in the Rig Veda means copper and not iron.[65]

Interestingly enough, as described above, the craftsmen of the Indus/Harappa Civilization hardened copper into bronze by alloying it with tin; after the decline of the Indus/Harappa Civilization, no tin-based bronze objects were produced in India for over a millennium. [66]

Conclusion to Chapter One

Evidence of the "Aryan Invasion Theory" in 1500 BC ancient India is rapidly shrinking to zero, due to the discovery of the Indus/Harappa Civilization sites, horse bones, the tree-the-horses-stand-under, clay models of chariot wheels with spokes, bronze saws as hard as steel, space satellite pictures of the dried-up River Sarasvati and skeletal and gene pool "No Aryan Invasion" evidence. If there is no "Aryan Invasion Theory", then no "Aryan Invaders" influenced the composition of the Law Code of Manu.

[65] See Dhavalikar, MK, *The Aryans Myth and Archaeology*, n.33, p. 73

[66] See Singh, Shivaji, *Vedic Culture and its Continuity Paradigm and Dimensions*, in Dube, SR, Ed, *Vedic Culture and Its Continuity*, n. 25, p. 27

# Chapter Two: History of Law Code of Manu (Manusmirti/ Manu Dharma Shastra)

The Law Code of Manu, also called "Manusmrti" ("manusmRti") or "Manu Dharma Shastra" ("manu-dharma-zAstra"), is the oldest Law Code from India. In order to take a new look as to when it was composed, it is useful to examine the clues given to us from the Law Code of Manu itself, from the Rig Veda, from the Indus/Harappan Civilization archeological remains in northwest India and Pakistan and from the "Time-Dates" of the beginning and end of the Indus/Harappan Civilization.

The Law Code of Manu itself, even though not dated, nor written (it was memorized word-for-word and recited every day), contains references to various practices of the people it was meant to inspire and govern. The Rig Veda, also not dated, nor written (it was also memorized word-for-word and recited every day), contains clues relating to the history and dating of the Law Code of Manu and pre-dates the Law Code of Manu. The majority of Indus/Harappan Civilization Archeological remains in northwest India and Pakistan have been carbon-14 dated to between 3000 to 2000 BC (4000 to 5000 years ago). Some are much older (the close-by city of Mehrgarh having been dated to about 8000 to 6000 BC) and a minority of sites, for a short time, outlasted the rapid decline of the

Indus/Harappan Civilization and are just a little younger (some of those sites dated to about 1700 BC).

From excavations of Indus/Harappa Civilization sites, archeologists have found many similarities from Indus/Harappa Civilization culture to "Vedic Culture", the culture and practices described in Rig Veda, and some scholars are beginning to advance the theory of the two together and are coining the term: "Vedic-Harappa Civilization". I believe that similarities also exist between the Law Code of Manu and the Indus/Harappa Civilization.

There seems to be a level of intellectual sophistication in the Rig Veda, the Law Code of Manu and remains of the Indus/Harappan Civilization that is similar. Such intellectual sophistication does not seem to have been found before the Indus/Harappan Civilization, nor afterwards for at least one thousand or more years.

Once that sophisticated level of urbanization, international trade and standardization of the Indus/Harappa Civilization ended, the next period of urbanization and sophistication in Indian history was somewhere prior to the Buddhist King, Asoka, in 300 BC.

Since we know that the majority of Indus/Harappan Civilization Archeological remains have been carbon-14 dated to between 3000 to 2000 BC, which is the period of time that most scholars refer to as the Indus/Harappa

Civilization time period. The "pre-Indus/Harappa Civilization" time period starts with Mehrgarh (time-dated from about 8000-6000 BC) and the "post-Indus/Harappa Civilization" commences with the date that the River Sarasvatii dried up, at the latest at around 1900 BC.

There exist different scholarly opinions about the dates of the post-Indus/Harappan Civilization, but the ones given above are accepted today by the majority of scholars.

The Law Code of Manu seems definitely to have been composed after Rig Veda was composed. The easiest way to prove that is that the Law Code of Manu does mention the Rig Veda many times, but the Rig Veda did not mention the Law Code of Manu even once.

The Law Code of Manu does not just mention the Rig Veda only in passing, but as the cornerstone of its civilization's philosophical and spiritual thought. The Law Code of Manu, Chapter one, verse 23, says: "But from fire, wind, and the sun he (the Creator) drew forth the threefold eternal Veda, called Rik (Rig), Yagus, and Saman, for the due performance of the sacrifice."[67]

The next topic that will be examined in more detail is the River Sarasvati (also spelled Sarasvatii). Most scholars now agree that space satellite images show the dried-up path of a once great and mighty river in northwest India and Pakistan. Most scholars believe that this was the River Sarasvatii and most

[67] See Buehler, G., LAWS OF MANU, n. 3

believe that the River Sarasvati dried up in about 1900 BC. Both the Rig Veda and the Law Code of Manu mention the River Sarasvatii in glowing terms, especially Rig Veda, praising the River Sarasvatii as a "great and mighty river" flowing all the way from "the mountains to the sea".

The Law Code of Manu mentions the River Sarasvatii as a "divine River", but does not "sing the praises" of the River as the Rig Veda does. The Law Code of Manu treats the River Sarasvatii more as a boundary or geographical marker. Even this fact, the River Sarasvatii as geographical marker most probably meant that the river was not dried-up, otherwise, most likely, the reference, even as geographical marker, would have been to the dried-up River Sarasvati, not the "divine River Sarasvatii", as appears in the text. Specifically, the Law Code of Manu in Chapter 2, verse 17, says, "That land, created by the gods, which lies between the two divine rivers Sarasvati ("sarasvatI") and Drishadvati ("dRSadvati"), the (sages) call Brahmavarta."[68]

We now know that because of earthquakes prior to, and including 1900 BC, at least part of the River Sarasvatii dried up, preventing the river from flowing from "mountains the to the sea" and making the river much less "mighty" to those who would compose hymns about this "Divine River". That alone is reason enough to see why more and more scholars have concluded that the Rig Veda has

[68] See Buehler, G., LAWS OF MANU, n. 3

an extremely strong possibility, if not almost certainty of being composed prior to 1900 BC and almost no possibility of being composed after 1900 BC.

That same argument can be advanced for the Law Code of Manu. As described above, the Law Code of Manu mentions, "That land, created by the gods, which lies between the two divine rivers Sarasvati and Drishadvati, the (sages) call Brahmavarta." in chapter two, verse seventeen.[69]

Similarly, the analysis that placed the composition of Rig Veda prior to the year 1900 BC, (the date of the earthquakes that dried up the River Sarasvatii), the Law Code of Manu should survive that same exact test of being composed prior to 1900 BC.

This part of the analysis concerning the date of the Law Code of Manu is as follows: The Law Code of Manu would not describe a thriving and desirable tract of land such as "Brahmavarta" if that tract of land was already abandoned (as was the case soon after the River Sarasvatii drying up in 1900 BC (according to modern archeological findings). Since that river had not yet dried up, one could and should logically conclude that therefore, that certain tract of land known as "Brahmavarta", must have been vibrant, alive, a thriving community during the time of composition of the Law Code of Manu.

This now begins to give us some evidence of the correlation between the Law Code of Manu and the civilization known as the Indus/Harappa Civilization.

[69] See Buehler, G., LAWS OF MANU, n. 3

Both seem to have some relationship (if not exactly the same relationship) with a not-yet-dried-up River Sarasvatii (meaning both should have existed prior to 1900 BC). Therefore, because of the earthquakes prior to 1900 BC, rendering many parts of the River Sarasvatii dried-up, thereby encouraging many of the inhabitants of Indus/Harappa Civilization towns and cities abandon the urban centers within that tract of land that the Law Code of Manu calls "Brahmavarta", then it makes sense that the Law Code of Manu was composed prior to the earthquakes, prior to the River Sarasvatii drying up, prior to 1900 BC.

The Physical Location

The physical location (the exact real estate location) where Rig Veda was composed is very similar to one very major location identified in the Law Code of Manu and also very similar to one huge tract of land belonging to the Indus/Harappan Civilization. Since these locations appear to be very similar, if not almost the same, additional location analysis may help us in our quest for the "time-dating" of the Rig Veda and the Law Code of Manu.

The Rig Veda location or the "Land of the Vedas" was between the Sarasvatii River and Drishadvati ("dRSadvati") River.[70] The first problem is the exact location of the Sarasvatii River.

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[70] Frawley, David, *Geographical References: The Ocean and Soma*, n. 14, p. 35
Rig Veda III.23.4: "He set thee in the earth's most lovely station, in Indraa's place, in days of fair bright weather. On man, on Aapayaa, Agni! on the rivers Drshadvati, Sarasvatii, shine richly."

There have been scholars who contend that the Sarasvatii River is in Afghanistan. The biggest problem with this theory is that Afghanistan is land-locked and therefore does not have an ocean. The Rig Veda clearly states that the River Sarasvatii flows from the "mountains to the sea". Most scholars today believe that the Sarasvatii River ran east of the current Indus or Sindu River that is located in what is now Pakistan.

More than one hundred years ago, a British officer named Oldham discovered the large dried-up "river-bed" of what he believed to be the seasonal river Gaggar (later scholars believed that to be the Sarasvatii). His conclusion was that a seasonal river could not create a river-bed so vast; thus the Gaggar River must be flowing (during its seasonal flow) on the river-bed of an older since dried-up river.

In the early 1970s space satellite photographs were taken of many parts of the world, including India, in part showing underground channels of water where scholars believed that the River Sarasvatii had dried-up. Later carbon testing of the underground waters yielded the result that the water was at least 3,500 years old, similar in time to the dried-up River Sarasvatii.

The Drishadvati River is also another river that is dried-up and has not been located exactly. Some scholars believe that the Drishadvati River was located northeast of the Sarasvatii River and actually flowed into the Sarasvatii River.

This hypothesis would then yield a region where the Rig Veda could have been composed and also the same region, called "Brahmavarta" by the Law Code of Manu, where the Law Code of Manu was composed. For our comparison purposes, this tract of land is also the place where there are many Indus/Harappan Civilization locations, many of which have yet to be excavated.

Alternatively, some other scholars believe that the Drishadvati River was located just due east of the Sarasvatii River and flowed almost parallel to the Sarasvatii River. This second hypothesis would then yield a similar region to the one described above: a location where the Rig Veda could have been composed and also the same "Brahmavarta" region, where the Law Code of Manu was composed. Also, just like above analysis, this similar location is also the place where there are many Indus/Harappan Civilization locations.

In summary, although the precise boundaries are in dispute and the exact course of the Sarasvatii-Drishadvati Rivers are still in dispute, a number of years ago, even prior to the discovery of even more Indus/Harappan Civilization sites, it was said that the ancient Sarasvatii-Drishadvati river zone (now dried up) has yielded the discovery of 1,200 (the Indus/Harappan Civilization) sites on these now dried up rivers, out of a total of more than 1,600 sites in both India and Pakistan.[71]

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[71] See Sharma, IK, *The Sarasvatii-Sindhu Civilization and Vedic Co-relations*, n. 14, p. 149

Rig Veda Preserved Orally

As mentioned above, the Rig Veda was preserved orally. But not just in the ordinary way that most other cultures preserved oral knowledge, by just vaguely repeating a story.

In ancient India, it was discovered that writing on acid-dipped palm leaves or clay tablets lasted a long time, but could be destroyed by the ravages of time, the elements and the insects. The only way to be certain of exact preservation of knowledge was to convince a certain percentage of the population with a talent for memorization to dedicate their lives to memorizing and preserving knowledge. Not just vaguely memorizing a story, as was the custom in other contemporaneous cultures, but exactly memorizing.

Those people with a talent for memorization and a willingness to dedicate their lives to memorizing and preserving knowledge were called Brahmins ("brAhmaNa"), but I call these people "Human Library Books" or "Human Computers". These "Human Library Books" or "Human Computers" were just like early computers of our time: they had to memorize certain "books", and then, upon being prompted, they probably could start anywhere and go forward in the text, as current Brahmins ("brAhmaNa"), "Human Library Books" or "Human Computers" can still do in India, even today.

During the time of the extensive use of the Law Code of Manu, these "Human Library Books" who devoted themselves to memorizing the Law Code of Manu could, I believe, with exact precision, recite any law, on any topic, especially since the Law Code of Manu prescribed a study period for those who studied to be either thirty-six years or eighteen years.

Those Law Code of Manu, these Brahmins ("brAhmaNa") "Human Library Books" could, I believe, probably recite all of the relevant sub-text and commentaries to the laws, if it was required by the "king sitting as judge" or one of the other Brahmins ("brAhmaNa") "human-computers" when he was "sitting as judge" (just to check the wording).

Before the Law Code of Manu, some of the most important "knowledge" to be preserved were the spiritual texts, which were at first were altogether called the Vedas, although later divided into three Vedas, with Rig Veda being the most mentioned. This was the case at the time of the composition of the Law Code of Manu. The Law Code of Manu spoke about three Vedas. Later, one more Veda was added, so we can surmise that the Law Code of Manu was composed after the composition of the first three Vedas and before the fourth one was composed.

The Vedas were very spiritually oriented (lots of hymns of praise for various gods of creation, rain, etc). The Vedas and the "books" that followed contained parts on geography, history, astronomy, astrology, mathematics,

medicine and law. (More about the Vedas below.) Although the Law Code of Manu also contained many verses that could be classified "spiritual laws", such laws will not be examined here other than those that give us insight into the formation section of the Law Code of Manu..

Some texts talk about Brahmins ("brAhmaNa"), being spiritually-minded and "begging" for their food each day, we learn from the Code of Manu and commentaries that in addition to their spirituality, the Brahmins ("brAhmaNa") were actually at the top of society. The Brahmins ("brAhmaNa") did not have to do manual labor.

When the Brahmins ("brAhmaNa") committed crimes, the punishments for their crimes were less harsh than for other members of society. Although in some parts of the Law Code of Manu, the Brahmins ("brAhmaNa") were not supposed to lend money, in other parts, the Brahmins ("brAhmaNa") were allowed to loan money and to charge the maximum amount of interest on a loan, more than any other class or caste of Law Code Of Manu society. (Brahmins ("brAhmaNa") could charge interest rates of up to 60% per year, compared to royalty/warriors called Kshatriya ("kSatriya") who could charge only up to 48% per year, cattlemen/merchants called Vaisyas ("vaizya") who could charge up to 36% in a

year, and even servants/Shuudras ("zUdra") who could charge up to 24% a year on a loan.[72]

There are no such "laws" regarding money-lending in the Rig Veda. In the Indus/Harappa Civilization society, at this time, we only can speculate regarding interest, since the script is not yet fully deciphered, and other clues are not yet available to us.

Giving food or other gifts to a Brahmin ("brAhmaNa") was considered to be a practice that would earn the other members of the Law Code Of Manu society a type of "spiritual merit".

Some modern translators of the Law Code of Manu have translated the word for the Brahmins ("brAhmaNa"), to the English word, "priest". This translation, I believe, is mostly incorrect. When Europeans began translating the Law Code of Manu and the Rig Veda, the translators were probably members of European Christian churches and used to seeing an member of the clergy of the Roman Catholic or Anglican Church, dressed in a black robe, "interceding" between "God" and the non-priests or "lay" members of that church.

Even though the Brahmin ("brAhmaNa") class or caste was treated as the highest level of the society of ancient India, I would argue that this was the price that the society found it had to "pay" in order to maintain its "human library

[72] Law Code of Manu:8:142. "Just two in the hundred, three, four, and five (and not more), he may take as monthly interest according to the order of the castes (varna)"

books" or "human-computers". (Later on, many scholars of today argue, members of the higher classes or castes tried to keep the caste system intact for the reasons of political or economic gain.)

When one person (especially a major or minor King or chief of a village) wanted to hear a Brahmin ("brAhmaNa") recite any piece of knowledge, whether it was a particular law or a "prayer" to any force of "Nature", such as the god of fire, "Agni", or the goddess "Sarasvatii", who was the personification of the River Sarasvattii, one had to call in the Brahmin ("brAhmaNa") to start reciting or singing one particular verse or song, complete with correctly-memorized words, correct pronunciation and correct rhythm). It was almost as if the "human library books" or "human-computers" were asked to "switch the power on".

Furthermore, I would argue, the Brahmin ("brAhmaNa") had to daily perform their "human library books"/"human-computers" functions more than their "priestly" functions. Just as a modern computer memory gets "backed-up" every day, the Brahmins ("brAhmaNa") had to recite every day all that they had memorized, so as not to forget words, pronunciation and the rhythm (since everything they memorized had been reduced to a kind of "poem" or "hymn" "song" and was required to be chanted with a specially assigned rhythm).

The Law Code of Manu shows us one important thing, that the Brahmin ("brAhmaNa") "human-computers" had to memorize and be able to "spit out" on a moment's notice more information on more other topics things than "prayers"; the ability to recite the law was very important to all of the citizens of the Law Code of Manu society.

The laws of the Law Code of Manu were memorized, and as we shall examine briefly below, contained such important non-spiritual topics as weights and measures. If one merchant-seller disagreed with another merchant-buyer about the proper way to judge the weight of a product to be sold, they would go to the king or chief of a village to help them decide. Then that king or village chief would probably ask his law Brahmins ("brAhmaNa"), his law "human library books" or "human-computers" to sing or chant the precise verse of the Law Code of Manu on the origins and exact way to determine correct weights and measures. That same king or village chief might also request the singing or chanting of the verse of the Law Code of Manu that proclaimed that the king or village chief is empowered to be the one to set weekly prices on certain commodities.

A better comparison of Law Code of Manu Brahmins ("brAhmaNa") is not to "priests" in their sacerdotal capacities, but instead the European Middle Ages monastery, when all of the members of a monastery (whether lay members or clergy) spent their days copying books by hand (before the printing press), and

reading out loud any passage that the majority population (who could not read) requested. The books that were being copied of course mostly dealt with religious and Church matters, but occasionally non-Church matters as well. The Law Code of Manu Brahmins ("brAhmaNa"), in my opinion, were much more like Medieval Monastic Scribes without the aid of pen and paper.

Two examples of people from India, that I personally know quite well, with amazing abilities to memorize large amounts of information and recall such information upon a moment's notice, are an Ayurvedic physician, Vansant D. Lad and a professor of music and singer, VV Shrikande.

Both of these individuals have an extraordinary capacity to have committed to memory unbelievable amounts of knowledge in their individual fields (much of it in the Sanskrit language), and, upon request, can immediately summon it up from the depths of their minds and produce it for an audience of one or one thousand.

The Concise Oxford Dictionary of Current English has many definitions of the word, "book". In addition to the usual definition of "a written or printed work consisting of pages glued or sewn together along one side and bound in covers", the Oxford Dictionary defines "book" as "an imaginary record or list (the book of

life)". [73] There is no mention as to whether or not that imaginary record or list is written or not.

That same dictionary, The Concise Oxford Dictionary of Current English, goes on to define the word, "Veda" as "the most ancient Hindu scriptures, esp. four collections called the Rig-Veda, Sama Veda, Yajur-Veda and Atarva-Veda (Sanskrit veda, literally (sacred) knowledge).[74]

Previously, the concept of "The Human Library Book" or "Human Computers with Search Engine" was introduced. I believe that this is a new coinage of words, a new way of expressing the concept of preservation of fixed text, preserved intact and unchanged by the practice of human memory and daily recitation. And that information has been handed down, unchanged, generation after generation for thousands of years. I also believe that compelling evidence exists to point to the conclusion that such oral transmission has occurred in India for a large body of knowledge or "texts" or "books", including Rig Veda and the Law Code of Manu. I myself have personally met individuals in India who have memorized large parts of the Vedas and parts of the Law Code of Manu.

Obviously, memorization is a difficult process. "...the study of it (The Vedas)...by the simple buy arduous process of memorizing, was so accurate and

[73] The Concise Oxford Dictionary of Current English, (1995) p. 147
[74] Id., 1553.

minute that, with a view to establish the text and prevent interpolation, every verse, word, and syllable has been counted." [75]

In ancient India, the idea of preserving knowledge by writing was rejected (because of the impermanency of writing on clay pots, clay seals or even carving on stone that could be broken or on palm leaves, parchment or leather that could be lost or burned by an enemy).

A more detailed discussion of the theory of "The Human Library Book" may help the reader's understanding. In ancient India, it must been observed that any one human being could remember quite precisely (i.e. word for word) long passages of information, if such information was sung or chanted. In order for the "hymn" to be sung or chanted in the same way every time, different musical "beats" or "meters" were devised, and that the information was poetically and musically set to a particular musical pattern.

In order for anyone to want to give up their entire lives to becoming a Brahmin ("brAhmaNa"), "Human Library Book", it was probably found to be necessary to elevate the social status of the Brahmins ("brAhmaNa") "Human Library Books", so that children could aspire to devote their lives to becoming a Brahmin ("brAhmaNa"),"Human Library Book". Food and shelter were probably provided by the society, so that the Brahmins ("brAhmaNa"),"Human Library Books" did not have to do other work in order to "earn their daily bread".

[75] See Ragozin, Zenaide A., *History of Vedic India,* (1984, rep.2003) p. 119

The main "work" that the Brahmins ("brAhmaNa"),"Human Library Books" did was to remember their "book" (their portion of Rig Veda or Law Code of Manu or other important composition) by chanting it several times a day and by teaching it to the next generation.

Originally, the older compositions that were memorized by Brahmins ("brAhmaNa"), "Human Library Books" mostly had philosophical or spiritual or religious content and prayers to some aspect of the "Divine". The individual persons that we are here calling, by Brahmins ("brAhmaNa"), "Human Library Books" probably also engaged in recitations for themselves, their families and others. The next generation of by Brahmins ("brAhmaNa"), "Human Library Books" probably would be a child of the Brahmin ("brAhmaNa")," "Human Library Book", usually a son, who was willing to devote his entire life to becoming a "Human Library Book".

It now appears that it was even better if the entire "Human Library Book" content did not just serve a single purpose, nor even just a duel purpose, but multiple purposes. For instance, each line of Rig Veda seems to have been so carefully thought out so as to contain not only what appears on first blush to be religious and spiritual prayers and stories, but upon further examination reveal information about history, geography, astronomy, astrology and mathematics.

In ancient India, it had been observed that any one human being could remember quite precisely (i.e. word for word) long passages of information, as the Brahmins ("brAhmaNa") remembered the Vedas. Writing, it was thought, would make people lazy about their memorization and actually shrink the human mind and the capacity for memorization.

Actually, for modern students of the ancient texts of India, such as Rig Veda and the Law Code of Manu, we are fortunate that writing did not "catch on" to any large extent in ancient India. Otherwise, most of Rig Veda probably would have been written down on parchment or acid-dipped palm leaves and been lost, having been eaten by insects or destroyed by the ravages of time. Of course, there was the writing on domestic clay pots and commercial writing on commercial pots. But the people of ancient India seemed to realize, as few contemporaneous cultures did, that most writing would be destroyed, or that it might be extremely difficult to leave a type of "Rosetta Stone" in a place where it would be easily found and aid in the decipherment of ancient texts.

Also, since the chanting of the Vedas requires precise meters, tones, and pronunciation, the people of ancient India have provided the modern listener with a type of "time travel machine", almost like an ancient audio-recording-device, available for listening today, to the chants of thousands of years ago.

Manu/Rishis/Dharma/Smrti/Shruti

The word "Manu" has many different meanings depending on the context. "Manu" can mean: "thinking, wise or intelligent". "Manu" can also generally mean man or mankind, or "the Man par excellence" or the representative man and father of the human race. In the Rig Veda, there is the "Manu" that is said to have been the first to have instituted sacrifices and religious ceremonies. In general, although in most cases, the word "Manu" has to do with human hood, the name "Manu" is also used to describe a divine being or a mythical progenitor of the earth.[76]

At the time of the composition of the Rig Veda, human beings that were called "Rishis" ("RSi"), were supposedly very wise or "enlightened" beings or seers who were able to "see" or "hear" the songs of the Universe and sing or chant them out loud. Since the Sanskrit word "Maha" roughly means great, then the two words together, "Maha-rishi" ("maha-RSi"), means "Great Seer". Many of the original composers of Rig Veda were given the title "Maha-rishi" ("maha-RSi").

"Manu" refers to a "Maha-rishi" ("maha-RSi"), or a family or school of Rishis ("RSi") and "Maha-rishis" ("maha-RSi"), who "wrote" or composed or complied the Law Code of Manu.

In some stories, this "Maha-rishi" ("mahaRSi"), named Manu is regarded as the progenitor of the present race of living beings, and said, like the "Noah" of

[76] See Monier-Williams, A Sanskrit-English Dictionary, n. 7

biblical "Noah's Arc" fame, to have been preserved from a great flood and the father of a new race of humans. It bears noting that there is an etymological similarity to the German word for man, "Mann", and of course, the English word, "man".[77]

The Law Code of Manu is also called by various other names. One of the names is: Manavadharmashastra ("mAnava-dharma-zAstra").

The word Manava ("mAnava") means: "...descended from or belonging to man or Manu, human; favoring men, the children of men, mankind; the races of men..." [78] The word Dharma ("dharma/dhArma") means: "...that which is established or firm, steadfast decree, statute, ordinance, law, usage, practice, customary observance or prescribed conduct, duty; right, justice (often as a synonym of punishment; virtue, morality, religion, religious merit, good; holding to the law, doing one's duty) Law or Justice personified as a Bull; law or doctrine of Buddhism; the ethical precepts of Buddhism (or the principal (of) dharma..."[79]

One of the writers on Buddhist Law, Andrew Huxley, talks about the reduction to writing of Buddhist Law oral memorized texts:

"The vinayapaali (which was collated and reduced to writing in the first century BCE) consists of oral memorized texts and jottings of various kinds from

[77] See Monier-Williams, n. 8
[78] Id.
[79] Id.

the prior Buddhist centuries, the core of which must have been fixed by the reign of King Asoka." [80]

Professor Sompong Sucharitkul, in his noted article, Thai Law and Buddhist Law, wrote about the Vinaya:

"True it is that the Vinaya lacks some of the elements in the modern legal system from the perspective of the Western world. There is no Court of Appeal, no prison wardens, no bailiffs to compel or enforce compliance with the verdict of monastic peers, while the most serious offenses are punishable with a form of capitis diminutio (defrocking or derobing of a monk). The vinaya is nonetheless law, if only for application within the religious Order, with inevitable repercussion for serious offenses in the secular world..."

Professor Sucharitkul has introduced well these "different" Eastern concepts to a Western audience." [81]

The word shastra ("zAstra") means "...an order, command, precept, rule; teaching, instruction, direction, advice, good counsel; any instrument of teaching, any manual or compendium of rules, any book or treatise, any sacred book."

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[80] See Andrew Huxley, *BUDDHIST CASE LAW ON THEFT: the viniitavatthu on the second paaraajika*, University of London Law Department School of Oriental and African Studies.(1999)

[81] See Sompong Sucharitkul, *THAI LAW AND BUDDHIST LAW*, American Journal of Comparative Law (1998)

The Law Code of Manu is also called by various other names. One of the names is: Manu-smriti ("mAnu-smRti"). Another definition of the word Manu ("manu") is:

"...thinking, wise, intelligent, "the thinking creature", man, mankind, the sons of man; the Man par excellence or the representative man and father of the human race (regarded in the Rig Veda as the first to have instituted sacrifices and religious ceremonies...the name Manu is esp(ecially) applied to 14 successive mythical progenitors and sovereigns of the earth,...the 7th Manu , called {vaivasvata}, Sun-born ... regarded as the progenitor of the present race of living beings...mentioned by Tacitus, in his wk. {Germania}, as the mythical ancestor of the Germans, {mann}, {man}; Angl. Sax. {man}; Eng. {man}." [82]

Smriti("smRti"): The word Smriti ("smRti") is also a difficult concept, and will here be presented by comparing and contrasting it with the word Shruti ("zruti").

In ancient India at the time of the composition of the Law Code of Manu, there was a differentiation between the information that was considered "divine in origin" and that that was generated by man. The "divine in origin" compositions were called Shruti ("zruti") and the human-generated "books" were called Smrti ("smRti"). Shruti ("zruti") is defined as: "hearing, listening, the ear, organ or power of hearing... that which is heard or perceived with the ear, sounds , noise

[82] See Monier-Williams, n. 8

etc. ... that which has been heard or communicated from the beginning, sacred knowledge orally transmitted by the Brahmans from generation to generation, the Veda (i.e. sacred eternal sounds or words as eternally heard by certain holy sages called Rishis, and so differing from Smirti or what is only remembered and handed down in writing by human authors..." [83]

Or in context: "Sruthi means that which is heard of acquired by hearing. All the four Vedas together with all affiliated Upanishads are known as Sruthi. They are regarded as primary scripture...the eternal truths stated in "sruthi"...is considered divine in origin." [84]

In other words, Shruti ("zruti") was supposedly the divine sounds or songs that is being sung all of the time and that any human being that was or is perceptible enough could or can hear them (only really available to a rishi ("RSi")).

Smrti ("smRti") is defined as: "remembrance, reminiscence, the whole body of sacred tradition or what is remembered by human teachers (in contradistinction to {zruti} or what is directly heard or revealed to the Rishis... the whole body of codes of law as handed down...by tradition (esp. the codes of Manu, Yajnavalkya and the 16 succeeding inspired lawgivers, viz. Atri, Vishnu,

[83] See Monier-Williams, n. 8
[84] See Kutty, ET Sankaran, *A Glimpse on SRUTHI,* Bharatiya Vidya Bhavan (2006) p. 3

Harita, Usanas or Sukra, Angiras, Yama, Apastamba, Samvarta, Katyayana, Brihas-pati, Parasara, Vyasa, Sankha, Likhita, Daksha and Gautama)." [85]

Or in context: "'Smrithi' means that which is remembered or written down from memory...'smrithi' actually interpreted 'sruthi' texts in a practical way...they are intended for ordinary people or less intelligent people..." [86]

Smrti ("smRti") is probably the precursor of the English word, "smart". In this context, one is smart if he or she can remember much information.

Smrti ("smRti") was not as "high and mighty" as Shruti ("zruti"). Shruti ("zruti") was the song that was constantly being sung by the divine, available to any human being, usually a Rishi ("RSi"), with a sufficiently subtle "radio-like" mind. Smrti ("smRti") was much more common, "remembered" by human teachers (like Manu).

A Rishi ("RSi"), as described above, were those who "received" Shruti ("zruti"). Rishi ("RSi") is defined as: "...an inspired poet or sage, any person who alone or with others invokes the deities in rhythmical speech or song of a sacred character...were regarded by later generations as patriarchal sages or saints, occupying the same position in India history as the heroes and patriarchs of other countries, and constitute a peculiar class of beings in the early mythical

[85] See Monier-Williams, n. 8
[86] See Kutty , ET Sankaran, *A Glimpse on SMRITHI*, (2006) p. 22-23

system...they are the authors or rather seers of the Vedic hymns...they are the inspired personages to whom these hymns were revealed." [87]

Spiritual Underpinnings of the Law Code of Manu through Rig Veda

In order to get some feel for the minds of the people who both wrote and were influenced by the Law Code of Manu, we need to examine, even briefly, the Vedas. Rig Veda especially was the chief "book" or "hymn" which was chanted or sung everyday and which was, as was pointed out above, the original "law book", in the sense that this was a codification of everything that the average person of that time and place believed: for instance, that there was a god, or force of nature called "Agni", which was responsible simultaneously for hot "fire", for the "fire of digestion" and the "spark" in human brains. And that all of those "fires" could be made better or stronger by "singing" or "chanting" hymns of praise to "Agni" (or hiring others to sing for you). Correspondingly, a lack of singing "Agni" praises would result in all of those "fires" not being "stoked" or cared for and result in a weakening or smothering of those fires whether it was a real hot "fire", the "fire of digestion" or the "spark" in human brains.

It was a rather simple formula: the magic words had been "heard" by spiritual persons. Sing more songs, get more. Sing fewer songs, get less. Also, one could sing the songs asking that as they got "more" that their enemies got "less". Supposedly, the gods or "Nature" were "fed" by the songs. Feed the gods

[87] See Monier-Williams, n. 8

to get fed yourself; starve the gods and receive starvation for yourself. It seems to have been very simple, very quick, and seemed to have only occasional references to worlds beyond this one.

An example of Shruti ("zruti") is from the Vedic "Text" of Rig Veda, Chapter II (Second Mandala), Hymn 1, Directed to Agni—Fire And More :

"Thou, Agni, shining in thy glory through the days, art brought to life from out the waters, from the stone:

From out the forest trees and herbs that grow on ground, thou, Sovran Lord of men art generated pure.

Thine is the Herald's task and Cleanser's duly timed; Leader art thou, and Kindler for the pious man.

Thou art Director, thou the ministering Priest: thou art the Brahman, Lord and Master in our home.

Hero of Heroes, Agni! Thou art Indra, thou art Visnu of the Mighty Stride, adorable:

Thou, Brahmanaspati, the Brahman finding wealth: thou, O Sustainer, with thy wisdom tendest us.

Agni, thou art King Varuna whose laws stand fast; as Mitra, Wonder-Worker, thou must be implored.

Aryaman, heroes' Lord, art thou, enriching all, and liberal Amsa in the synod, O thou God." [88] (emphasis added)

This is a good example of text from this spiritual and philosophical "book" that pre-dated the Law Code of Manu and was considered to be "sacred" by the authors of the Law Code of Manu, as we shall see below.

One of the biggest differences between the Vedas and the Law Code of Manu is the notion that God or the gods will give out rewards or punishments to humans rather than kings or village chiefs, acting as judges, giving out punishments (usually not rewards). These" Divine Rewards" came, for instance, in the form of sufficient rain for watering crops,

People prayed for large crop yields, freedom from sickness, defeat of their enemies, etc. Sometimes "divine" punishments came in the form of little or no rain, many pests that ate the crops and defeat by enemies. And one of the means of "earning" specific rewards was "acceptable" sacrifices to the gods.

The "rewards and punishments" mentioned in the Vedas also seemed much more immediate, that is, realized while one was still alive. On the other hand, in the Law Code of Manu, much more time is devoted to rewards, but often heavenly rewards. Many of these rewards were not the immediate earthly rewards of the kind mentioned in the Rig Veda, but rewards that were far off, like going to one of the heavens. The punishments were also not immediate; many were described as

[88] See Ralph T.H. Griffith, *The Rig Veda* [1896]

punishments after death, for instance, being sent to one of the eighteen hells, or for people who were more afraid of reincarnation, the threat of being reincarnated as some very undesirable animal.

Within each phrase of Rig Veda there exists many references packed with meaning that is "hidden" to the modern reader. We will next examine some of the myriad "hidden" meaning of these "packed" words.

For instance, "agni" is defined as: "fire, sacrificial fire (of three kinds); the god of fire, the fire of the stomach, digestive faculty, gastric fluid; bile; gold; (Latin (ignis))[89]

Therefore, when the listeners in ancient India heard the word "agni", did they just think about the god of fire? Did they think about fire itself, sacrificial fire or non-sacrificial fire? Did they think about improving their own gastric fire (since their system of medicine, Ayur Veda, says that most disease was born from improper digestion, i.e. not enough "fire of digestion")?[90] Did they think about gold? Or all of the above?

Of course there is no definitive way to find out. But if the word "agni" had all of those different meanings and the average listener knew all of the meanings, then it is easier to suppose that all of the meanings were brought forward to the front of the listener's mind, to some extent or another.

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[89] See Monier-Williams, n. 3

[90] See e.g. Vasant Dattatray Lad, MASc, *Textbook of Ayurveda*, The Ayurvedic Press (2002) p. 81

Another question comes to mind, as to whether the listeners of the time of Rig Veda composition (Rig Veda Time) heard something different, or interpreted something differently than the listeners at the time of the composition of the Law Code of Manu (Law Code of Manu Time).

Did the listeners at the Rig Veda Time simply think about increasing their own cooking fire or their own gastric fire? Did they pray to destroy the cooking fire and gastric fire of their enemies? Did the listeners at the Law Code of Manu Time interpret the Rig Veda in a similar manner or were they more worried about heaven and hell or being reborn as a donkey? That is to say, did the first group think more about the present and the second group think more about life after death? These and other similar questions are, as of yet, not completely answered. But we can intelligently speculate, the more we study the well-preserved oral texts. And if the emerging theories are correct, that there is a correlation between Rig Veda and the Indus/Harappa Civilization, then additional information becomes available for scholars to analyze.

The word Brahmin ("brAhmaNa") means growth, expansion, evolution, development, swelling of the spirit or soul, from {bRh}) pious effusion or utterance, outpouring of the heart in worshipping the gods; the sacred word, the Veda, a sacred text, a text or Mantra used as a spell; the sacred syllable Om; religious or spiritual knowledge; holy life; the Brahma or one self existent

impersonal Spirit, the one universal Soul (or one divine essence and source from which all created things emanate or with which they are identified and to which they return), the Self-existent, the Absolute, the Eternal (not generally an object of worship but rather of meditation and-knowledge; the class of men who are the repositories and communicators of sacred knowledge, the Brahmanical caste as a body, one versed in sacred knowledge; the Brahman was the most learned of them and was required to know the three Vedas, to supervise the sacrifice and to set right mistakes."[91]

A similar question arises here. When the people of the Rig Veda Time or Law Code of Manu Time heard the word "Brahman", did they think of the god of fire, Agni? Did they think of the Brahmin men in another village, town or city? Or did all of these meanings cross their minds together?

Indra is defined as the god of the atmosphere and sky or lord of rain (who in Vedic mythology reigns over the deities of the intermediate region or atmosphere; he fights against and conquers with his thunder-bolt {vajra} the demons of darkness, and is in general a symbol of generous heroism; {indra} was not originally lord of the gods of the sky, but his deeds were most useful to mankind , and he was therefore addressed in prayers and hymns more than any other deity, and ultimately superseded the more lofty and spiritual Varuna; in the later mythology {indra} is subordinated to the triad Brahman, Vishnu, and Siva,

[91] See Monier-Williams, n. 8

but remained the chief of all other deities in the popular mind)."[92] If he remained chief of all other deities, how come so many hymns begin with Agni?

Vishnu ("viSNu") is the "All-pervader" Name of one of the principal Hindu deities (in the later mythology regarded as `"the preserver", and with Brahma "the creator" and Siva `"the destroyer", constituting the well-known Tri-murti or triad; although Vishnu comes second in the triad he is identified with the supreme deity by his worshippers; in the Vedic period, however , he is not placed in the foremost rank, although he is frequently invoked with other gods [esp. with Indra whom he assists in killing Vritra and with whom he drinks the Soma juice; as distinguished from the other Vedic deities, he is a personification of the light and of the sun, esp. in his striding over the heavens, which he is said to do in three paces, explained as denoting the threefold manifestations of light in the form of fire, lightning, and the sun, in the Brahmanas he is identified with sacrifice , and in one described as a dwarf; in the Maha-bharata and Ramayana he rises to the supremacy which in some places he now enjoys as the most popular deity of modern Hindu worship: the distinguishing feature in the character of the Post-vedic Vishnu is his condescending to become incarnate in a portion of his essence on ten principal occasions, to deliver mankind from certain great dangers." [93] Remember that both

[92] See Monier-Williams, n. 8
[93] Id.

Vishnu ("viSNu") and Indra both drank the Soma juice. Something related to this will appear below.

Varuna ("varuNa") is the "All enveloping Sky"...; he is often regarded as the supreme deity, being then styled `"king of the gods" or "king of both gods and men" or "king of the universe"; no other deity has such grand attributes and functions assigned to him; he is described as fashioning and upholding heaven and earth , as possessing extraordinary power and wisdom called {mAyA}, ascending his spies or messengers throughout both worlds, as numbering the very winkings of men's eyes, as hating falsehood, as seizing transgressors with his {pAza} or noose, as inflicting diseases, especially dropsy, as pardoning sin, as the guardian of immortality; ...yet he is often connected with the waters, especially the waters of the atmosphere or firmament, and in one place ...is called with Mitra, {sindhu-pati}, "lord of the sea or of rivers"; hence in the later mythology he became a kind of Neptune, and is there best known in his character of god of the ocean."[94]

Mitra is the "friend, companion, associate...sustaining earth and sky and beholding all creatures with unwinking (unblinking) eye." [95]

Conclusion to Chapter Two

There is strong evidence that the same geographical location was shared by the people of the Rig Veda, later by the people of the Law Code of Manu and

[94] See Monier-Williams, n. 8
[95] Id.

perhaps contemporaneously by the people of the Indus/Harappa Civilization, the land, "... which lies between the two divine rivers Sarasvati and Drishadvati, the (sages) call Brahmavarta."

During the time of the extensive use of the Law Code of Manu, Brahmins ("brAhmaNa"), "Human Library Books" or "Human Computers" who devoted themselves to memorizing the Law Code of Manu could, I believe, with exact precision, recite any law, on any topic.

The Law Code of Manu is a "less divine" "Smrti"--"that which is remembered", not a "more divine" "Shruti"—"that which is heard" by a Rishi, like the Rig Veda, which contains much "hidden" information.

# Chapter Three: Indus/Harappa Civilization Decline

There is ample evidence of a large-scale volcanic-seismic-tectonic upheaval, (in approximately 1900 BC) involving a vast region, including part of the Near East, the Arabian Sea and in India, the path of the River Sarasvatii.[96] This was not just something that happened in and beyond the Indian subcontinent. As the space satellite Landsat Imagery has shown, the palaeo-channels of the Sarasvatii River depends on factors like the pattern of drainage scars, distinct tone, texture and surface manifestations such as younger alluvium and concentration of vegetation.[97]

Some scholars have summed it up succinctly, saying because of earthquakes, were once the Sarasvatii River flowed, now is only desert.[98] Although there must have also been other rivers that dried up in the earthquakes, such as the Drishadvati ("dRSadvati") River, which has resulted, in part, in the formation of the Thar Desert.

The river Sarasvatii was structurally controlled by enechelon faults; for this reason even relatively minor tectonic movements caused big changes in the configuration of the palaeo-channels.[99] There also exists evidence of other earthquakes prior to the large one of 1900 BC.

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[96] See Bharadwaj, OP, *The Rigvedic Sarasvati*, n. 14, p. 17
[97] Id., p. 24
[98] See McIntosh, Jane, *A Peaceful Realm*, n. 58, p. 185
[99] See Lal, BB, *The Sarasvati flows on*, n. 16, p. 14

Evidence of an earthquake in the Indus/Harappa Civilization city of Dholavira, located in the western part of what is now the Indian State of Gujarat, have been dated to about 2200 BC, which probably resulted in the diversion of the river drainage system; the Sarasvatii River became shallower, probably resulting in a trade disaster.[100]

Dholavira was apparently a large and prosperous port city of the Indus/Harappa Civilization, similar to the Indus/Harappa Civilization city of Lothal. Both cities are located in what is modernly known in India as the State of Gujarat.

Because of the number of earthquakes over the several hundred years prior to the big earthquake of 1900 BC, some scholars speculate that by the time of the Mature Harappan civilization, the Sarasvatii River had already partially dried up to cause it to terminate in an inland delta. This inland delta is located near the modern Pakistani city of Fort Derawar, where a large number of Mature Harappan sites have been discovered.[101]

Another theory that is gaining in popularity among scholars is the idea that the people of the Indus/Harappa Civilization were just not good at managing the natural resources around them. If true, that mis-management had terrible consequences. The decline of the Indus/Harappan Civilization in part is, as the

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[100] See Gaur, Aniruddh See Singh, *Harappan Maritime Legacies of Gujarat*, Asian Publication Services (2000) p.153-154

[101] See Possehl, Gregory, *The Indus Civilization*, Rowman Altamira (2002) p. 9

famous British archeologist, Wheeler, says, "they were wearing out their landscape". If one does the calculations, one finds that one farmed-acre annually fed about 1.8 people; today in western Pakistan, for example, 60% of all milk production goes to human consumption and 12% of all acreage is used for fodder production.

Estimates are that there are 5,000,000 fired bricks at the Indus/Harappa Civilization site of Mohenjodaro; in modern times, one tree provides enough fuel to fire 1000 bricks; the Harappans must have denuded their forests; the evidence points to a precarious economic situation as a significant factor in the decline of this civilization.[102]

This kind of "overuse" of natural resources was a relatively common phenomenon throughout history. It is only a little surprising coming from the people of the Indus/Harappa Civilization. They seemed so sophisticated in many areas of their lives, such as their technology. But perhaps the combination of the earthquakes and drying up the Sarasvatii and Drishadvati ("dRSadvati") Rivers, along with the overuse of the natural resources, was just too much of a strain to sustain the complexities of the Indus/Harappa Civilization.

[102] See Fariservis, Walter A. Jr., *The Origin, Character and Decline of an Early Civilization,* in Lahiri, Nyanjot, Editor, *The Decline and Fall of the Indus Civilization*, Permanent Black (2000) p. 251-262

By about 1900 BC, the Indus/Harappa Civilization city centers were no longer functioning as urban centers. The Indus/Harappa Civilization had come to an end as a complex socio-cultural system.[103]

In one of the Indus/Harappa Civilization cities, Dholavira, a castle and a bailey were unearthed. Dholavira, as stated above, is located in the modern day Indian State of Gujarat, situated in the isolated island of Khadir in the Great Rann of Kachchh; in the post-Harappan period, the urban components rapidly diminish an disappear, along with the weights and many other sophisticated items of art and utility.[104]

This is an important marker to analyze. Many urban components, such as the use of weights and measures for international trade, as well as for local trade, was one of the elements that seemed quite important and in great use during the time of the Law Code of Manu society. If similar use of similar weights and measures were common in the Indus/Harappa Civilization, then perhaps there was an overlap between that Indus/Harappa Civilization and the Law Code of Manu society. The possibility of this overlap becomes even stronger when examined in light of such "urban components" such as weights and measures and other sophisticated items of art and utility disappearing soon after the Indus/Harappa Civilization earthquake of 1900 BC.

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[103] See Possehl, Gregory, *The Indus Civilization*, n. 100, p. 2

[104] See Bisht, RS, *Dholavira*, in Lahiri, N, Ed, *The Decline and Fall of the Indus Civilization*, n. 101, p. 305-314

Since the return of urbanization in ancient India did not return for more than one thousand to fifteen hundred years, there is much more of a chance of such an overlap between the Indus/Harappa Civilization and the Law Code of Manu society, rather than a later overlap.

The majority of scholars are now concluding that the evidence shows that the urban phase of the Harappan Civilization ended around 2000 BC due to massive flooding, climatic changes, earthquakes and increase aridity and decline in trade with West Asia.[105]

Another area that bears examination is the technology of bronze production. The craftsmen of the Indus/Harappa Civilization hardened copper into bronze by alloying it with tin; after the decline of the Harappans, no tin-based bronze objects were produced in India for over a millennium.[106]

This provides another clue towards answering the question of the possible overlap between the Indus/Harappa Civilization and the Law Code of Manu society. Archeological evidence reveals the bronze production of the Indus/Harappa Civilization. The Law Code of Manu tells us of its production of various metals, including bronze. Once again, another piece of evidence is found linking the Indus/Harappa Civilization with the Law Code of Manu society of ancient India.

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[105] See Sharma, DP & Maduri, *Panorama of Harappan Civilization*, Kaveri Books (2003), p. 64

[106] See Singh, Shivaji, Vedic Culture and its Continuity Paradigm and Dimensions, in Dube, SR, Ed, Vedic Culture and Its Continuity, n. 25, p. 27

Because of the previous earthquakes, the great earthquake of 1900 BC and the decline of the Indus/Harappa Civilization, there was also a sharp decline in production of the seals of the civilization and the accompanying writing on the seals.

It seems that seals and the Indus writing was used only by a small group of political and ritual elites; the confirmation of the loss of power of that small group of political and ritual elites by 1700 BC also coincided with the end of the seals and the Indus writing.[107]

It does not appear that other invaders could have come in to have started the Law Code of Manu society. As mentioned briefly above, no biological discontinuities have been found in India between 4500 BC and 800 BC; the North and South Indian gene pool is the same and differ markedly from the gene pool of Western Eurasia.[108]

Cotton In Ancient India

Another way in which one can try to fix the dates of ancient cultures in India is through the study of certain archeological finds, such as cotton.

KD Sethna's book on the cotton of ancient India is an excellent example, analyzing ancient texts, such as Rig Veda, searching for the Sanskrit word for

[107] See Kenoyer, JM, Ancient Cities of the Indus Valley Civilization, n. 63, p. 79
[108] See Singh, Shivaji, Vedic Culture and its Continuity Paradigm and Dimensions, in Dube, SR, Ed, Vedic Culture and Its Continuity, n. 25, p. 27

cotton, karpaasa ("karpAsa").[109] One of the first facts that Sethna brings up is that cotton is not mentioned in the Rig Veda, but remains of cotton were found in the ancient archeological sites of the Indus/Harappa Civilization in what was northwest India and Pakistan.

DP Sharma and Madhuri Sharma edited a recent book about this time period. They called the Indus/Harappa Civilization the Early Harappans and Indus-Sarasvati Civilization. The Sharmas looked at all of the evidence and concluded that at least from 2700 to 2000 BC, a highly developed civilization existed along the rivers Indus and (the now dried up) Sarasvatii, in ancient India (now located mostly in Pakistan).[110]

Although the Law Code of Manu does not reveal its exact dates of composition, it does reveal its society as a highly developed civilization, similar to the highly developed civilization of the Indus/Harappa Civilization.

The Law Code of Manu was also very sophisticated and seemed to apply to quite of number of urban and non-urban locations. Regarding the Indus/Harappa Civilization, over the last 80 years more than 2668 sites from this civilization have been discovered in South Asia.[111]

This is very different information than what was known in the 1920s, when

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[109] See Sethna, KD, *Karpasa in Prehistoric India*, n. 26, p. x
[110] See Sharma, DP & Madhuri (Editors), *Early Harappans and Indus-Sarasvati Civilization*, Kaveri Books, (2006) p. 3
[111] See Sharma, DP & Madhuri, n. Cx, p. 4

the British archeologist, Sir John Marshall, directed archeological digs of just the two cities of the Indus/Harappa Civilization that he had found, Mohenjo-daaro and the sister-city, Harappa. In 1927, Sir John Marshall published his results in the Archaeological Survey of India. One of things that he announced was the discovery of cotton cloth.

Sethna, as mentioned above, examined the ancient India text of Rigveda, and concluded that Rigveda does not mention cotton. Sethna concluded that if Rigveda does not mention cotton, Rigveda must have come before the Indus/Harappa Civilization of 2500 BC, which did have cotton and even traded internationally in cotton.[112]

The Law Code of Manu does mention cotton, therefore, another marker exists, showing that the Law Code of Manu is later in time than the composition of the Rig Veda. The mention of cotton, karpaasa ("karpAsa") in the Law Code of Manu relates to the sacrificial string of Brahmins ("brAhmaNa"), and specifies that it shall be made of cotton. These references to cotton give us another clue as to the dating of the Law Code of Manu; it cannot be dated in any case earlier than post Rig Veda.[113]

Not only is the Sanskrit word for cotton, karpaasa ("karpAsa") not mentioned in Rig Veda, it is also not mentioned in the other three Vedas that

[112] See Sethna, KD, *Karpasa in Prehistoric India*, n. 26, p. 18
[113] The sacrificial string of a Brahmana shall be made of cotton

follow Rig Veda, nor the works that immediately followed the Vedas: the Braahmanas, Aaranyakas or Upanishads; according to Rigveda, clothes of that time period were woven of sheep's wool or goat's wool, sometimes adorned with gold.[114]

The Indian scholar, SR Rao, wrote that the evidence shows that the pre-Harappans at Mehrgarh had domesticated cotton by 4000 BC.[115]

If we combine Sethna's research that karpaasa ("karpAsa") is not mentioned in the Rig Veda and Rao's research that the pre-Indus/Harappa Civilization had domesticated karpaasa ("karpAsa") by 4000 BC, that puts the date of the composition of Rig Veda even further back in time than the Max Mueller "guess" of 1500 BC. If all of these facts and conclusions are correct, the composition of Rig Veda should be dated earlier than 4000 BC.

Some scholars claim that the climate of India has not changed much over time. Perhaps they have not looked at all of the evidence when reaching such a conclusion.

In what is now today called the Sind (located in what today is Pakistan) is partly a desert, which clearly at the time of the 4th century BC, the records of Alexander the Great described as a fertile land.[116]

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[114] See Sethna, KD, *Karpasa in Prehistoric India*, n. 26, p. 24
[115] See Rao, SR, *New Frontiers of Archaeology*, n. 24, p. 3 n. 24
[116] See Sethna, KD, *Karpasa in Prehistoric India*, n. 26, p. 27

The climate of India has changed and that may be one of the reasons that woolen clothing was worn and cotton not developed. There was contact established between the merchants of the Kulli Culture in South Baluchistan (another Indus civilization city) and those of Early Dynastic Sumer, probably soon after 2800 BC.[117]

Rig Veda mentions knowledge of parts of Afghanistan, the Punjaab, Sind and part of the Gangetic Valley, pointing the treasure of the ocean as contact with pearl-merchants; it is much more likely that Rig Veda considerably antedates the Harappa Culture; the western banks of the Sarasvati River, rather than the western Punjaab appears to be the center of the Rig Vedic civilization.[118]

This now brings us to a discussion of the word, Mlechchha, ("mleccha"). Mlechchha, ("mleccha") is defined as: a foreigner, barbarian, non-Aryan, man of an outcast race, any person who does not speak Sanskrit and does not conform to the usual Hindu institutions; a person who lives by agriculture or by making weapon; a wicked or bad man, sinner; ignorance of Sanskrit, barbarism. The Vishnu Dharma-suutras say that one should not perform sraaddha in a Mlechchha country nor visit such a country (except on a pilgrimage). This seems to strongly

[117] See Sethna, KD, *Karpasa in Prehistoric India*, n. 26, p. 47, quoting Piggott, Stuart, *Prehistoric India*, (1961)
[118] Id., p. 60-61

indicate that the people living in these countries are of mixed origin, and one who visits them needs purification.[119]

Mlechchha could have just meant some of the citizens of the Indus/Harappa Civilization: mixed and complicated. It could have meant different cultural and linguistical forces.[120]

From Mesopotamia, on clay tablets, in cuneiform texts, often a far-away kingdom is inscribed, called Meluhha. Assryiologists tell us that the "h" is aspirated and hard, equivalent to the "kh". Thus Melhuhha is to be pronounced Melukhkha, which could very well be the Mesopotamian pronunciation of Meluhha. This might be especially true if the traders from Harappa spoke the "corrupt" version of Sanskrit called Praakrit, where the word would be pronounced (or mispronounced depending on one's adherence to Sanskrit purity) "Melakha".[121]

Meluhha belongs to one of three kingdoms referred to by a sailor returning to the city of Ur, the chief port-of–entry into Mesopotamia fro the Persian Gulf. The three kingdoms were: Dilman (or Tilman or Telmun), Makan (or Makkan, or Magan) and Meluhha (or Miluhha). Whenever listed together, they also indicated their relative distances from Mesopotamia.[122]

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[119] See Sethna, KD, *Karpasa in Prehistoric India*, n. 26, p. 65
[120] Id., p. 67
[121] See Sethna, KD, *Karpasa in Prehistoric India*, n. 26, p. 69
[122] Id., p. 72

During the reign of Sargon of Akkad (2350 BC), ships from Dilmun, Makan and Meluhha are said to have been moored in the harbor of his capital; by 2100 BC, direct trade is only with Dilman and Makan. (There were some earthquakes in ancient India prior to the large earthquake of 1900 BC. These smaller earthquakes could have caused the drop in trade.) Meluhha seems to have become only an indirect supplier of goods. Finally, at the time of the Hammurabi Dynasty (c. 1700 BC) even Dilmun loses trading contact not only with Meluhha but also with Makan.[123]

This is once again, another clue as to the timing of the Law Code of Manu society. If the Law Code of Manu society engaged in international trade, as appeared to be the case, and Indus/Harappa Civilization international trade was alive and well from about 3000 BC to 2000 BC, and in steep decline after that, it certainly appears to be more than a coincidence that there exists the possible overlap of cultures.

If it is clear that there were strong trading ties, i.e. transfer of goods (pre Hammurabi Dynasty) between Mesopotamia and Meluhha (the ancient Indian Harappa Civilization, especially its three large cities of Mohenjadaro, Harappa and Lothal), there was, most likely, also trading of information and philosophy between Mesopotamia and Meluhha.

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[123] See Sethna, KD, *Karpasa in Prehistoric India*, n. 26, p. 73

Since there are similarities between the Code of Hammurabi and the Law Code of Manu, it stands to reason that either one influenced the other, or both influenced each other. Given the fact that the Code of Hammurabi contains 282 laws and the Law Code of Manu contains thousands of laws, it is certainly a possibility, and probably a more logical deduction, that the Law Code of Manu had the greater influence.

Rig Veda As An Ultimate Source of Science

Rig Veda is said by some to be the ultimate source of science. Albert Einstein said that cosmic religious experience is the strongest and noblest driving force behind scientific research; veda means knowledge, in Rig Veda, mythology, cosmology and religion are intermixed.[124]

Dr. Shri Ram Verman, in his book, *Vedas: The Source of Ultimate Science,* starts out by defining the world "veda" from Rig Veda as "knowledge", coming from the Sanskrit verb root "vid", which means "to know" and saying that the 10552 verses of Rig Veda contain many scientific provisions.[125]

India believed in the superiority of intuition to intellectual reasoning; Vedic rishis believe what they saw and heard from a superior spirit are the Vedas.[126]

In Rig Veda, the word "Agni" is used quite a bit. Agni sometimes means God, sometimes the sun or light and heat or bodily heat; another word used quite a

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[124] See Verma, Dr. Shri Ram, *Vedas: The Source of Ultimate Science*, Nag Publishers (2005) p. 1
[125] Id., n. 124, p.1
[126] Id., p. 3

bit is "Soma". Soma means Lord of delight and nectar; this is vedic symbolism, riddles to be interpreted with great difficulty.[127]

It is first pointed out that Western scholars usually translate the words "Deva" or "Devata" to mean "deity or god"; Dr. Verman cites the ancient Indian reference book, *Nirukta*, to should that "Dev" is derived from "da, dur, dip and divu" or "knowledge, light, peace and delight".[128] Sir Monier-Williams seems to agree, defining "deva" as heavenly, divine (also said of terrestrial things of high excellence).[129]

Astronomy In Rig Veda and Law Code of Manu

There has been a recent shift in the understanding of Indian astronomy: the archaeological discovery that the River Sarasvati dried up before 1900 BC, making ancient texts, such as Rgveda, older than that and the discovery of astronomy in the Vedic texts.[130]

Rigveda says that the moon's path was divided into twenty-seven equal parts, each part was called a nakshatra; modern science says that such a conclusion was close to reality, the moon takes about twenty-seven and one-half days to

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[127] Verman, Dr. Shri Ram, *Vedas: The Source of Ultimate Science*, n. 124, p. 15-16
[128] Id., p.21
[129] See Monier-Williams, n. 8
[130] See Kak, Subhash, *Birth and Early Development of Indian Astronomy*, in Selin, Helaine, Editor, *Astronomy Across Cultures, The History of Non-Western Astronomy*, Kluwer Academic Publishers (2000) p. 303

complete its cycle.[131] This conclusion required fairy precise and accurate observation.

Another big astronomical leap for the people of the Indus/Harappa Civilization was the conclusion that the moon received its light by way of the sun. The moon was called suurya rasmi, the one that shines by sunlight; vedic ritual (that ritual derived from the Rig Veda) was based on the times for the full and new moon, solstices and equinoxes.[132]

The Rigveda mentions five planets and two of them, Jupiter and Venus by name.[133] Subsequent texts composed after Rig Veda although not dated, mention more planets.

A fairly precise calendar seems to have been invented in India. It is not exactly known when this calendar was invented, but some scholars believe that perhaps it was invented at the same time of the beginning of the civilization in Mehrgarh. Apparently, the calendar used the observation of the Pole Star. The Pole Star keeps changing over time due to the "precession" of the earth's polar axis, with a period of roughly 26,000 years; Polaris is the Pole Star now, but

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[131] See Singh, Bhagwan, *The Vedic Harappans*, n. 32, p. 409
[132] See Kak, Subhash, *Birth and Early Development of Indian Astronomy*, in Selin, H. Ed, *Astronomy Across Cultures*, n. 129, p. 308
[133] Id., p. 308

around 3000 BC it was Draconis; the Greek historians Pliny and Arrian say that the calendar used in India began in 6676 BC.[134]

Those same Greeks Pliny and Arrian say that the earliest calendar in India had a cycle of 2700 years, called the saptarishi calendar. The saptarishi calendar is still in use in some parts of India today. Greek historian Pliny suggested that it was that very same saptarishi calendar which was the one that the people of India began to use in 6676 BC.[135] If this is true, then Mehrgarh is certainly one of the oldest "cradles of civilization".

According to some other scholars, the RigVeda has the earliest calendar, which is believed by some to probably be the same saptarishi calendar mentioned above: (RV 1.164.48)[136] That verse in Rig Veda speaks about the twelve months, and the days of the year, which were said to be three hundred and sixty (with additional make-up periods of time): "Twelve are the fellies, and the wheel is single; three are the naves. What man hath understood it? Therein are set together spokes three hundred and sixty, which in nowise can be loosened."

How we determine "what time is it" is something that most modern people do not think about; they just look at a clock. Most people do not realize that there is more than one way to determine "what time it is". One of the ways is called

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[134] See Kak, Subhash, *Birth and Early Development of Indian Astronomy*, in Selin, H. Ed, *Astronomy Across Cultures*, n. 129, p. 311-312

[135] See Kak, Subhash, *The Mahaabhaarata and the Sindhu-Sarasvatii Tradition,* n. 14, p. 82

[136] See Verma, Dr. SR, *Vedas: The Source of Ultimate Science,* n. 124, p.1

"sidereal time". Sidereal Time is different than the time that is used by most human beings currently living on planet earth. Modern-day astronomers find it convenient to use sidereal time, which is based on the stars rather than the Sun; most planetary and stellar observatories are equipped with a sidereal clock that gives modern-day astronomers the correct sidereal time; the astronomers from the vedic time figured out sidereal time.[137]

It is utterly amazing that the star-gazers from the time of the Rig-veda figured out sidereal time in addition to the regular solar time that most of us use today in order to tell time. Many Westerners think that it was Greek astronomers in about 250 BC who discovered the precession of the earth's polar axis and sidereal time; rather it was the vedic people, as described by Greek historians who discovered sidereal time. [138]

The people who lived at the time that the Law Code of Manu was composed were also deeply interested in astronomical observations. In the Law Code of Manu, Chapter 1, verse 67, astronomical observations were recorded: A year is a day and a night of the gods; their division is (as follows): the half year during which the sun progresses to the north will be the day, that during which it goes southwards the night.[139]

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[137] Verma, Dr. SR, *Vedas: The Source of Ultimate Science,* n. 124, p. 255-256
[138] See Kak, Subhash, *Birth and Early Development of Indian Astronomy*, in Selin, H. Ed, *Astronomy Across Cultures*, n. 129, p. 311-312
[139] See Buehler, *LAWS OF MANU*, n. 3

Mathematics in Rig Veda, Law Code of Manu and Indus/Harappa

MD Pandit is of the opinion that one of the most accurate means to measure the development of a civilization is to study its mathematical knowledge contained in its literature; he believes that no civilization can develop without mathematics.[140]

One of the ways to measure development of a civilization's mathematical knowledge is to look to its knowledge of numbers. Numbers in Rigveda reach beyond ten thousand; this seems incredible as compared to comparable cultures around the world that were far behind in high numbers.[141]

Actually, the highest number mentioned in Rig Veda is one hundred thousand.[142] There are also examples of mathematical multiplication in Rig Veda: 1.122.13: We will rejoice to drink the tenfold present when the twice five come bearing sacred viands.[143]

Ancient India seems to have had addition, subtraction, multiplication, division, squaring, finding the square root, finding the cube and finding out the cube-root.[144]

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[140] See Pandit, MD, Mathematics As Known To The Vedic Samhitas, Sri Satguru Publications (1993), p. 3
[141] See Singh, Bhagwan, *The Vedic Harappans*, n. 32, p. 408
[142] See Pandit, MD, Mathematics As Known To The Vedic Samhitas, n. 139, p. 10
[143] Id., p. 33
[144] Id., p. 61

It is amazing to think about the complexity of mathematical thought in vedic times. If the mathematical ability was that advanced, one can only speculate about the advanced thinking in other areas.

One of the greatest inventions by Vedic mathematicians was the development of the concept of zero.[145] This is again, an amazing occurrence, since most Western historians think that zero was invented either by the Greeks in the year 200 BC or someone else in the 13th century, rather than the Vedic mathematicians.

Fire altars were built in Vedic times to comply with the duty of fire worship; the construction of the Fire altars required solving geometric and algebraic problems.[146] One of the four Vedas, Yajurveda, gives the names for powers of ten from one to ten to the twelfth ("parardha"). In another composition from ancient India, the Ramayana, there were names for numbers of powers of ten up to ten to the sixty-second; this is to be compared to the ancient Greeks, who had no names for numbers beyond ten to the fourth.[147]

One hymn from one of the Vedas, in the Artharvaveda, is dedicated to a written meditation diagram called a "sri-yantra" ("zrI-yantra") (a great object; a tantric meditation device), consisting of nine inter-woven isosceles triangles. Four

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[145] See Pandit, MD, Mathematics As Known To The Vedic Samhitas, n. 139, p. 133
[146] See Kak, Subhash, *Birth and Early Development of Indian Astronomy*, in Selin, H. Ed, *Astronomy Across Cultures*, n. 129, p. 313
[147] See Joseph, Gorge Gheverghese, *The Crest of the Peacock, The Non-European Roots of Mathematics*, Princeton University Press (2000), p.242

of these triangles point upwards, representing Shakti ("zakti"), primordial female dynamic energy and five of the triangles point downwards, representing Shiva ("ziva"), primordial male essence of wisdom. The triangles are arranged to produce subsidiary triangles, at the center of which is a dot (bindu).[148]

In all correctly constructed "sri-yantras" ("zrI-yantra") the base angle of the largest triangles is about fifty-one and one-half degrees; the slope of the base of the Great Pyramid at Gizeh in Egypt, built around 2600 BC, is approximately the same, both using the "golden ratio" or "divine proportion", with its link to the Fibonacci numbers.[149]

The exact thinking of some of the calculations needed to arrive at the above mathematics, although passed down orally for some period of time, were first written down in the Sulbasutras, between 800 and 600 BC. The Sulbasutras contained both religious and secular mathematics; it contains a general statement of the Pythagorean theorem, a method for calculating the square root of two, correct to five decimal places.[150]

The Sulbasutras give a remarkable approximation of constructing a square twice the area of a given square, A, with no clue as to how this was arrived at; the

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[148] See Joseph, GG, *The Crest of the Peacock*, n. 146, p.236-237
[149] Id., p.236-237
[150] Id., p.226

formula is: increase the measure by its third and this third by its own fourth less the thirty-fourth part of that fourth.[151]

The Indus/Harappa Civilization culture was a highly organized society with a number of different plumb-bobs of uniform size and weight; the weights were "decimal", that is, if we take 27.584 as standard, the other weights are .05, .1, .2, .5, 5, 10, 20, 50, 100, 200 and 500.[152] Once again, this is another means to prove up the sophistication of the Indus/Harappa Civilization and see how it was possible to achieve the uniformity in cities and towns throughout this vast ancient civilization.

When the people of the Indus/Harappa Civilization wanted to measure anything, they used the Indus/Harappa Civilization "ruler". The Indus/Harappa Civilization "ruler" was remarkably accurate; 1.32 inches have been named the "Indus inch"; (Sumeria or Sumer is located in modern-day Iraq) the Sumarian "inch" is exactly half the "Indus inch".[153]

The Indus/Harappa Civilization was also well known for its incredibly strong bricks, most which have survived until today. There are fifteen different sizes of Harappan bricks, some with the ratio of 3:2:1, most with the ratio of 4:2:1,

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[151] See Joseph, GG, *The Crest of the Peacock*, n. 146, p.234-235
[152] Id., p.222
[153] Id., p.222

a ratio which, even today is considered the optimal ratio for efficient strength and bonding.[154]

In the Puranaas, another composition from ancient India, time was defined as 15 nimeSas equals one kaaSThaa; when this statement is converted into modern units (one nimeSa equals sixteen over seventy-five seconds) it comes very close to the correct figure of 186,000 miles per second; if this is true, this is much earlier than the speed of light being first determined in 1675.[155]

A very similar number was given in the Law Code of Manu. The Law Code of Manu has its own definition of a nimeSa, just slightly differently, but very similar; this means that the speed of light was either discovered and passed down by the authors of the Law Code of Manu, or that the Puranaas preceded the Law Code of Manu and those Puranic scientists passed it down to the authors of the Law Code of Manu.

The actual text of this part is: Law Code of Manu Chapter I.64: "Eighteen nimeshas (twinklings of the eye are one kashtha), thirty kashthas one kala, thirty kalas one muhurta, and as many (muhurtas) one day and night."[156]

The Law Code of Manu also mentions a very large number, "one million": 3. 131. 'Though a million of men, unacquainted with the Rikas, were to dine at a

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[154] See Joseph, GG, *The Crest of the Peacock*, n. 146, p.223
[155] See Kak, Subhash, *Birth and Early Development of Indian Astronomy*, in Selin, H. Ed, *Astronomy Across Cultures*, n. 129, p. 331
[156] See Buehler, G., LAWS OF MANU, n. 3

(funeral sacrifice), yet a single man, learned in the Veda, who is satisfied (with his entertainment), is worth them all as far as the (production of) spiritual merit (is concerned)." [157]

Sanskrit Language Complexity

The Rigvedic hymns were the composition of ten families and individuals, all called Rishis ("RSi"). Some hymns, 1,028 of them, comprising 10,552 verses were collected into two books or mandalas ("maNDala") called Rig or Rik Samhitaa ("Rc saMhita").[158]

Many scholars write about the strong intellectual development that must have been present during the time of the composition of the Rig Veda. The Rig Veda, they say, represents a "Developed Stage" of human civilization, witness the abstract thought, the hallmark of a high level of intellectualism; the language of the hymns is also quite developed.[159]

In 1786, as was mentioned above, in his famous address to the Asiatic Society of Bengal, Sir William Jones said: The Sanskrit language, whatever be its antiquity, is a wonderful structure, more prefect than the Greek, more copious than the Latin and more exquisitely refined than either: yet bearing to both of them a

[157] See Buehler, G., LAWS OF MANU, n. 3
[158] Gupta, SP, *The Sarasvati and the Homeland of Early Rigvedic Rishis*, n. 14, p. 55
[159] Id., p. 70

stronger affinity, both in roots of verbs, and in the forms of grammar, than could possibly have been produced by accident.[160]

Sanskrit is considered by many people to be a difficult language to learn because of its sometimes overwhelming complexity. Sanskrit words, besides conveying meaning, also convey the correct gender, number and mutual relations so accurately that there is practically no chance of any confusion in understanding the correct meaning of words.[161]

Many scholars speak of the tremendous intellectual power that was needed to create the Sanskrit language. There must have been a mathematical consciousness on the part of the Vedic speakers of Sanskrit that is an intellectual development and speaks for a sufficiently advanced state of civilization; such a mathematical consciousness, some scholars say, has not been found in any other contemporary language.[162]

The way in which the Vedas, such as Rig Veda, are chanted is very interesting. The Vedic meter is called "chandas", and is governed by the principle of measurement by number of syllables; for example, the Gaayatri ("gAyatri") meter has twenty-four syllables.[163] The knowledge of how many syllables were contained in the Gaayatri ("gAyatri") meter was one of the ways in which the

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[160] Handa, Devendra, *Vedic vis-à-vis Harappan Culture*, n. 14, p. 75
[161] Pandit, MD, *Mathematics As Known To The Vedic Samhitas*, n.139, p. ix
[162] Id., p. xi
[163] Id., p. xiv

number of syllables contained in Rig Veda were able to be counted. If one knew precisely which meter was assigned to which hymn, and the number of verses in a hymn, one could easily count the total number of syllables.

Weights and Measures of Indus/Harappa and Law Code of Manu

The cubical stone weights of the Indus/Harappa Civilization were based on a complex system of measurements; the base weight may have been a tiny black and red seed known as the gunja, which is still used by jewelers in Pakistan and India.[164]

When I visited the National Museum in New Delhi, India, I saw weights and measures from the Indus/Harappa Civilization. I saw different, yet similar, weights and measures when I visited the museum next to the Indus/Harappa Civilization site of Lothal.

Some scholars believe that eight gunja seeds equal the smallest known Indus weight, which by our modern standards equals .871 grams; the largest weight found at Mohenjodaro weights 10,865 grams, about 25 pounds, which is almost 100,000 times the weight of the gunja seed.[165]

Other scholars believe something very close, but not precisely similar: that the most common Indus weight was equivalent to about 13.7 grams; the Indus people used smaller weights that were as little as one-sixteenth of this and as much

[164] See Kenoyer, JM, *Ancient Cities of the Indus Valley Civilization*, n. 63, p. 98
[165] Id., p. 98

as 800 times the most common unit; the basis was probably the ratti (a seed of a gunja creeper) about 0.109 gram, one-one hundred twenty-eights of the most common unit.[166]

The Law Code of Manu, Chapter 8, verse 131 goes into great deal about weights and measures, as will be discussed below. In any case, the same seed of the gunja creeper was used. In the Law Code of Manu, it was called a "krishnala", which the translators say is the same as one gunga-berry or one raktika. The Law Code of Manu states that one krishnala equals three barley-corns.

Returning to the Indus/Harappa Civilization, one finds that weights of various kinds of stone followed a standardized weight system used throughout the Indus realms.[167] In addition to the numerous cities and towns of the Indus/Harappa Civilization that emerged in about 2600 BC, there was also uniformity in the writing, in the system of weights and styles of pottery. The uniformity also emphasized social classes and considerable trade.[168]

The Localization Era is dated approximately 1900-1300 BC, after the earthquakes and drying-up of the River Sarasvati. Although there was a continuation of some culture, we do not see writing nor the use of standardized weights. There also seems to have been a breakdown of international trade.[169]

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[166] See McIntosh, Jane, *A Peaceful Realm*, n. 58, p. 124
[167] Id., (color plate 19)
[168] Subhash, Kak, *The Mahaabhaarata and the Sindhu-Sarasvatii Tradition*, n. 14, p. 82
[169] Id., p. 82

Before the drying-up of the River Sarasvati, weights and measures were made of chert, agate and shell; varying series were made with all sides beautifully polished. Such weights and measures have never been found later; the precision, accuracy and refinement was lost.[170] Just like the time of the Law Code of Manu, weights were in existence and even codified into law—certainly the Law Code of Manu seems to have made the exactitude of the weights and measures a serious matter.

The fact is that after the decline of the Indus/Harappa Civilization, the loss of the making of weights occurred and the use of weights went out of fashion. This period after the decline of the Indus/Harappa Civilization certainly does not seem like the time of the Law Code of Manu, when the laws were such that very exacting weights and measures were mandated, and, I believe, very much in use. The Law Code of Manu seems much more like the middle of the Indus/Harappa Civilization: the time when international trade, weights and measures were in great use and high demand.

The people of the Indus/Harappa Civilization had two systems of weights, one for internal trade and the other for international trade. The Indus unit weight of 27.584 gram seems to have been the basis of the later Greek uncial of 27.2

[170] See Sankalia, HD, *Pre-Historic Art in India*, n. 55, p.68

grams; a series of small gold discs found at the Indus/Harappa Civilization city of Lothal weigh 50 mg to 3250 mg in the ration of 1:2:4:5:10:20:30, etc. [171]

More research on the gunja seed, also called a ratti, the seed of the gunja creeper reveals that it is now almost certain that the accepted weight of a gunja was 100 mg.[172] Once again, this is beginning to look a lot like the Law Code of Manu. Uniformity in the system of weights and considerable national and international trade.

The Law Code of Manu, Chapter 8, verse 131 goes into great deal about weights and measures, especially the weight that pertains to copper, silver and gold: "Those technical names of (certain quantities of) copper, silver, and gold, which are generally used on earth for the purpose of business transactions among men, I will fully declare.132. The very small mote which is seen when the sun shines through a lattice, they declare (to be) the least of (all) quantities and (to be called) a trasarenu (a floating particle of dust). 133. Know (that) eight trasarenus (are equal) in bulk (to) a liksha (the egg of a louse), three of those to one grain of black mustard (ragasarshapa), and three of the latter to a white mustard-seed. 134. Six grains of white mustard are one middle-sized barley-corn, and three barley-corns one krishnala (raktika, or gunga-berry); five krishnalas are one masha (bean), and sixteen of those one suvarna. 135. Four suvarnas are one pala, and ten

[171] See Rao, SR, *New Frontiers of Archaeology*, n. 24, p. 13
[172] Id., p. 13

palas one dharana; two krishnalas (of silver), weighed together, must be considered one mashaka of silver. 136. Sixteen of those make a silver dharana, or purana; but know (that) a karsha of copper is a karshapana, or pana. 137. Know (that) ten dharanas of silver make one satamana; four suvarnas must be considered (equal) in weight to a nishka. 138. Two hundred and fifty panas are declared (to be) the first (or lowest) amercement, five (hundred) are considered as the mean (or middlemost), but one thousand as the highest."[173]

There certainly seems to be a strong relationship between the Indus/Harappan civilization weight system and the Law Code of Manu weight system.

Conclusion to Chapter Three

It seems that the combination of the earthquakes and drying up the Sarasvatii and Drishadvati ("dRSadvati") Rivers, along with the overuse of the natural resources, was just too much of a strain to sustain the complexities of the Indus/Harappa Civilization.

It is clear that there were strong trading ties, i.e. transfer of goods (pre-Hammurabi Dynasty) between Mesopotamia and Meluhha (the ancient Indian Harappa Civilization. There was, most likely, also trading of information and philosophy between Mesopotamia and Meluhha. The Law Code of Manu could have influenced the Code of Hammurabi or the other way around.

[173] See Buehler, G., LAWS OF MANU, n. 3

The similarity between the weights and measures of the Indus/Harappa Civilization and the Law Code of Manu society seem unmistakable. The decline in the use of weights and measures by most of the Indus/Harappa Civilization after 1900 BC certainly makes it possible that the Law Code of Manu society existed in that urban setting with international trade, prior to 1900 BC.

# Chapter Four: Technology in Rig Veda, Indus/Harappa Civilization and Law Code of Manu Society

Another example of the "brain-power" of the people of the Indus/Harappa Civilization was their technology. One simple technology, probably one of the first was the making use of animal power. Harnessing the use of animal power made progress towards civilized life possible.

Separately, the Rigveda mentions similar harnessing the use of animal power: training elephants and the use of animal reins and bridles.[174]

Another use the "brain-power" of the people of the Indus/Harappa Civilization was the division of labor. Once there was division of labor along with sufficient food production, it was possible for certain members of the Indus/Harappa Civilization to specialize in a particular field or trade. Division of labor allowed for the large amount of local and international trade to begin and flourish.

Separately, the Rig Veda mentions similar division of labor, with the development of many different areas of work. Trades and professions mentioned in Rigveda include surgeon, sailor, danced, carpenter, guard, priest, traders, warriors, physicians, navigators, architects, masons, potters and entertainers.[175]

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[174] See Singh, Bhagwan, *The Vedic Harappans*, n. 32, p. 119
[175] Id., p. 162

The Law Code of Manu also must have had made use of the practice of division of labor because they too had many laws that pertained to people of different trades and professions.

The Rig Veda rishis ("RSi") those poet-composers who would "sing" the Rig Veda, used words for themselves, their "listeners" and the "subjects of their hymns" that show a high level of mental, moral and cultural development. For instance the Rig Veda rishis ("RSi") used words that mean "knowing the inner working of another's mind", "being law abiding", "prudent", "earnest", "highly cultured" and "enlightened".[176]

Music was also important in vedic times. Rig Veda has the concept of seven musical notes (Rig Veda 10.32.4).[177] This may very well be the oldest reference to the seven notes of the musical scale.

Indus/Harappa Civilization Technology

Throughout the vast Indus/Harappa Civilization Empire merchants and craftsmen realized that standardization helped mass production; for example, Indus/Harappa Civilization copper and bronze arrowheads are of uniform size,

[176] See Singh, Bhagwan, *The Vedic Harappans*, n. 32, p. 38-39
[177] See Ghosal, P, Lifestyle of the Vedic People, DK Printworld (2006) p. 139

shape and content; the bricks were mainly of two sizes depending on the particular type of construction.[178]

Standardization throughout an entire realm that was geographically larger than the corresponding civilizations combined in Egypt and Iraq (Mesopotamia, Sumer, Ur) must have taken much planning, discussion and agreement. It is not something that happened overnight.

In the corresponding civilizations in Egypt and Iraq (Mesopotamia, Sumer, Ur), there existed kings that either believed themselves to be God or appointed by God. They had many statutes carved of themselves, large, lavish palaces and often ruled with "an iron hand". The vast Indus/Harappa Civilization seems not to have had any such kings. No large, lavish palaces have been found. No carved statues of kings have been found.

Turning back to Indus/Harappa Civilization standardization, this probably occurred with a great many "minor" kings or tribal "chiefs" over the entire realm. These "minor" kings or tribal "chiefs" apparently did not care about statutes of themselves being carved or did not care about palaces being built in their names. Perhaps they believed that it was their religious duty to act as "servant kings", that is, kings who believed that "service to the people" were their foremost duty. Part of the service to the people must have been standardization throughout the entire Indus/Harappa Civilization realm.

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[178] See Rao, SR, *New Frontiers of Archaeology*, n. 24, p. 3

Separately, in the Law Code of Manu, many laws were aimed at a class of minor kings and tribal chiefs. The underlying philosophy there was that the number one task of a king or chief was to protect the people.

The Indus/Harappa Civilization artisans crafted the world's oldest "high-fired" stoneware ceramics and they were among the most highly skilled artists in antiquity; some stoneware bangles were made in such a complex manner than no one has been able to duplicate them today.[179]

It is almost unbelievable that the Indus bronze saw was able to cut the fresh-from-the-ocean sea-shells for bangle-making as efficiently as modern-day steel saws, which means that Indus bronze workers were able to produce a bronze as hard as steel.[180] (To refresh the reader's memory: Bangles are similar to bracelets, but bracelets move and bangles are fixed and do not move.)

Metal figurines throughout the Indus/Harappa Civilization sites, but especially at Mohenjo-daro show that the Indus people were masters of complex casting using the "cire perdue" (lost wax) technique. [181] The lost wax technique in making metal statutes usually starts with the artist making a model from clay or wax. Then a metal "mold" is made from the model. Next the clay or wax is "lost" or destroyed when it is removed from the mold (usually two halves that can later be joined together), but when heated metal is poured into the mold, then cooled, an

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[179] See Kenoyer, JM, Ancient Cities of the Indus Valley Civilization, n. 63, p. 75
[180] Id., p. 96
[181] See McIntosh, Jane, *A Peaceful Realm*, n. 58, p. 68

almost perfect metal replica of the original figure that was carved in clay or wax is the result.

The Indus/Harappa Civilization artisans used various alloys of copper and other metals. Such alloys were carefully made; for example, thirteen percent tin added to copper was "conventional bronze"; sometimes it had added arsenic or lead.[182]

Jewelry making and particularly the making of "beads" was a specialty of the Indus/Harappa Civilization. One type of manufactured bead today is called "faience". A "less sophisticated" type of "faience" was simultaneously being made in Mesopotamia and Egypt. But in the Indus/Harappa Civilization, the Indus technique for making "faience" was different than in Mesopotamia and Egypt. The Indus/Harappa Civilization artisans carefully heated their ground rock crystal and colored stones to over one thousand degrees centigrade, which they again cooled, ground-up, combined with other things and fired a second time at high temperature.[183]

The making of an Indus civilization long bead out of the stone that we call today "carnelian" was a difficult process; first the carnelian was mined in Khambhatt (which is now in the Indian state of Gujarat), dried, sawn and chipped to rough-cut. The carnelian bead was then re-heated to bring out color. Next,

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[182] See McIntosh, Jane, *A Peaceful Realm*, n. 58, p. 68
[183] Id., p. 71

using a fine-grained metamorphic drill, drilling for three to eight days of continuous drilling to perforate the beads; finally grinding on stone with sand to polish them.[184]

Carnelian beads of this type were only made by the Indus/Harappa Civilization artisans. For such a long and arduous process, the result was that these long carnelian beads were in great demand among the rich and powerful of Egypt, Mesopotamia and Sumeria. This fact turns out to be a great archeological clue when such Indus/Harappa Civilization carnelian beads have been found in abundance in burial sites of the rich and powerful of Egypt, Mesopotamia and Sumeria.

Some other "bead making" by the Indus/Harappa Civilization artisans is so small that without archeological remains would be impossible to believe.

The Indus/Harappa Civilization "white micro beads" are only one millimeter across and one to three millimeters long; some scholars believe the material was ground into powder, mixed to a paste, extruded with a fine copper wire for a hole, cut with a horsehair, then fired at around nine hundred degrees centigrade.[185]

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[184] See Sharma, DP & Maduri, *Panorama of Harappan Civilization*, n. 104, p. 176

[185] See McIntosh, Jane, *A Peaceful Realm*, n. 58, p. 73

I personally was able to see some Indus/Harappa Civilization "white micro beads" at the museum in Lothal, south of the modern-day city of Ahmedabad, in the Indian state of Gujarat.

In this case, the Indus/Harappa Civilization white micro beads in the Lothal museum were in a small plastic bag. The beads were behind a glass encasement and attached to the outside glass of the encasement was a magnifying glass. The magnifying glass was necessary, because most human eyes could not see properly what was being displayed. When I peered through the magnifying glass, I could make out a collection of tiny, tiny beads that were either carefully drilled or made according the process speculated above. Scholars speculate that the beads were either used as jewelry or as a stringed ornament for the hair. These beads were the smallest man-made, seemingly hand-drilled beads that I have ever seen anywhere in the world.

Indus/Harappa Civilization people were technically advanced when it came to woodworking tools. For instance, a saw has been discovered with undulating teeth, which allowed the dust to escape freely, something that seems ordinary in saw design today, but was far ahead of its time.

Back to Lothal, a twisted metal drill has been discovered, which some have said represents a great moment in the history of civilization.[186] No other contemporaneous civilization came up with a twisted metal drill. The United

[186] See Sethna, KD, *The Problem of Aryan Origins*, n. 12, p.51

States Patent Office gave a patent for the brand-new "invention" of the twisted metal drill in the 1860s.

Indus/Harappa Civilization town planning was accomplished with the geometric instruments they had developed; the compass, the plumb bob and the right angle measuring instruments that have been found at many sites. [187] As was pointed out previously, the ratio of Indus/Harappa Civilization bricks were either 1:2:3, or in most cases: 1:2:4. I have seen many of the remaining bricks at Lothal, and I was amazed at how well bricks that are more than four thousand years old have held been preserved.

Two shell rings, one with eight slits and the other with twelve slits have been found at Indus/Harappa Civilization cities of Lothal and Dhola Vira. Those "rings" measure not only the line, points and degrees on a plain surface, but also the eight or twelve whole section of the horizon; if held in suspension, it could even be used as a sextant.[188]

Lothal metal smiths produced bronze as follows: bangles with 11.2% tin, pins with 13.8% tin and chisels with 9.62 % tin.[189] Drills of copper and chalcedony were needed for making holes in beads; those found in Lothal and the copper saw were probably the earliest of the kind in the world.[190]

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[187] See Sharma, DP & Maduri, *Panorama of Harappan Civilization*, n. 104 p. 30
[188] See Rao, SR, *New Frontiers of Archaeology*, n. 24, p. 15
[189] Id., p. 18
[190] See Dhavalikar, MK, *The Aryans Myth and Archaeology*, n.33, p. 63

The Harappans were highly literate and left behind more than 3000 seals; sixty-one sealings at Lothal were probably used for sealing cargo.[191] Some of the Indus/Harappa Civilization seals depict the "mother goddess" and ritualistic scenes, giving the impression that the seals, although used as stamps of authority in trade, represented religious symbols used during the rituals.[192] It is not entirely clear what the purpose was for all of the seals.

The standard house of Indus/Harappa Civilization times that survives even today in India was an open space in the center with rooms on all sides.[193] Private houses were arranged around a central courtyard, a practice that is still maintained in traditional homes throughout northern India and Pakistan.[194] There were later compositions of texts regarding architecture that required the open space in the center with the rooms on all sides.

City Planning in Rig Veda, Indus/ Harappa and Law Code of Manu

Rig Veda mentions the same material, style and workmanship as those used by the Indus/Harappa Civilization, including laying a foundation, framing of doors, laying of bricks, building gates, doors, entrances and load bearing girders, measuring width and breadth with a measuring rope.[195]

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[191] See Rao, SR, *New Frontiers of Archaeology*, n. 24, p. 3
[192] See Sharma, DP & Maduri, *Panorama of Harappan Civilization*, n. 104, p. 47
[193] See Dhavalikar, MK, *The Aryans Myth and Archaeology*, n.33, p. 55
[194] See Kenoyer, JM, Ancient Cities of the Indus Valley Civilization, n. 63, p. 58
[195] See Singh, Bhagwan, *The Vedic Harappans*, n. 32, p. 285

In Rigveda III.55.14, a "Rtasya sadma" is mentioned, or a "house of justice".[196] This seems very similar to the Law Code of Manu, where the king, when sitting as judge, or his legal advisors, when sitting as judges, are advised to go to the "house of justice".

Sir John Marshall of England, who led the excavation of Mohenjo-daro in the1920s, wrote about the relatively high degree of luxury of the Indus/Harappa Civilization denoted by the existence of roomy and well-built houses, their elaborate system of drainage, as well as by the character of many of the smaller antiquities found within, seem to betoken a social condition of the people far in advance of what was then prevailing in Mesopotamia and Egypt.[197]

The Indus/Harappa Civilization cities were oriented along cardinal directions (north-south, east-west) and that orientation is probably linked to religious beliefs, reflecting precise astronomical observations and movement of sun, moon and stars.[198] The streets of the Indus/Harappa Civilization never diverge by more than two degrees.[199]

Indus bricks, which were referred to previously, were mostly made in the ratio of 1:2:4; in addition to strength, these same ratios are reflected in the rooms of houses and in the construction of large public buildings.[200]

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[196] See Singh, Bhagwan, *The Vedic Harappans*, n. 32, p. 293
[197] See McIntosh, Jane, *A Peaceful Realm*, n. 58, p. 21
[198] See Kenoyer, JM, *Ancient Cities of the Indus Valley Civilization*, n. 63, p. 52
[199] See McIntosh, Jane, *A Peaceful Realm*, n. 58, p. 99
[200] See Kenoyer, JM, *Ancient Cities of the Indus Valley Civilization*, n. 63, p. 57

Most archeologists that have studied the Indus/Harappa Civilization are very impressed. One summary is thus: Mohenjodaro and Harappa were as old as the civilizations of Egypt and Iraq and in many ways excelled them; the Indian cities were well planned with streets running north-south and east-west, whereas no such planning existed in Egypt and Iraq of that time, as well as kiln-fired bricks and superbly intricately carved steatite seals. Grain production went up with the building of circular silos plastered with lime and clay; objects were made with semi-precious stone in copper, silver and gold.[201]

In Indus/Harappa Civilization towns had well-planned wide straight streets and major roads running north-south and east-west and cutting each other right angles with covered drains longs the sides of streets; most were divided into two parts and fortified.[202]

The Indus/Harappa Civilization had fabulous town planning and drains; important building were made of kiln-baked bricks; Dholavira was divided into three divisions Citadel, Middle Town and Lower Town and fortified with a thick brick wall.[203]

The division of the Indus/Harappa Civilization site of Dholavira into its three sections of Citadel, Middle Town and Lower Town reminds me of the division of caste or class from the text of the Law Code of Manu. If, in general, as

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[201] See Lal, BB, *The Sarasvati flows on*, n. 16, p. 30
[202] See Sharma, DP & Maduri, *Panorama of Harappan Civilization*, n. 104 p. 27
[203] Gaur, Aniruddh, *Harappan Maritime Legacies of Gujarat*, n. 99, p.33

the Law of Manu says, the Brahmins ("brAmaNa") were supposed to remain somewhat aloof from the rest of the population, and even the king and his people remained somewhat separated and everyone was separated from the Shudra ("zUdra"), then the three sections of Citadel, Middle Town and Lower Town of Dholavira could be right from the pages of the Law Code of Manu.

International Trade in Rig Veda, Indus/Harappa and Law Code of Manu

According to Rigveda, in the beginning, there was no earth, just ocean; all things emerged from the primordial sea; God is the merciful supreme navigator.[204] There are many references in Rig Veda to traveling the oceans.

Rigveda mentions fabulous profit from mining and shipping; words appear, such as, "having an abundant flow", "the speediest boat", "ships with three masts", "ships with three sails", "the four seas filled full of riches thousandfold".[205]

In the Indus/Harappa Civilization, international trade was important. One means of identifying goods was the making of "seals" to attach physically to the internationally-traded goods.

The Indus/Harappa Civilization artisans made extraordinary square and rectangular fired-soapstone (steatite) seals with pictures of animals and Indus script; many animals were male bulls with a mysterious offering stand in front of them. The seals may have been used sometimes like credit cards today. Perhaps

[204] See Singh, Bhagwan, *The Vedic Harappans*, n. 32, p. 228
[205] Id., p. 237

one would show his seal and get it "stamped" in clay. In Mesopotamia (modern-day Iraq), when a seal was lost, a herald announced the loss so that the seal would be invalidated.[206]

Some scholars identify the Indus/Harappa Civilization "offering stand" as a filter for the preparation of a sacred intoxicating beverage called soma, which is used in Vedic rituals.[207] (The cone cared in ivory from the Indus/Harppa Civilization city of Harappa certainly seems to confirm this view.)

Many jar fragments with Indus/Harppa Civilization script on them have been found at many different Gulf state sites; kings and queens from Ur (modern Iraq) were buried with many treasures, including carnelian beads that were produced by the artisans of the Indus/Harppa Civilization.[208]

Flat-bottomed boats used on the Indus River today resemble the terracotta boats made by Indus/Harappa Civilization.[209] Many types of timber from the Indus/Harappa Civilization are mentioned in Sumerian texts, including "sullum meluhhi", "black wood of Meluhha", probably ebony from south India.[210] If this really was ebony from south India, it even shows more clearly the trade within India itself, between the Indus/Harappa Civilization and other locations.

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[206] See Kenoyer, JM, *Ancient Cities of the Indus Valley Civilization*, n. 63, p. 73
[207] Id., p. 86
[208] See Kenoyer, JM, *Ancient Cities of the Indus Valley Civilization*, n. 63, p. 97
[209] See McIntosh, Jane, *A Peaceful Realm*, n. 58, p. 76
[210] Id., p. 169

The archeological site of Shortughai is in Afganistan was discovered in 1975 and excavated soon after; many Indus/Harppa Civilization jars have been found with the typical Harappan designs, (intersecting circles, papal leaves, fishes, peacocks), long tubular and etched carnelian beads and the use of Harappan mud bricks, (with their traditional 4:2:1 ratio) in this case, 32 cm by 16 cm by 8 cm. The provisional interpretation is that some of the people from the Indus/Harppa Civilization migrated to Shortughai as early as the beginning of the third millennium BC.[211]

One of the major excavated places in Bahrain was the ancient capital of Dilman, Ras al-Qala, which, among other articles, yielded half a dozen stone weights, in shape and weight agree completely with the weights found in the Indus/Harappa Civilization.[212]

A Harappa cylindrical seal with an Indus/Harappa Civilization motif and writing was found at Tell Asmar (2700 BC) (Sumeria, Mesopotamia, modern-day Iraq) in 1933.[213]

Chakrabarti talks about J.F.S. Stone's analysis of the composition of faience beads found from the Minoan civilization in Crete—directly from the Indus/Harappa Civilization culture; that faience consists almost entirely of

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[211] See Chakrabarti, Dilip Kumar, *The External Trade of the Indus Civilization*, Munishiram Manoharlal (1990) p. 2
[212] Id., p.13
[213] Id., p. 28

thermally-cemented-together finely ground quartz, which was then glazed, most often with blue glass.[214]

In Lothal (that Indus/Harappa Civilization city located in modern-day Gujarat), a terracotta male head was found from Period A levels that looks like Sumerian figures, with a broad, stiff beard that was only known in Sumerian, not at all known at Lothal.[215]

The etching of Carnelian Beads began in the Indus/Harappa Civilization and the process has continued until the present day in India and Pakistan; nowhere else in the world has such a record of such production.[216]

The findings of Indus/Harappa Civilization seals along with other pieces of evidence may lead one to conclude that at least during the period of the Mesopotamia ruler, Sargon, the Indus-Mesopotamia trade was direct and carried on by both land and sea.[217]

Mesopotamian literary references say that the products it received from Meluhha (the Indus/Harappa Civilization) were goods made out of lapis lazuli, carnelian, gold, silver, copper, ebony, ivory and tortoise shell, peacocks and animals such as dogs and monkeys.[218]

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[214] See Chakrabarti, *The External Trade of the Indus Civilization*, n. 208, p. 43
[215] Id., p. 63
[216] Id., p.111
[217] Id., p.149
[218] Id., p.144

We know from Rig Veda, that the vedic people engaged in sea-trade. Rig Veda IX.33.6:"From every side, O Soma, for our profit, pour thou forth four seas; Filled full of riches thousandfold."[219] This has led some scholars to conclude that the Indus/Harappa Civilization was the same as the vedic civilization. Those scholars say that the Vedic-Harappans engaged in sea-trade.[220]

Another Indus/Harappa Civilization site near the city of Lothal is Naeswar, which is also in the modern-day Indian state of Gujarat and is located about 20 kilometers northeast of Dwarka. Naeswar was a major Indus/Harappa Civilization period center for shell works.[221]

In Naeswar, there have been discoveries of semiprecious stone Indus/Harappa Civilization beads and Indus/Harappa Civilization seals form Ur, Brak, Nippur (all from Mesopotamia, or modern-day Iraq) and in Gulf of Arabia countries like UAE, Oman and Bahrain.[222]

Some scholars say that the Dock-Yard of Lothal is a holding tank for water. It does not seem to be a holding tank. The evidence points to it being a wharf. The Lothal Dock-Yard measures 214 x 36 meters; a wharf served the purpose of handling cargo and lies along the western embankment wall; kiln-dried bricks were precious to the inhabitants of Lothal, therefore they would not have used

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[219] See Ralph T.H. Griffith, *The Rig Veda* [1896]
[220] See Lal, BB, *Search for Vedic-Harappan Relationship*, n. 14, p. 5
[221] See Gaur, Aniruddh, *Harappan Maritime Legacies of Gujarat*, n. 99, n. 99, p.7
[222] Id., p.7

millions of them to make this structure if it was only an irrigation water holding tank.[223] The dock-yard at Lothal is a wonderful thing to behold, a man-made dock, more than four thousand years old, made with very high technical skill and engineering skill, made with millions of baked bricks.

The Indus/Harappa Civilization site of Dwarka has yielded more than fifty stone anchors, which have survived even if their wooden ships did not; Dwarka must have been an important port in the past for the local and international trading of the Indus/Harappa Civilization.[224]

King Sargon of Mesopotamia (about 1900 BC) was quoted as boasting that the boats of Dilmun, Magan and Meluhha lay anchored at his docks at Agade, which was his capital.[225] Since Meluhha is now widely accepted by scholars to mean the Indus/Harappa Civilization, this is one of the ways in which we can be fairly certain of the international trade carried on by the Indus/Harappa Civilization from its ports such as Lothal.

Evidence of direct trade between the Indus civilization and Mesopotamia can be found in the presence of seals, etched carnelian, terracotta statues and dice in Mesopotamia. Also, Mesopotamian goods have been found in the remains of

[223] See Gaur, Aniruddh, *Harappan Maritime Legacies of Gujarat*, n. 99, p.45
[224] Id., p.83
[225] Id., p.97

the Indus/Harappa Civilization: spiral and animal headed pins, segmented beads and pottery of the perforated knobbed and reserved slip ware type.[226]

Many Indus seals have been found in Bahrain, adding to the theory that the merchants of the Indus/Harappa Civilization had colonies at Failaka, Ras-al-Aala and Failaka. Shells are not available in Gulf countries and were therefore traded by merchants from the Indus/Harappa Civilization city of Lothal to Bahrain and Mesopotamia; a special shell called Shangkha ("zaGkha") is very sacred today in Hindu temples and was also found to be important in the Indus/Harappa Civilization.[227]

Wood was also a valuable trading commodity that was mentioned in Mesopotamian texts as being imported from Dilmun, Magan and Meluhha.[228] Ivory was an important Indus/Harappa Civilization export to Mesopotamia, used for making combs, pins, awls, hooks, gamesmen, buttons, scales, dice personal ornaments.[229]

Lapiz Lazuli (the semi-precious blue stone) was desired by the ruling class of Mesopotamia for ideological reasons and used in temple consecrations and funerary offerings; it was a valuable trading commodity for the Indus/Harappa Civilization.[230]

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[226] See Gaur, Aniruddh, *Harappan Maritime Legacies of Gujarat*, n. 99, p.98-99
[227] Id., p.110
[228] Id., p.128
[229] Id., p.130
[230] Id., p.131

Mesopotamia was a center of making clothing from sheep-wool and goat-wool; Some Mesopotamian texts refer to a single commercial transaction could involve 6,400 tons of wool.[231] That seems like a gigantic quantity of wool just for one commercial transaction.

Terracotta model boats have been found at the Indus/Harappa Civilization city of Lothal; these boats have a pointed or curved prow, a blunt stern and sharp keels, similar to Phoenician trading ships and Egyptian vessels between 3000 and 2000 BC.[232]

The Indus/Harappa Civilization covered an area considerably larger than those covered by either ancient Egypt or Mesopotamia. Evidence of an earthquake in Dholavira have been dated to about 2200 BC, which probably resulted in the diversion of the drainage system; the Sarasvati River became shallower, probably resulting in the beginning of a large scale trade disaster.[233]

Mesopotamia tablets from about 2100 BC mention the stoppage of trade from Meluhha for unknown reasons.[234]

More than thirty-five Mature Harappan sites from the Indus/Harappa Civilization are located along the Gujarat coast, characterized by fabulous town

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[231] See Gaur, Aniruddh, *Harappan Maritime Legacies of Gujarat*, n. 99, p.133
[232] Id., p.141-143
[233] Id., p.149-154
[234] Id., p.160

planning and drainage systems, well-thought out and proper layout of roads and fortification.[235]

The Rig Veda talks about sea trade (RV 9.33.6) and boats with one hundred oars (RV 1.116.5).[236] The Sanskrit word for ocean, samudra ("sAmudra"), occurs about one hundred times in the Rigveda. It occurs many more times than any river or group of rivers by name.

Other related terms meaning sea or ocean are saagra ("sAgra"), arnas ("arNas"), and sindhu ("sindhu").[237] The main myth in the Vedas is of Indra slaying a dragon and releasing seven rivers to flow into the sea.[238]

Rig Veda I.51.1 mentions the god, Indra, the sea of wealth.[239] Rig Veda: I.52.4 says "To Indra, even as rivers to the ocean, flow forth." Rig Veda X.45.1says that first Agni sprang to life from out of Heaven: the second time from us came Jaatavedas. Thirdly the Manly-souled was in the waters."

My interpretation of the third part of this verse, "Agni" (the god of fire) springing forth from the waters is the following. As described above, the medicine from ancient India is Ayur Veda. The Ayur Vedic explanation of "fire being born from water" is that a one type of agni (fire) is the fire-in-the-stomach, stomach acid, also called, jathar-agni ("jaTharAgni") digestive stomach-fire,

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[235] See Gaur, Aniruddh, *Harappan Maritime Legacies of Gujarat*, n. 99, p.162-163
[236] See Lal, BB, *The Sarasvati flows on*, n. 16, p. 71
[237] See Frawley, David, Geographical References: The Ocean and Soma, n. 14, p. 29
[238] Id.,. 30
[239] See Griffith, Ralph T.H., n. 11

gastric juice.[240] "Water" here, I believe, is a kind of digestive enzyme. This shows just one of the many instances in which Rig Veda is written in a short-handed kind of way or for those who knew the jargon of the day.

Rig Veda in another section talks about the making of Chariots and praises the Kimsuka and Salmali trees for the making of Chariots (Rig Veda 10.85.20); these trees are located only in India, Burma (Myanmar) and Sri Lanka.[241] Therefore, when such a Chariot made of one of these woods is found in Egypt or Mesopotamia, it is yet another example of the international trade that originated from the Indus/Harappa Civilization.

Rig Veda tells of the Vibhiidaka trees for the making of dice, which were used in different types of games (Rig Veda 7.86.6 and 10.34.1); these trees are located in India, Burma (Myanmar), Sri Lanka, Pakistan and Malaysia.[242]

Rig Veda tells of the Urvaaruka (cucumber) being picked from its stem, so may the invoker of the hymn be released form death (Rig Veda 7.59.12):

tryambakam yajAmahe zughandhim puStivardhanm/

urvArukamivabandhanAn mrtyormukSIya mAmritAt.

These cucumbers (wild version) are located in India, Pakistan and tropical Africa.[243]

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[240] See Monier-Williams, n. 7

[241] See Lal, BB, *The Homeland of the ARYANS, Evidence of Rigvedic Flora and Fauna & Archaeology*, n. 42, p. 11

[242] Id., p. 16-17

Regarding the sacred intoxicating drink called Soma, it has not been possible to identify the Soma plant with full certainty; its juice definitely was used in Vedic sacrifices; one hundred and fourteen hymns were devoted to it in the Rigveda; to extract juice, the plant was pounded with stones in a mortar with a pestle.[244]

The camel (uSTra) has been mentioned about a half-dozen times in the Rigveda; there are many skeletal remains of camels at many Indus/Harappa Civilization sites. The camels, though, never appeared on Harappan seals.[245]

(Why did camels not appear on Indus/Harappa Civilization seals? Was it bad luck to portray them? Or was there any other kind of superstition about them? Maybe it was the same for the horse.)

The Gaura or wild cow (bos gaurus) is mentioned frequently in the Rigveda, has three subspecies in South and South-East Asia and has nothing to do Europe or Western Asia.[246]

The MahiSa or water buffalo (bubalus bubalis) is also mentioned frequently in the Rigveda, is from South and South-East Asia and has nothing to do Europe or Western Asia.[247] The elephant or hastin is mentioned in Regveda and appears on Mature Harappan seals and there is much evidence of objects made from ivory

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[243] See Lal, BB, *The Homeland of the ARYANS, Evidence of Rigvedic Flora and Fauna & Archaeology*, n. 42, p. 16-17
[244] Id., p. 26-27
[245] Id., p. 29-33
[246] Id., p. 35-36
[247] Id., p. 38-39

in the Harappan civilization; there are faunal remains from the seventh to sixth millennia BC.[248]

The people of the Indus/Harappa Civilization traded in peacocks to Mesopotamia in the third millennium BC and peacocks with colored tails only come from South-East Asia.[249]

Rigveda only mentions flora and fauna from a tropical zone; there is no mention of a cold-climate zone.[250] Rigveda says the horse had 17 ribs (1.162.18), just like Shetland ponies and the wild mustang herds of the American West.[251]

I mentioned above my personal visit to the Indus/Harappa Civilization archeological site of Lothal in the modern Indian State of Gujarat. Some additional points regarding Lothal are presented as follows.

The first thing that struck me as I walked in the Lothal ruins was the straightness of bricks and the straightness of the walls made of bricks. I had just been riding in a car from the big Indian city of Ahmedabad in the state of Gujarat through the countryside to get to Lothal. The differences between the simple modern-day structures on the side of the road and Lothal were easy to see.

Even though Lothal is more than 4000 years old, the straightness of the brick walls was as clear as a bell. The straightness of each brick, some made

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[248] See Lal, BB, *The Homeland of the ARYANS, Evidence of Rigvedic Flora and Fauna & Archaeology*, n. 42, p. 43-46
[249] Id., p. 51
[250] Id., p. 62
[251] Id., p. 99-100

according to the ratio 1-2-3 and others 1-2-4, was also fascinating to behold. The quality of the 4000 year old Lothal sun-dried bricks and kiln-fired bricks and the brick walls were better than the modern-day simple brick structures dotting the farms surrounding Lothal. (By the way, when I am describing simple modern-day Indian structures, I am referring to small man-made structures made of brick for people or animals; the more expensive houses are similar to those in any western country.)

The next thing that struck me was the roundness of the wells. The inhabitants of Lothal were very intelligent people and obviously technologically advanced.. They were first-class mathematicians, architects, engineers and builders. (And I hypothesize, possibly also singers of the Vedas and users of The Law Code of Manu.)

As I have said above, most of modern-day Indian expensive buildings are similar to any western country. Therefore, when the ASI (Archeological Survey of India) wanted to cover the wells at Lothal (to prevent well-wishers from falling in), they procured a modern round metal screen of the approximate size of the well. The interesting thing is that the screen fits like a glove, proving that the roundness that the civil engineers of Lothal could achieve (and preserve for 4000 years) in their wells is extremely similar to the modern-day roundness that

mankind can achieve with all of our current 21st century engineering and fabricating skill.

All of the above discussion is in addition to the engineering feat of the gigantic Lothal man-made, brick-lined dock. The store-houses were built on brick platforms to perform even during floods.

Inside the museum at Lothal, there were tiny one inch square and two inch square seals, with delicate, intricate carvings, often of horned "buffalo" bulls. Once again, on the drive through the surrounding countryside, many similar bulls were seen. Visiting this archeological site at Lothal and the National Museum in New Delhi was amazing.

Further Evidence of International Trade

There is a significant amount of Sorath Harappan pottery located in was called by the ancients "Dilmun", which we now know to be Bahrain, a country located in the Arabian Gulf.[252]

Different countries during the Indus/Harappa Civilization time-period produced different "seals". One did not have to be literate to identify the seals of the third millennium BC. For instance, Harappans had the square Indus seals. Someone having the cylinder seal was identified as Mesopotamian.[253]

[252] See Possehl, Gregory, *The Indus Civilization*, n. 100, p. 60
[253] Id., p. 61

Indus/Harappa Civilization products like seals, carnelian beads, figurines, shells and ivory dice have been report from Tell Asmar, Kish, Lagash, Umma, Nippur, Tepa Gawra, Jokha, Tell Agrab and Ashur, which confirms Indus/Harappa Civilization trade links with Mesopotamian Civilization in what is now modern-day Iraq.[254]

Ample evidence exists of Indus Civilization sea-voyages, sea-faring ships and sea-trade; ships with three masts (tirbandhur) and/or ten oars (dasaritra) and even one hundred oars (sataritra) were commissioned; the wealth thus achieved seems to have been tremendous.[255]

As mentioned above, Rig Veda had many references to ocean voyages. The scholars who previously believed that the Rig Veda was composed in a land-locked country must have been mistaken. According to Rigveda, in the beginning, there was no earth, just ocean; all things emerged from the primordial sea; God is the merciful supreme navigator.[256]

Rigveda mentions fabulous profit from mining and shipping; words appear, such as, "having an abundant flow", "the speediest boat", "ships with three masts", "ships with three sails", "the four seas filled full of riches thousandfold".[257]

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[254] See Sharma, DP & Maduri, *Panorama of Harappan Civilization*, n. 104 p. 61
[255] See Lal, BB, It is Time To Rethink, in Lahiri, N, Ed, *The Decline and Fall of the Indus Civilization*, n. 101, p. 89
[256] See Singh, Bhagwan, *The Vedic Harappans*, n. 32, p. 228
[257] Id., p. 237

In Lothal, sixty-four clay sealings were found, that seemed to be preserved because of a warehouse fire; the sealings prove that the Indus seals were used for a commercial purpose, to seal the cargo and authenticate the source and contents.[258]

There are few economic systems that are only concerned with obtaining and trading for food, shelter and clothing; status obligations and ruling-class ideologies are equally important; for instance, there was a royal Mesopotamian obligation to decorate temple with exotic materials which were only available at great distances.[259]

In Mesopotamia in the third millennium BC, no wood of the requisite strength for cart frames, wheels, sea boats or temple pillars or roofing was locally available apart from poplar; they could export cereals, oils and wool to the Indus/Harappa Civilization in exchange for wood.[260]

Ivory imported from the Indus/Harappa Civilization became a favored medium of art and carved objects in Mesopotamia and can be found today in many objects.[261]

Cubical dice occur in both Mesopotamia and Indus/Harappa Civilization; the arrangement of the dots on a die from a royal third millennium BC cemetery in

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[258] See Rao, SR, *New Frontiers of Archaeology*, n. 24, p. 9

[259] Ratnagar, Shereen, Trading Encounters From the Euphrates to the Indus in the Bronze Age, Oxford University Press (2006) p. x

[260] Id., p. 22

[261] Ratnagar, S, Trading Encounters From the Euphrates to the Indus in the Bronze Age, n. 260,p. 159

Ur have the exact same arrangement of dots as dice from the Indus/Harappa Civilization.[262]

In order to move textiles, wood and meals, boats of the third millennium BC much have been constructed out of wooden planks; it is believed that they retained their "spoon" shape and bipod mast; teak wood from India is an excellent ship building wood because of its hardness and resistance to warping or swelling in water.[263]

Five "anchor stones" were found in the basin of the "dockyard" at Lothal; we thus assume that the ancient boats were made of wood such as teak, rope from vegetation fiber, cotton, flax or rush for sails, bamboo for masts; either wood or bronze for pegs and nails and stone for anchors, and perhaps bitumen (natural tar) or animal fat for caulking.[264]

Another piece of evidence that Indus seals were used in foreign trade is a commodity sealing from Jokha (Umma) that bears an impress of woven material stamped with a square Harappan seal showing a unicorn and the written script of the Indus/Harappa Civilization.[265]

The Law Code of Manu had many references to trade, and some to long-distance trade. One such reference was: Law Code of Manu, 8.406. For a long

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[262] Ratnagar, S, Trading Encounters From the Euphrates to the Indus in the Bronze Age, n. 260, p. 200
[263] Id., p. 215
[264] Id., p. 226
[265] Ratnagar, S, Trading Encounters From the Euphrates to the Indus in the Bronze Age, n. 260,p. 259

passage the boat-hire must be proportioned to the places and times; know that this (rule refers) to (passages along) the banks of rivers; at sea there is no settled (freight).

Water Technology

Water Technology is an important subject in the Rig Veda; for the people of the Indus/Harappa Civilization, what we can guess by examining the ruins and excavating the cities, towns and villages is this: to the people of the Indus/Harappa Civilization having sophisticated water technology was one of the most important aspects of their lives.

There is a rich terminology connected to water in the Rigveda, including, a pond, a well, a spring or fountain, a canal, a leather bag for gathering water, an excavated well and irrigation.[266] Rigveda mentions the same material, style and workmanship as those used by the by the people of the Indus/Harappa Civilization, including laying a foundation, frames of doors, brick laying, gates, doors, entrances, load bearing girder, measuring rope, width and breadth.[267]

The ancient Indus/Harappa Civilization town of Kunal, in the Punjab, near Haryana, has undergone recent excavation. Bricks were found (once again) to be

[266] See Singh, Bhagwan, *The Vedic Harappans*, n. 32, p. 133
[267] Id., p. 285

standardized in two rations of 1:2:3 and 1:2:4. A well developed drainage system is in place, soakage jars fixed in street pits, to keep the streets neat and clean.[268]

The houses of the Harappan civilization were built of bricks and stone on high platforms, with stairs, bathrooms and a good drainage system both covered and open.[269]

The Dock at Lothal is the largest structure ever built by the Indus/Harappa Civilization in any city; it was larger than six hundred feet by one hundred feet (210 x 35 m); there was a lock-gate system for low tide and it is estimated that as many as thirty ships of sixty tons or more could be berthed at the same time.[270] Recent analysis of sediment from the floor of the basin at the Lothal Dock indicates that the existence of a high tidal range in the Gulf of Cambay during Harappan times.[271]

In the Indus/Harappa Civilization city of Lothal, not only annual flooding occurred, but some severe floods and the inhabitants had to rebuild their houses. Instead of just rebuilding in a replacement way, the inhabitants not only rebuilt their houses on higher platforms, but the opulence of inhabitants was increasing,

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[268] See Khatri & Acharya, *Kunal Excavations*, n. 14, p. 108
[269] See Sharma, DP & Maduri, *Panorama of Harappan Civilization*, n. 104 p. 28
[270] See Rao, SR, *New Frontiers of Archaeology*, n. 24, p. 10
[271] Id., p. 11

judging from the number of spacious houses and industrial establishments, costly ornaments and imported goods.[272]

Water in Rig Veda, Indus/Harappa and Law Code of Manu

Law Code of Manu re Water: 6.24. When he bathes at the three Savanas (sunrise, midday, and sunset), let him offer libations of water to the manes and the gods, and practicing harsher and harsher austerities, let him dry up his bodily frame.[273]

If the Law Code of Manu recommended bathing three times a day, that certainly would have seemed excessive to the average person living more than two thousand years ago. But to the people of the Indus/Harappa Civilization, with all of their indoor plumbing and drainage, bathing three times a day would not be at all difficult or impossible, as it probably might have been at other periods in history.

Law Code of Manu re Water: 3, 163. (Regarding professions): He who diverts water-courses, and he who delights in obstructing them, an architect, a messenger, and he who plants trees (for money),

This passage is speaking in part about architects, not only those who designed outside irrigation, but also those who had the job of designing the baths and indoor plumbing. Once again, this certainly seems like the people of the

[272] See Rao, SR, *Lothal: A Harappan Port* Town, in Lahiri, N, Ed, *The Decline and Fall of the Indus Civilization*, n. 101, p. 147
[273] See Buehler, G., LAWS OF MANU, n. 3

Indus/Harappa Civilization, who obviously had architects and engineers to design the complicated urban bathrooms and drainage.

Law Code of Manu re Water: 2:53. Let a twice-born man always eat his food with concentrated mind, after performing an ablution; and after he has eaten, let him duly cleanse himself with water and sprinkle the cavities (of his head).[274]

Many people in India did not live near a body of water. Therefore, bathing after every meal would have been quite a task for many. But for the citizens of the cities and towns of the Indus/Harappa Civilization, no problem.

Law Code of Manu re Water: 2: 62. A Brahmana is purified by water that reaches his heart, a Kshatriya by water reaching his throat, a Vaisya by water taken into his mouth, (and) a Sudra by water touched with the extremity (of his lips).[275]

Once again, water, water, water. Not only unavailable to the average person in ancient India outside of the Indus/Harappa Civilization, but unimaginable to bathe so many times per day.

Law Code of Manu re Water: 2: 176. Every day, having bathed, and being purified, he must offer libations of water to the gods, sages and manes, worship (the images of) the gods, and place fuel on (the sacred fire).[276]

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[274] See Buehler, G., LAWS OF MANU, n. 3
[275] Id.
[276] Id.

Bathing and more bathing seemed to be the norm in the Law Code of Manu society and the Indus/Harappa Civilization. This seems very difficult to even prescribe for even one person. This is the prescription for students. Much easier for students living in the Indus/Harappa Civilization.

Law Code of Manu re Water: 4. 76. Let him eat while his feet are (yet) wet (from the ablution), but let him not go to bed with wet feet. He who eats while his feet are (still) wet, will attain long life.[277]

This time, it is bathing before each meal, as well as after each meal. All of this bathing required lots and lots of water, of course, available, if one lived in the Indus/Harappa Civilization.

Law Code of Manu re Water: 4:151. Far from his dwelling let him remove urine (and ordure), far (let him remove) the water used for washing his feet, and far the remnants of food and the water from his bath.[278]

Once again, The Law Code of Manu also insisted upon the removal of wastes and dirty water. This was easy for inhabitants of the Indus/Harappa Civilization because of their marvelous drains, house drains, street drains, city drains, but difficult for many if one did not live as part of an Indus/Harappa Civilization city or town.

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[277] See Buehler, G., LAWS OF MANU, n. 3
[278] Id.

Law Code of Manu re Water: 5.134. In order to cleanse (the organs) by which urine and faeces are ejected, earth and water must be used, as they may be required, likewise in removing the (remaining ones among) twelve impurities of the body.[279]

Throughout the bathrooms and drains of the ruins of the Indus/Harappa Civilization, one finds cakes of sand and earth; the inhabitants seems to have been very familiar with the Law Code of Manu.

The question keeps coming up: could it be that the Law Code of Manu was written at the same time, in approximately 2800 BC?

Indus/Harappa Civilization and Wasserluxus

The clearest examples of the important role that water played in the Indus/Harappa Civilization occurs at Mohenjo-daro and Dholavira—many wells, elaborate drainage systems, bathing facilities in virtually all the houses and the Mohenjo-daro Great Bath.[280]

Water Management was amazing in the Indus/Harappa Civilization. The Harappans were masters in hydraulic engineering; there are eighteen reservoirs in Dholavira, suggesting excellent water management.[281]

"The World's First Swimming Pool", as some visitors call it, was build at Mohenjo-daro, but it was probably used for ritual bathing, not public

[279] See Buehler, G., LAWS OF MANU, n. 3
[280] See Possehl, Gregory, *The Indus Civilization*, n. 100, p. 57
[281] See Sharma, DP & Maduri, *Panorama of Harappan Civilization*, n. 104 p. 59

swimming.[282] Even if the large pool at Mohenjo-daro was meant for ritual bathing, certainly all of the requirements given in the Law Code of Manu could have been taken care of or satisfied.

For almost every house in Mohenjo-Daro, the bathroom was important; water was poured over the bather, over the brick floor, emptying into a brick outlet into an efficient drainage network of the city.[283]

Once again, the Law Code of Manu was satisfied by carrying one's waste products far from home. Most of the inhabitants of other contemporaneous civilizations did not have the drainage of Indus/Harappa Civilization.

Water played a vital part in the life of the Indus/Harappa Civilization people; Indus/Harappa Civilization hydraulic engineers were 2000 years ahead of their time because not for another 2000 years did hydraulic engineers of that caliber emerge in Rome.[284] This is an amazing conclusion: that the hydraulic engineers of the Indus/Harappa Civilization achieved feats that were not seen again in the world for another 2000 years.

Cleanliness is stringently enforced and water is recommended for cleaning purposes in another post Rig Veda composition, the Grihya-Suutras. A regular daily bath was insisted upon. The sipping of water and washing of feet are

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[282] See Kenoyer, JM, Ancient Cities of the Indus Valley Civilization, n. 63, p. 63
[283] See McIntosh, Jane, *A Peaceful Realm*, n. 58, p. 94
[284] Id., p. 100

insisted upon as preliminary to even the most trivial ritual act.[285] This is again just like the requirements of the Law Code of Manu. Washing was one of the most important acts of many people in the Law Code of Manu society.

The Baths at Mohenjo-daro are large, thus suggesting that the daily bath was concurrent with the writing of the Grihya-Suutras. I believe that it is also possible to conclude that the daily bath of the people of the Indus/Harappa Civilization was concurrent with the composition of the Law Code of Manu.

A good example of an Indus/Harappa Civilization toilet is in the town of Banawali; in one of the houses the toilet has a wash-basin high in the corner near the drain which carried off the waste water into a sullage jar place outside on the street.[286] Probably the sullage jar had to be emptied by servants whose job it was to empty such jars.

There were many wells throughout the Indus/Harappa Civilization city of Mohnjo-daro, essential for cleanliness and the drainage systems served to move the water away from the houses, below ground to prevent contamination.

The builders of the Great Bath in Mohenjo-daro used elevation and distance to set it apart from the rest of the city; ritual space that seems to have been reserved for the elites of the city, possibly the elites of the entire Indus world.[287]

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[285] See Sethna, KD, *Karpasa in Prehistoric India*, n. 26, p. 53
[286] See Lal, BB, *The Sarasvati flows on*, n. 16, p. 62
[287] See Possehl, Gregory, *The Indus Civilization*, n. 100, p. 58

In the Great Bath at the Indus/Harappa Civilization city of Mohenjodaro, fired bricks were held together by chuna mortar and asphalt to make them watertight for the bathers and so the water could be drained out by an opening in one corner.[288]

Current excavators at the Indus/Harappa Civilization city of Harappa are finding what appear to be latrines in every house; the commodes were made of large jars sunk into the floor and many contained a small jar similar to the modern water jar (or plastic cup) sued through out India and Pakistan today for washing after using the toilet; clean sand was scattered on the floor of the latrine.[289]

Government

The Rigvedic village, graama, ("grAma") probably had a population of about one hundred people known as a Jana ("jana") or vis and had a king, raja ("rAja") ruling over it.[290] Sir Monier-Williams defines ("rAja") as not only a king, but also a sovereign, a chief or best of its kind.[291]

The Vedic people had sabhaas and samitis whose functions seems to have been both legislative and to give advice to rulers. The rulers had a hierarchical status, for example, raajan, kings. The smallest rulers were called raajaka, next raajan, then Samraat.[292]

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[288] See Sharma, DP & Maduri, *Panorama of Harappan Civilization*, n. 104 p. 40
[289] See Kenoyer, JM, Ancient Cities of the Indus Valley Civilization, n. 63, p. 60
[290] See Dhavalikar, MK, *The Aryans Myth and Archaeology*, n.33, p. 53
[291] See Monier-Williams, n. 8
[292] See Lal, BB, *Search for Vedic-Harappan Relationship*, n. 14, p. 5

In the 1800s in India, a settlement with three hundred population was described as an important settlement; therefore, four thousand years ago, a place with a population of two hindered may well have been considered a major settlement.[293] So today, when we speak of a settlement, or a village, or a town or city, we must be careful with population estimates.

Rig Veda lists many occupations related to the administration of government, including officer, minister, architect, treasurer, tax collector, courier, commander, village headman, warrior, archer, ambassador/envoy, spy, police officer and guard.[294] There are so many governmental and administrative functionaries mentioned in the Rig Veda. It is impossible to think that the people living at the time of the composition of Rig Veda were simple nomads.

Other terms which refer to kingdoms and rulers of different stature are rastra, raja, jyetharaj, samrat, janaraj; terms for councils and assemblies such as samsad, sabha, samiti and terms for various categories of administrative posts such as adhyaksa, duta, nidhapti, rathaspati and senarni; Vedic society was not merely in a rural stage.[295]

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[293] See Dhavalikar, MK, *The Aryans Myth and Archaeology*, n.33, p. 53
[294] See Ghosal, P, *Lifestyle of the Vedic People*, n. 191, p. 99
[295] See Lal, BB, *It is Time To Rethink*, in Lahiri, N, Ed, *The Decline and Fall of the Indus Civilization*, n. 101, p. 89

The Rigveda refers to great assemblies (9.92.6), major and minor kings (8.21.18), riches poring fourth from four seas (9.33.6) and boats with one hundred oars (1.116.5); this was not a simple society.[296]

Already discussed above was one of the Indus/Harappa Civilization cities was Dholavira, situated in the isolated island of Khadir in the Great Rann of Kachchh in Gujarat, India, where a castle and a bailey were unearthed. What is most interesting to us in this stage of our discussion, was that in the post-Indus/Harappa Civilization period, the urban components rapidly diminish an disappear, along with the weights and many other sophisticated items of art and utility.[297] If the Law Code of Manu did indeed have much influence during the rise of the Indus/Harappa Civilization, then it stands to reason that the Law Code of Manu might also diminish in importance with the decline of international trading and cities of the Indus/Harappa Civilization.

The Indus/Harappa Civilization cities of Harappa, Mohenjodaro, Lothal, Kalibangan and Dhola Vira had both an Upper Town Acropolis or Citadel and a Lower Town; the Upper Town was reserved for the residence of the Ruler and his entourage and the Lower Town for the rest of the population.[298] Once again,

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[296] See Lal, BB, *It is Time To Rethink*, in Lahiri, N, Ed, *The Decline and Fall of the Indus Civilization*, n. 101, p. 78-79

[297] Bisht, RS, *Dholavira*, in Lahiri, N, Ed, *The Decline and Fall of the Indus Civilization*, n. 101, p. 305-314

[298] See Rao, SR, *New Frontiers of Archaeology*, n. 24, p. 4

archeological clues that seem to fit with the prescriptions included within the Law Code of Manu.

Behind the issuing of uniform weights and their use in the Indus/Harappa Civilization realm, must have been a well-organized bureaucratic system capable of enforcing standardization over this enormous area.[299] There must have been a center of administration. A village is a collection of houses and nothing else; towns are the home of the local chief, center of an area's administration and a center of craft production and trade.[300]

The total number of Indus/Harappa Civilization sites that have currently been found is approximately 2,658.[301] The Indus/Harappa Civilization was greater in area than the contemporary civilizations of Egypt and Mesopotamia in Iraq and Syria in the valley of the Euphrates and Tigris rivers.[302]

The evidence suggests that fire worship had a religious role in Indus life; at Kalibangan, Lothal, Banawali and Rakhigarhi, bathing facilities are associated with what are taken to be fire altars.[303] Again, bathing and fire worship as described by Rig Veda are prescribed in the Law Code of Manu.

There are no references to temples or religious buildings in Rig Veda, just individual fire worship, as is popular in India today; modern-day Hindu temples

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[299] See McIntosh, Jane, *A Peaceful Realm*, n. 58, p. 126
[300] Id., p. 83
[301] See Sharma, DP & Maduri, *Harappan Civilization*, n.179, p. (ix)
[302] Id., p. 17
[303] See McIntosh, Jane, *A Peaceful Realm*, n. 58, p. 110

are very small compared to Christian churches and Muslim mosques.[304] The Law Code of Manu also seemed to refer to the kings and rulers not as demi-gods, but almost as "servant-kings", as mentioned above. In that sense, it was the task of the "king" to protect the people from harm. It was not within their "job description" to build themselves lavish palaces and live the life of luxury.

The Law Code of Manu has an entire chapter devoted to laws and advice regarding rulers and kings. It is summed up in one verse in the First Chapter, saying that the Creator commanded all members of the Kshatriya caste (the royal and warrior caste) to protect the people, etc.: Law Code of Manu: 1.89. "The Kshatriya he commanded to protect the people, to bestow gifts, to offer sacrifices, to study (the Veda), and to abstain from attaching himself to sensual pleasures."[305] This is a very important verse, to abstain from attaching himself to sensual pleasures, something that almost all other kings of the time did.

Law Code of Manu: 6.62. "Among them let him (the King, the Chief) employ the brave, the skilful, the high-born, and the honest in (offices for the collection of) revenue, (e.g.) in mines, manufactures, and storehouses, (but) the timid in the interior of his palace."[306] Here the king is given his job as administrator. He must learn how to procure the right person for his administration and then apply daily skills of management. The references to

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[304] See Dhavalikar, MK, *The Aryans Myth and Archaeology*, n.33, p. 65-66
[305] See Buehler, G., LAWS OF MANU, n. 3
[306] Id.

"collection of revenue, (e.g.) in mines, manufactures, and storehouses" seems to fit the clues left to us by the ruins of the Indus/Harappa Civilization.

Law Code of Manu: 6.63. "Let him also appoint an ambassador who is versed in all sciences, who understands hints, expressions of the face and gestures, who is honest, skilful, and of (noble) family." 6.64. "(Such) an ambassador is commended to a king (who is) loyal, honest, skilful, possessing a good memory, who knows the (proper) place and time (for action, who is) handsome, fearless, and eloquent." [307] We can easily surmise that the people of the Indus/Harappa Civilization must have had great memories. The architecture was complex, the mathematics complex, the engineering complex, and all we have written down are a few seals.

Law Code of Manu: 6.65. "The army depends on the official (placed in charge of it), the due control (of the subjects) on the army, the treasury and the (government of) the realm on the king, peace and its opposite (war) on the ambassador."[308] Next, the king had to also be a real commander-in-chief of the army, and not just a figure-head.

Law Code of Manu: 6.66. "For the ambassador alone makes (kings') allies and separates allies; the ambassador transacts that business by which (kings) are

[307] See Buehler, n.3
[308] Id.

disunited or not."[309] These are very complicated local and international governmental practices described here, ones that were needed at the time of the Indus/Harappa Civilization, and not needed again for thousands of years. Once again, another relationship between the Indus/Harappa Civilization and the Law Code of Manu society.

Law Code of Manu: 6.67. "With respect to the affairs let the (ambassador) explore the expression of the countenance, the gestures and actions of the (foreign king) through the gestures and actions of his confidential (advisers), and (discover) his designs among his servants."[310] Once again, in this related area, high level diplomacy, such skills seemingly only needed in the Indus/Harappa Civilization time.

Law Code of Manu: 6.68. "Having learnt exactly (from his ambassador) the designs of the foreign king, let (the king) take such measures that he does not bring evil on himself."[311] The Law Code of Manu king had to also make sure that his foreign ambassadors were almost junior spies.

Law Code of Manu: 7.115. "Let him appoint a lord over (each) village, as well as lords of ten villages, lords of twenty, lords of a hundred, and lords of a

[309] See Buehler, n.3
[310] Id.
[311] Id.

thousand."[312] This again sounds like the Indus/Harappa Civilization with its standardization of production.

Law Code of Manu: 7.127. "Having well considered (the rates of) purchase and (of) sale, (the length of) the road, (the expense for) food and condiments, the charges of securing the goods, let the king make the traders pay duty."[313] The administration of the cities and towns of the Indus/Harappa Civilization could not have flourished without making traders pay duty.

Law Code of Manu: 7.128. "After (due) consideration the king shall always fix in his realm the duties and taxes in such a manner that both he himself and the man who does the work receive (their due) reward."[314] The administration of the cities and towns of the Indus/Harappa Civilization could not have flourished without taxes collected from traders.

Law Code of Manu: 7.129. "As the leech, the calf, and the bee take their food little by little, even so must the king draw from his realm moderate annual taxes."[315] The Law Code of Manu even gave the king the politically correct things to say to his people regarding taxes.

Within the Law Code of Manu, the amounts of taxes were described down to each level of society and means of production. These descriptions also give a

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[312] See Buehler, n.3
[313] Id.
[314] Id.
[315] Id.

glimpse into the lives of the people living under the Law Code of Manu. They do seem to have lives that would fit in with the people of the Indus/Harappa Civilization.

Law Code of Manu: 7.130. "A fiftieth part of (the increments on) cattle and gold may be taken by the king, and the eighth, sixth, or twelfth part of the crops."[316]

Law Code of Manu: 7.131. "He may also take the sixth part of trees, meat, honey, clarified butter, perfumes, (medical) herbs, substances used for flavoring food, flowers, roots, and fruit." Law Code of Manu: 7.132. "Of leaves, pot-herbs, grass, (objects) made of cane, skins, of earthen vessels, and all (articles) made of stone."[317]

Soma

Soma was both a "god" and a sacred intoxicating drink of the people of the time of Rig Veda and Law Code of Manu. The Soma cult may have reached Babylonia and Egypt. The Soma cult pervades all of the Vedas and is a cult of all Vedic people, like the fire ritual. All the Vedic Gods drink the Soma, which gives them power.[318]

The Soma plant was not just one plant, but a plant mixture or the sacred use of plants. That is why Soma is mentioned relative to all plants. Ephedra does not

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[316] See Buehler, n.3
[317] Id.
[318] See Frawley, David, *Geographical References: The Ocean and Soma*, n. 14, p. 44

resemble the characteristics of the Soma plant as described in Rigveda. The Rigveda describes Soma as a watery plant, growing near water and flowing with a milky juice gained by crushing the plant. Ephedra, is a dry plant that has almost no juice.[319]

Soma was the most important intoxicating drink; it was a divine drink, consumed on sacrificial occasions as part of a ritual; it was difficult to obtain the actual soma plant and therefore several substitutes were used; other alcoholic beverages were consumed.[320] Soma was an important ritual and was prepared three times a day, morning, noon and evening.[321]

We discussed above the most frequently mentioned tree in the Rig Veda is known as the piipala tree in Hindi, in Rig Veda, it is called the asvattha ("azvattha") ("the tree that the horses stand under"), translated as the "holy Fig tree". Here, we re-examine that tree, since its wood was used to make vessels which would hold the Soma (Rig Veda 1.135.8 and 10.97.5).[322]

The Law Code of Manu said about soma: 11.14. "If (a man) possessing one hundred cows, kindles not the sacred fire, or one possessing a thousand cows, drinks not the Soma-juice, a (sacrificer) may unhesitatingly take (what he requires)

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[319] See Sharma, DP & Maduri, *Panorama of Harappan Civilization*, n.179, p. 45
[320] See Ghosal, P, *Lifestyle of the Vedic People*, n. 191, p. 26-27
[321] See Dhavalikar, MK, *The Aryans Myth and Archaeology*, n.33, p. 67
[322] See Lal, BB, *The Homeland of the ARYANS, Evidence of Rigvedic Flora and Fauna & Archaeology*, Aryan Book International (2005) p. 1-4

from the houses of those two, even (though they be Brahmanas or Kshatriyas)."[323] Soma was very important to the people who lived at the time of the composition of the Law Code of Manu. Many scholars are beginning to believe that soma may have been important to the people of the Indus/Harappa Civilization.

The people of the Indus/Harappa Civilization made extraordinary square and rectangular fired-soapstone (steatite) seals with pictures of animals and Indus script; many animals were male bulls with a mysterious offering stand in front of them; seals may have been used sometimes like credit cards today; in Mesopotamia, when a seal was lost, a herald announced the loss so that the seal would be invalidated.[324]

Some scholars identify the offering stand as a filter for the preparation of a sacred intoxicating beverage called soma, which is used in Vedic rituals.[325] The cone carved in ivory from Harappa certainly seems to confirm this view. If the above theory is true, that the offering-stand carved on so many seals of the Indus/Harappa Civilization were really filters for the preparation of a sacred intoxicating beverage called soma, which is used in Vedic rituals, then another part of our understanding would be enlarged regarding the people of the Indus/Harappa Civilization.

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[323] See Buehler, n.3
[324] See Kenoyer, JM, Ancient Cities of the Indus Valley Civilization, n. 63, p. 73
[325] Id., p. 86

Tradition

Yoga is defined both as yoking, joining, attaching and meditation, especially...as a system taught by Patanjali and called the Yoga philosophy; ... its chief aim being to teach the means by which the human spirit may attain complete union with ... the Supreme Spirit.[326] As we shall see below, the practice of yoga, especially hatha yoga seems to have been performed by the people of the Indus/Harappa Civilization.

The Sanskrit-English dictionary of Sir Monier-Williams is excellent in providing roots of each Sanskrit letter. In this case, the word, Yoga ("yoga") means" the act of yoking, joining, attaching, generally understood to mean various practices that help one reach greater spirituality.

And apparently comes from:

ya– ... joining, restraining

o--- an interjection

ga–... going, moving

Putting this all together, the roots seem to indicate: "one who restrains one's self to go".[327] And many philosophers believe "to go" is short-hand for "going to God, or the divine".

[326] See Monier-Williams, A Sanskrit-English Dictionary, n. 7
[327] Id.

Yoga as we know it today in the West has two main paths, the one we know best as yoga, the physical stretching and postures, which is really called "hatha yoga" (force yoga) and the meditation path, which is generally called "raja yoga" (kingly or royal yoga).

There is strong evidence that the people of the Indus/Harappa Civilization practiced Hatha Yoga and possibly Raja Yoga. There are many terracotta figurines from the Indus/Harappa Civilization cities of Harappa and Mohenjo-daro in Hatha Yogic postures and some sitting cross-legged in an apparently Raja Yoga posture.[328]

One of the Hatha Yoga postures that the terracotta figure is performing is today called "anjalimudra".[329] All classes of society had occasion to use engraved seals is shown seated with folded legs as in the Hatha Yoga postures that the figure is performing is today called "padmasanda" or "vajrasana".[330] It is very interesting that we can easily see from hatha yoga positions from modern-day India that the Indus/Harappa Civilization terra-cotta figures and the figure on seals were performing.

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[328] Rajaram, NS, *Connections Between the Harappan Seals and the Vedic Literature*, n. 14, p. 136
[329] Sankalia, HD, *Pre-Historic Art in India*, n. 55, p.29
[330] Id., p.60-61

Other scholars concur that the proto-Shiva figures of seals is shown seated with folded legs as in the Hatha Yoga postures that the figure is performing what is today called "padmasanda" or "vajrasana".[331]

From many Indus/Harappa Civilization sites, terracotta figures in Hath Yoga Asanas are found, leading up to bolstering the theory that Hatha Yoga goes back to early Indus/Harappa Civilization times as we can tell from terracotta figures.[332]

Other practices survive today in modern India that we can tell were practiced by individuals in the Indus/Harappa Civilization. For instance, the practice that survives today in India of married Hindu women putting sunduura (vermilion) to the maanga (line of partition of the hair on their head) goes back to early Indus/Harappa Civilization times as we can tell from female terracotta figures.[333]

The practice that also survives today in India of newly-married Hindu women putting a gold cone on their head and bangles all over her right arm goes back to early Indus/Harappa Civilization times as we can tell from female terracotta figures.[334] The practice that survives today in India of women putting collyrium on their eyes (in the same place where some modern women put eye-

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[331] See Sankalia, HD, *Pre-Historic Art in India*, n. 55, p.29
[332] See Lal, BB, *The Sarasvati flows on*, n. 16, p. 127
[333] Id., p. 82
[334] Id., p. 84

liners, such as mascara) goes back to early Indus/Harappa Civilization times as we can tell from female terracotta figures. There is also a modern three-in-one tweezers-cum-toothpick gadget that is in use in India today; extremely similar objects have been found in Indus/Harappa Civilization sites.[335]

From the Indus/Harappa Civilization city of Lothal, gamesmen have been found that look very much like the pieces of a chess game. I myself have seen some of those gamesmen and have been much impressed. These Indus/Harappa Civilization gamesmen have led scholars to theorize that chess, as well as the throwing of dice, goes back to early Indus/Harappa Civilization times as we can tell from terracotta figures.[336]

The Tanduur oven is very popular in Northern India cooking today. This Tanduur oven dates back to 2800 BC to early Indus/Harappa Civilization times as we can tell from examples in many Indus/Harappa Civilization cities and towns.[337] This is another example of Indus/Harappa Civilization technological progress that has survived thousands of years.

The Indus/Harappa Civilization city of Kalibangan excavations revealed a terracotta specimen which is clearly a linga ("liNga") with yoni, something that is very common in Saivte Indian Hindu temples today.[338]

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[335] See Lal, BB, *The Sarasvati flows on*, n. 16, p. 89
[336] Id., p. 91
[337] Id., p. 95
[338] Id., p. 119

The Indus/Harappa Civilization Kalibangan excavations also revealed seven "fire-altars" with a bathing well nearby; anybody using these fire-altars had to face east, something that is very common in Indian Hindu "fire-rituals" of today.[339] Facing in the easterly direction, towards the rising sun is considered very auspicious in many parts of India today.

Aditii, the Mother Goddess is mentioned again and again in Rig Veda was the Mother of every god; worship of her could clearly be the Mother Goddess-type of worship.[340]

The Bull in the Vedas is spoken of as Purusha, the supreme Being or Soul, as is Indra and Agni; worship of the bull in the Vedas is common.[341] So many of the Indus/Harappa Civilization seals, as will be discussed below, have the carving of a bull on them. The Bull in the Vedas is spoken of as Purusha, the supreme Being or Soul, as is Indra and Agni; worship of the bull in the Vedas is common.[342] There are many seals of bulls and mother goddess statutes in Indus/Harappa Civilization.

Right Arm Uncovered: Law Code of Manu: 1.63. "A twice-born man is called upavitin when his right arm is raised (and the sacrificial string or the dress, passed under it, rests on the left shoulder); (when his) left (arm) is raised (and the

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[339] See Lal, BB, *The Sarasvati flows on*, n. 16, p. 123
[340] See Sethna, KD, *The Problem of Aryan Origins*, n. 12, p.38
[341] Id.,.40-41
[342] Id., p.40-41

string, or the dress, passed under it, rests on the right shoulder, he is called) prakinavitin; and nivitin when it hangs down (straight) from the neck." 1.193. "Let him always keep his right arm uncovered, behave decently and keep his body well covered..."[343] Many of the male statutes have their right arm uncovered in the Indus/Harappa Civilization culture, as we can tell from the terra-cotta figures and some statutes.

Aditii, the Mother Goddess is mentioned again and again in Rig Veda was the Mother of every god; worship of her could clearly be the Mother Goddess-type of worship.[344]

All of the above facts should allow us to date the Rig Veda as pre-Indus/Harappa Civilization.[345]

Eternal Law from Rig Veda

In Rig Veda, the concept of "Eternal Law" is introduced and it is called, Rita ("Rta"). Devas (who are defined sometimes as gods, sometimes as angles, sometimes as shining beings) are the personified agents of Rita ("Rta"). Cosmic

[343] See Buehler, G., LAWS OF MANU, n. 3
[344] See Sethna, KD, *The Problem of Aryan Origins*, n. 12, p.38
[345] Id., p.53

order is that harmony (law) whose ordinances shine through Rita ("Rta"). (Rig Veda X.65.5).[346]

"Bring gifts to Mitra and to Varuṇa who, Lords of all, in spirit never fail the worshipper, Whose statute shines on high through everlasting Law, whose places of sure refuge are the heavens and earth." (mitrAya zikSa varuNAya dAzuSe yA samrAjA manasA naprayuchatha/ yayordhAma dharmaNa rocate bRhad yayorubhaerodasInAdhasI vRtau.)

Sir Monier-Williams-defining: Rita ("Rta"):

R--an interjection expressing laughter, a particle implying abuse, in heaven, to go, move, rise, tend upwards, to go towards,

ta--a tail, the breast, the womb, crossing

Something like the "tail part of rising upwards", which became "proper, right, fit, apt, suitable, able, brave, honest, law, rule, divine law, divine truth".

One hymn in Rigveda praises certain devatas as "True to Law, born in Law the strengtheners of Law, terrible, haters of the false" (Rigveda VII.66.13).[347]

Law Code of Manu re Law

Rita ("Rta") is the universal law which all gods and humans must obey.[348]

Law Code of Manu: 2.6. "The whole Veda is the (first) source of the sacred law, next the tradition and the virtuous conduct of those who know the

[346] See Verma, Dr. SR, *Vedas: The Source of Ultimate Science,* n. 124, p. 26
[347] See Singh, Bhagwan, *The Vedic Harappans*, n. 32, p. 313
[348] See Verma, Dr. SR, *Vedas: The Source of Ultimate Science,* n. 124, p. 57

(Veda further), also the customs of holy men, and (finally) self-satisfaction." Even though the Law Code of Manu pays "lip-service" to Rig Veda, the Law Code of Manu has so many laws and punishments, which I believe it is very different than the Rig Veda.

Law Code of Manu: 2.7. "Whatever law has been ordained for any (person) by Manu, that has been fully declared in the Veda: for that (sage was) omniscient."[349] The Law Code of Manu is trying to justify its differences with the Vedas by saying that all of the Law Code of Manu has been declared in the Vedas, which we know to be untrue.

Law Code of Manu: 2.8. "But a learned man after fully scrutinizing all this with the eye of knowledge, should, in accordance with the authority of the revealed texts, be intent on (the performance of) his duties."[350] Once again, this sounds like a manual made up by a bureaucrat, not an enlightened person, as the Vedas were composed.

Law Code of Manu: 2.9. "For that man who obeys the law prescribed in the revealed texts and in the sacred tradition, gains fame in this (world) and after death unsurpassable bliss."[351] In the Law Code of Manu, there is an emphasis on the life hereafter, and not on the life of the present.

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[349] See Buehler, n.3
[350] Id.
[351] Id.

Law Code of Manu: 2.10. "But by Sruti (revelation) is meant the Veda, and by Smriti (tradition) the Institutes of the sacred law: those two must not be called into question in any matter, since from those two the sacred law shone forth."[352]

As was remarked above, Smrti ("smRti") was not as "high and mighty" as Shruti ("zruti"). Shruti ("zruti") was the song that was constantly being sung by the divine, available to any human being, usually a Rishi ("RSi"), with a sufficiently subtle "radio-like" mind. Smrti ("smRti") was much more common, "remembered" by human teachers (like Manu). Here, the composers of the Law Code of Manu were trying to elevate their Smrti ("smRti") to become Shruti ("zruti").

Law Code of Manu: 2.11. "Every twice-born man, who, relying on the Institutes of dialectics, treats with contempt those two sources (of the law), must be cast out by the virtuous, as an atheist and a scorner of the Veda."[353] If the people do not obey the Law Code of Manu, they should be cast out.

Law Code of Manu: 2.12. "The Veda, the sacred tradition, the customs of virtuous men, and one's own pleasure, they declare to be visibly the fourfold means of defining the sacred law."[354]

Law Code of Manu: 2.13. "The knowledge of the sacred law is prescribed for those who are not given to the acquisition of wealth and to the gratification of

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[352] See Buehler, n.3
[353] Id.
[354] Id.

their desires; to those who seek the knowledge of the sacred law the supreme authority is the revelation (Sruti)."[355]

Law Code of Manu: 3. 133. "As many mouthfuls as an ignorant man swallows at a sacrifice to the gods or to the manes, so many red-hot spikes, spears, and iron (metal) balls must (the giver of the repast) swallow after death."[356] Once again, the penalty is after death.

Human Library Books: Brahmins defined by the Law Code Of Manu.

Law Code of Manu: 3.134. "Some Brahmanas are devoted to (the pursuit of) knowledge, and others to (the performance of) austerities; some to austerities and to the recitation of the Veda, and others to (the performance of) sacred rites."[357] These "Human Library Books" or "Human Computers" as I like to call them, are definitely that, as defined by the first phrase that "some are devoted to knowledge". This is not a "priest" performing a sacerdotal function. This is a scholar, a teacher, an inventor, not a "priest".

Law Code of Manu: 3. 1. "The vow (of studying) the three Vedas under a teacher must be kept for thirty-six years, or for half that time, or for a quarter, or until the (student) has perfectly learnt them."[358] If one studies for thirty-six years, that is a long time, even if one begins in childhood. Again, this is more of a path

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[355] See Buehler, n.3
[356] Id.
[357] Id.
[358] Id.

of knowledge, then the path of one performing sacerdotal functions as a "priest" for the people.

Law Code of Manu: 7.141. "When he is tired with the inspection of the business of men, let him place on that seat (of justice) his chief minister, (who must be) acquainted with the law, wise, self-controlled, and descended from a (noble) family."[359] The king, or head of a village, when getting tired of acting as judge, must turn over the duties of judge to a Brahmin who is acquainted with the law. This means someone who is not a "priest" but a lawyer or assistant judge who has helped the king or village head previously.

Conclusion to Chapter Four

The Indus/Harappa Civilization made progress towards "civilized life" by using the "technology" of harnessing the use of animal power and the "technology" of division of labor, in addition to urban planning, jewelry making, sanitation and long-distance maritime trade. Most of the above "technologies" were also mentioned in the Rig Veda and the Law Code of Manu.

Throughout the vast Indus/Harappa Civilization empire, standardization helped mass production. Standardization must have been brought about by the "servant kings", similar in concept to the Law Code of Manu.

[359] See Buehler, n.3

Other "overlaps" of technology and knowledge between Indus/Harappa Civilization on the one hand and Rig Veda culture and Law Code of Manu society on the other hand: water technology and efficient government.

Soma, the spiritual intoxicating beverage, was very important in Rig Veda and Law Code of Manu societies also seems to have been present and perhaps important in the Indus/Harappa Civilization.

Many Indus/Harappa Civilization practices have been preserved by modern-day citizens of India and/or Pakistan, including Hatha Yoga, make-up and jewelry. Many of these practices were also mentioned in the Law Code of Manu.

# Chapter Five: Indus/Harappa Civilization Script

Both the Law Code of Manu society and the Indus/Harappa Civilization seemed to value memorization and did not value writing.

As was discussed above, the Law Code of Manu prescribed intense study, not to learn to write, but to learn to memorize: "The vow (of studying) the three Vedas under a teacher must be kept for thirty-six years, or for half that time, or for a quarter, or until the (student) has perfectly learnt them. If one studies for thirty-six years, that is a long time, even if one begins in childhood."

Additionally, many of the drawings and carvings of the Indus/Harappa Civilization was of bulls. There are many references to the gods in Rig Veda as bulls. This is one of the "links" that some scholars look to in order to theorize the connection between Rig Veda and the Indus/Harappa Civilization.

In Rig Veda, the god Agni, the god of fire, etc, to who the largest number of Rigvedic hymns are addressed is sometimes referred to as a bull.[360] Female figures seem to be missing from the seals, for instance, it is the bull, not the cow which is depicted on the seals.[361](This is in spite of the fact that the Indus/Harappa Civilization was very dependent on dairy products). These facts will be brought up again below when discussing the script of the Indus/Harappa Civilization.

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[360] See Sethna, KD, *Karpasa in Prehistoric India*, n. 26, p. 33

[361] See Singh, Bhagwan, *The Vedic Harappans*, n. 32, p. x

One seal from the Indus/Harappa Civilization has a drummer playing a long cylinder drum, much like the dholak or pakawaj style drum still played in the Punjab today. That will also be brought up again below when discussing the script of the Indus/Harappa Civilization.

We will now examine several theories regarding the script of the Indus/Harappa Civilization.

We have already touched upon the individual subjects of the practice of Hatha Yoga in the Harappan Civilization and the possible belief in Chakras ("cakra") Theory by the Harappans.

What follows is the combination of the two subjects and indications of such belief in the combination by the Harappan Civilization. The principal theory that will be investigated here is that if one is successful at making the first Chakra ("cakra") at the base of the spine work correctly, then, according to Sir John Woodruffe's translation of Sat-Cakra-Narupana, the Vajra or thunderbolt from that first Chakra ("cakra") can reach to the head.[362]

The Yoga of stretching and posture, Hatha Yoga, has some schools that believe in Chakra ("cakra") Theory and believe that Hatha Yoga can enhance the correct functioning of Chakras ("cakra").

It seems possible that there were many individuals in the Indus/Harappa Civilization that believed similarly regarding Hatha Yoga enhancing the correct

[362] See Woodruffe, Sir John, *Serpent Power*, p.1

functioning of Chakras ("cakra"). The clearest example one can give is the well-known Harappan engraving that many Westerners call "a horned-god". The engraving shows a man sitting on his heels with a horizontal "3" above his head and sprouting out of his head is these ever-present pipali leaves, also known as "ficus religiosa" or by their Sanskrit name, asvatta ("azvatta")—"the trees that the horses like to stay under".

For those who believe in the combination of Hatha Yoga and Chakra ("cakra") Theory, sitting on one's heels, in addition to other physical health benefits, aids in the correct functioning of the first Chakra ("cakra") or "wheel" at the base of the spine. According to this theory, two other things will happen. One, the positively-influenced first Chakra ("cakra") or "wheel" will make the physical organs nearby function better. Second, , the positively-influenced first Chakra ("cakra") or "wheel" will make more "energy" available to the body, especially to bring to the head for more advanced spiritual experiences.

The proponents of this theory agree with Sir John Woodruffe's translation of Sat-Cakra-Narupana, describing that the Vajra or thunderbolt from that first Chakra ("cakra") can be encouraged to reach to the head. And once reaching the head, the individual's spiritual experience is like sprouting spiritual leaves from the middle of one's forehead.

Is this one of the messages from 2500 BC Indus/Harappa Civilization? That if one practices the Hatha Yoga position of sitting on one's heels, one may have a "spiritual experience" in one's head?

The written script of the Indus/Harappa Civilization and the later Brahmi Script may be related to Chakra ("cakra") theory. Part of this analysis comes from the Sanskrit to English Dictionary mentioned before by Sir Monier-Williams; he defined not only words, but also syllables.[363]

Sanskrit to English Dictionary defined syllables by Sir Monier-Williams:

a--a prefix having a negative or contrary sense, occasionally comparison and sometimes disparagement, sometimes diminutiveness

A---a particle of reminiscence, also of compassion or pain, a prefix of verbs, near, near to, towards, with some verb-roots reverses the action, out of, from among, towards, to, as far as, from, in, at, on

i--an interjection of anger, calling, sorrow, distress, compassion, to go, to walk, to flow, to blow, to advance, spread, get about, to go to or towards, come, to go away, escape, pass, retire, to arise from, come from, to come back again, return, to succeed, to arrive at, reach, obtain, fall into, come to, to approach with prayers, gain by asking, to undertake anything, to be employed in, go on with, continue in any condition or relation, to go quickly or repeatedly , to come, wander, run,

[363] See Monier-Williams, n. 7

spread, get about, to appear, make one's appearance, to approach any one with requests, to ask, request, to cause to go or escape

I--Kandarpa, the god of love, Lakshmi, an interjection of pain or anger, a particle implying consciousness or perception, consideration, compassion

u--an interjection of compassion, anger, a particle implying assent, calling, command, an enclitic copula used frequently in the Vedas as a particle implying restriction and antithesis, and also further, on the other hand, this very person , now, to call to, hail, to roar, bellow, of Brahma

U--an interjection of calling to, of compassion, a particle implying promise to protect, helping, protecting, the moon, of ziva

R--an interjection expressing laughter, a particle implying abuse, in heaven, to go, move, rise, tend upwards, to go towards, meet with, fall upon or into, reach , obtain, to fall to one's share, occur, befall, advance towards a foe, attack, invade, to hurt, offend, to move, excite, erect, raise, to cause to move, throw, cast, to pierce, to put in or upon, place, insert, fix into or upon, fasten, to apply, to direct or turn towards, to deliver up, surrender, offer reach over, present, give, to give back, restore, to move or go towards, with speed or zeal, to wander about, haste towards

e--an interjection, a particle of recollection, addressing, censure, contempt, compassion, viSNu , to come near or towards, go near, approach, to come back,

come again to, to reach, attain, enter, come into, to submit, fall to one's share, to hasten near, to request

ai--an interjection, a particle of addressing, summoning, remembering

o--an interjection, a particle of addressing, calling, reminiscence, of compassion, Brahma

au--an interjection, a particle of addressing, calling, prohibition, ascertainment, a sound, the Setu or sacred syllable of the Sudras, of the earth

ka—of Brahman, of viSNu; of Yama; a particular comet; the sun; fire; splendor, light; air; a peacock; the body; time; wealth; sound; a king, n. happiness, joy, pleasure; water; the head; hair, a head of hair

------interrog. pron., who? which? what? may express " how is it possible that? "' " what power have I, you, they, &c.? "or with the potential

kA--to seek, desire, yearn, love; to like, enjoy, be satisfied with, to please, be sought after, satisfy

kha-- a cavity, hollow, cave, cavern, aperture; an aperture of the human body (of which there are nine, viz. the mouth, the two ears, the two eyes, the two nostrils, and the organs of excretion and generation), the hole made by an arrow, wound; the hole in the nave of a wheel through which the axis runs; vacuity, empty space, air, ether, sky; Brahma (the Supreme Spirit);the Anusvara represented by a circle (bindu); N. of the tenth astrological mansion; a city; a field;

happiness (a meaning derived from su-kha) action; understanding, f. a fountain, well

ga--going, moving, going in a carriage, going quickly; having sexual intercourse with, reaching to; staying, being, abiding in; relating to or standing in connection with going, moving

gA--to go, go towards, come, approach; to go after, pursue; to fall to one's (dat.) share, undergo, obtain; to go away; to come to an end; to walk, to be born

gha--a rattling or gurgling or tinkling sound; a bell; f. a tinkling ornament worn by women round the waist; at least, surely, verily, indeed, especially; striking, killing

Ga--an object of sense; desire for any sensual object

ca--and, both, also, moreover, as well as, moving to and fro; mischievous, seedless,. a thief; the moon, a tortoise; ziva; occasionally {ca} is disjunctive, "but", "on the contrary", "on the other hand", yet, "nevertheless"

cha--dividing; a fragment, pure, clean, tremulous, unsteady, covering, concealing; a mark, sign

ja--born, produced; offspring pl. descendants; speedy, swift; victorious; eaten; speed; enjoyment; light, lustre; poison; born or descended from, produced or caused by, born or produced in or at or upon, growing in, living at; prepared

from, made of or with; "belonging to, connected with, peculiar to" a son of; father; birth; f. a race tribe. a daughter, viSNu, ziva

jha–asleep, playing a tune, beating time, a sound like the splashing of water or clashing of symbols, jingling, clanking, wind accompanied by rain, anything lost or mislaid, Brihaspati, a water-fall

Ja– a singer, a jingling sound, a heretic, an ox, the planet zukra"

Ta--sound, a dwarf, a quarter, 4th,{karaGka}; the earth, an oath, confirming an assertion by ordeal

Tha--a loud noise ( an imitative sound as of a golden pitcher rolling down steps); the moon's disk; a disk; a cypher; a place frequented by all; ziva

Da--a sound, a kind of drum, submarine fire, ziva, a Dakini, a basket &c. carried by a sling

Dha---an imitative sound, a large drum, a dog, a dog's tail, a serpent

Na--knowledge, certainty, ascertainment, ornament, a water-house, a bad man, of ziva or of Buddha, the sound of negation, gift

ta--a tail (esp. of a jackal), the breast, the womb, the hip, a warrior, a thief, a wicked man, a Mleccha, a Buddha, a jewel, nectar, crossing, virtue, Lakshmi

tA--impassableness, insurmountableness, inaccessibility; inviolability. indisposition, sickness.

tha--a mountain, a protector, sign of danger, a disease, eating, preservation, fear, an auspicious prayer

da--giving, granting, offering, effecting, producing, a gift, a mt, a wife, heat, pain

dA–to give, bestow, grant, yield, impart, present, offer to (to give (a daughter) in marriage; to hand over; to give back, to pay {daNDam}, a fine, a debt, to give up, cede (Asanam)"one's seat"(to give up the road , allow to pass); to sell (with instr. of the price); to sacrifice ({AtmAnam}"one's self", to give one's self up to grief; to offer (an oblation &c.); to communicate, teach, utter (blessings, give (answer {prati-vacas}, speak {satyaMvacas} the truth, to address a speech to; to permit , allow; to permit sexual intercourse; to place, put, apply; to add, to grant a boon, to cause grief, to give room or space , allow to enter, " to spare any one's life", to slap with the palms of the hands, to strike with the palm, to beat time with the hands, to make a sign; to make an appointment, to propose an agreement, to compare with, to proclaim with the drum, to make a noise, call out, to utter a curse, to embrace, to jump, to accomplish, to give battle, fight with to give an order , command,{darzanam}, to show one's self, to fix the eyes on, listen, to set on fire{agnIn} to consume by fire, to draw a bolt, to cause to give or be given, cause to bestow or present or give up, oblige to pay, make, restore, to cause to be made known, to wish to give in marriage

dha--placing, putting, holding, possessing, having, bestowing, granting, causing, of Brahma or Kubera, virtue, merit, wealth, property

dhA--to put, place, set, lay in or on, to inflict punishment on, to put one's foot in another's footstep i.e. imitate, to take or bring or help to, fix or resolve upon; to destine for, bestow on, present or impart to, to be given or granted, fall to one's lot or share; to make, produce, generate, create, cause, effect, perform, execute; to seize, take hold of, hold, bear, support, wear, put on (clothes) to accept, obtain, conceive (esp. in the womb), get, take, to take pleasure or delight in; to assume, have , possess , show , exhibit , incur , undergo, to wish to put in or lay on; Old Sax. {duan}, Angl. Sax. {don} , Engl. {do}; Germ. {tuan}; {tuon}, {thun}.

na-- not, no, nor, neither, it is not so; thin, spare; vacant, empty; identical; unvexed, unbroken; m. band, fetter; jewel, pearl; war; gift; welfare N. of Buddha; N. of Ganeza; f. the navel; a musical instrument; knowledge.

pa--drinking, guarding, protecting, ruling, wind, a leaf

pA–to drink, quaff, suck, sip, swallow; to imbibe, draw in, appropriate, enjoy, feast upon (with the eyes, ears &c.)to drink up, exhaust, absorb; to drink intoxicating liquors, to cause to drink, give to drink, to drink greedily or repeatedly------to watch, keep, preserve; to protect from, defend against; to protect

(a country) i.e. rule, govern; to observe, notice, attend to, follow; keeping, protecting, guarding &c

pha– manifest, a gale, swelling, gaping, gain, flowing, bubbling, boiling, angry or idle speech

phA–heat; idle talk

ba-- varuna, sindhu, bhaga, gandana, vapana

bha--of the planet Venus, delusion, error, light or beam of light, lustre, appearance, resemblance, likeness, a star, planet, lunar mansion;

bhA–to shine, be bright or luminous; to shine forth, appear, show one's self; to be splendid or beautiful or eminent, to appear as, seem, look like, pass for, to show, exhibit, manifest, light, brightness, splendour

ma– 1000 names of Rama, a molossus, a meter, 1st personal pronoun, time, poison, a magic formula, the moon, of various gods, a mother, measure, authority, light, knowledge, binding, fettering, death, a woman's waist, happiness, welfare, water

mA--to sound, bellow, roar, bleat (esp. said of cows, calves, goats &c)...to measure, mete out, mark off; to measure across = traverse; compare with`" to be large or long enough for"', to find room or be contained in; to measure out, apportion, grant; to help any one to anything; to prepare, arrange, fashion, form, build, make; to show, display, exhibit," he displayed or developed himself "', to

infer, conclude; to pray, to cause to be measured or built, measure, build, erect; Lat. {metior}, {mensus}, {mensura};

ya– who or which, in which of many ways, goer or mover, wind, joining, restraining, fame, barley, light, abandoning, going, a car, restraining, meditation, attaining, pudendum muliebre, of Lakshmira

ra–acquiring, possessing, giving, effecting, fire, heat, love, desire, speed, amorous play, giving, gold, going, motion, brightness, splendor

rA--to grant, give, bestow, impart, yield, surrender

la– Name of Indra, cutting

lA--to take, receive, obtain; to undertake, begin; the act of taking or beginning

va– air, wind, the arm, Name of Varuna, the ocean, water, addressing, reverence, conciliation, auspiciousness, a dwelling, a tiger, cloth, the esculent root of the water-lily, going, hurting, an arrow, weaving, a weaver, a Varuna strong, powerful

vA--to blow (as the wind); to procure or bestow anything by blowing; to blow towards or upon; to emit an odor, be diffused (as perfume); to smell; to hurt, injure; Lat.{ventus}; Eng. {wind}

za–zastra, ziva, zam

Sa– best, excellent, wise, learned, loss, destruction, loss of knowledge, end, term, rest, remainder, eternal happiness, final emancipation, heaven, paradise, sleep, a learned man, teacher, a nipple, the embryo, patience, endurance

sa– a snake, air, wind, a bird, of ViSNu or Shiva, of Lakshmi or Gauri, knowledge, meditation, a carriage road, a fence, an inseparable prefix expressing "junction", "conjunction", "possession", "similarity", "equality"; and when compounded with nouns to form adjectives and adverbs it may be translated by "with", "together or along with", "accompanied by", "added to", "having", "possessing", "containing", "having the same"; "angrily", "fraudulently"; Lat. {sim} in {simplex};{semper}Eng.{same}

sA--giving, bestowing, granting

ha--a form of Shiva or Barairava, water, a cipher, meditation, auspiciousness, sky, heaven, paradise, blood, dying, fear, knowledge, the moon, ViSNu, war, battle, a horse, pride, a physician, cause, motive, laughter, coition, a lute, Supreme Spirit, pleasure, delight, a weapon, the sparkling of a gem, calling, the sound of a lute, mad, drunk, indeed, assuredly, verily, of course, then, killing, destroying, removing, abandoning, deserting, avoiding

hA--an exclamation expressive of pain, anger, astonishment, satisfaction &c; to start or spring forward, bound away, give way to, to leave, abandon, desert, quit, forsake , relinquish "'to die"; to discharge, emit; to put away, take off,

remove, lay aside, give up, renounce, resign, avoid, shun, abstain or refrain from; to disregard, neglect; to lose, be deprived of; to get rid of, escape from; to cause to emit,"to cause to break wind", to be left or abandoned or deserted &c.; to be left behind, fall short of; to be excluded from or bereft of "to die"; to be overtaken by; to be deficient or wanting, suffer loss or injury, fail (also in a lawsuit), decrease, wane, decline, come to an end; to weigh less; to omit, neglect; to fall short of. be wanting in; to give up "life"; to lose "time"; to abandon "a thesis"

Indus/Harappa Civilization "Character-Script"

The alphabetic characters of modern Sanskrit is called Devanagari ("devanAgarI") or Nagri. Many characters from the script of the Indus/Harappa Civilization, often called the "Indus Script" is very similar to the script prior to Devanagari, called the "Brahmi Script", which was prevalent in ancient India in about 300 BC.

Sanskrit is considered one of the most difficult languages in the world to master, primarily because of the precise and complicated grammar. There are grammar rules for instance for changing vowel-sounds when certain words follow one another.

The reason that I believe that the Indus Script has been nearly deciphered is not only the similarities between the Indus Script and the Brahmi Script (and in

some rare instances the modern Devanagari Script). More details will follow regarding the comparisons below.

The Chakra ("cakra") Theory, described above, is the theory that there are many invisible "wheels" in the human body (especially six major ones along the spine) that influence health. There is some chance that the Chakras ("cakra") Theory influenced Indus script writing, and that is why it is included here.

Chakras ("cakra") are defined by Monier-Williams as: "a circle or depression of the body (for mystical or chiromantic purposes; 6 in number , one above the other, viz. 1. mUlA dhAra, the parts about the pubis; 2. svA7dhiSThAna, the umbilical region; 3. maNi-pUra, the pit of the stomach or epigastrium ; 4. anAhata, the root of the nose; 5. vizuddha, the hollow between the frontal sinuses ; 6. AjJA7khya, the fontenelle or union of the coronal and sagittal sutures; various faculties and divinities are supposed to be present in these hollows."[364]

The point here is not to debate in this context whether or not Chakras ("cakra") Theory is correct. Whether or not there are invisible energy "wheels" that influence human health is not for us to determine here. There is a reasonable chance that those responsible for the Indus script believed in Chakras ("cakra") Theory and that such theory influenced at least some of the Indus script characters, especially the semi-vowels.

[364] See Monier-Williams, A Sanskrit-English Dictionary, n. 7

The theory that that Chakras ("cakra") influenced the script writing of India is also presented in a book called, Unfolding the Petals.[365]

Starting from the bottom, going up, as Sir John Woodruffe did, the sound of the First Chakra ("cakra") is "la" or "lam".

The sound of the first Chakra ("cakra") is "la" or "lam". The Sanskrit semi-vowel "la" is defined by Monier-Williams as "Indra (lord of rain, sky) cutting", for instance the "cutting" of one mountain to make two mountains. Both the Devanagari "la" and the Indus "la" look like one mountain (from a distance) cut into two. (From a Chakra ("cakra") Theory point of view, it could be the division of a human embryo into two legs.) The Devanagari "la" is more rounded, looks like a handwriting "m" and the Indus "la" (which looks like a "M" (or half of the "M") written by a child. The Brahmi "la" on the other hand, looks like a stylized version of one of the Indus "la", one half of the "M".

The sound of the second Chakra ("cakra") is "va" or "vam". The Sanskrit semi-vowel "va" is defined by Monier-Williams as "air, wind, Varuna (king of the gods and the ocean), water, to blow upon". Both the Devanagari "la" and the Indus "va" look like a hole one can blow through, whether a square, diamond or circular shape in the Indus script or just a circle in the Brahmi and Devanagari script. (From a Chakra ("cakra") Theory point of view, it could be any human orifice.)

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[365] See Teplitz, David, *Unfolding the Petals*, Humanities Press (1982)

The sound of the third Chakra ("cakra") is "ra" or "ram". The Sanskrit semi-vowel "ra" is defined by Monier-Williams as "acquiring, possessing, giving, effecting, fire, heat, love, brightness, splendor". The Devanagari character was originally represented by a pictogram involving the human stomach, and is now a shadow of such a pictogram and looks like a capital "R" without the vertical line. (From a Chakra ("cakra") Theory point of view, it could be the human stomach.) The Indus "ra" has three versions, a stick figure person, one straight vertical line and a type of capital "P". The Brahmi "ra" is a squiggly vertical line.

The sound of the fourth Chakra ("cakra") is "ya" or "yam". The Sanskrit semi-vowel "ya" is defined by Monier-Williams as "goer or mover, wind, joining, restraining... meditation, of Lakshmi (lakSmI) (goddess of fortune and beauty)" perhaps influencing the English words "yoke" and "union". Both the Indus "ya" and the Sanskrit "ya" looks like a kind of yoke, the Indus character looking like a type of capital "V", as if one has a head-on view of a yoked bull, or the "V" turned upside-down with horizontal lines through it. (From a Chakra ("cakra") Theory point of view, it could be a human heart.) The Devanagari character on the other hand, looks like a yoked bull's head from the side. The Brahmi character is a vertical line with two curved feet.

The sound of the fifth Chakra ("cakra") is "ha" or "ham" and the analysis is similar. The Sanskrit sibilant "ha" is defined by Monier-Williams as "meditation, auspiciousness, sky, heaven, pleasure, delight, killing, destroying, removing, abandoning,

deserting, avoiding ". The Indus "ha" character looks like a type of rake, similar to the Phoenician "h" character. The Brahmi "ha" character is a vertical line with a fish-hook at the bottom, and the Devanagari "ha" character is similar, just much more ornate.

The sound of the sixth Chakra ("cakra") is "om" or "aum". Here the analysis could be similar or could be different. Is the "3" rotated horizontally on Indus/Harappa Civilization figure the same as the "3" figure that is recognized as the Devanagari "om"?

Other Indus/Harappa Civilization Character Script

In the early Harappan script (2500-1900 BC), the number of basic sign is sixty-four including twenty-two pictures; Lat Harappan script (1900-1700 BC), the number of basic signs gets reduced to twenty-four.[366]

In comparison with other languages, the best course open was to compare the basic cursive signs of the Indus script with those of a known phonetic script of twenty-three consonantal signs used in the $15^{th}$-$11^{th}$ century BC by the people speaking Phoenician, Hebrew, Aramaic and South Arabian languages; the result was that seventeen sign in the two scripts are identical; it was therefore reasonable to assign the phonetic value of the Semitic signs to the analogous basic cursive sign of the Late Harappan script. The Indus language was found to be close to Vedic Sanskrit.[367]

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[366] See Rao, SR, *New Frontiers of Archaeology*, n. 24, p. 32
[367] Id., p. 36

Many animals are represented on Harappan seals; the unicorn seems to stand for the deified composite figure of the bull and the horse. The basic concepts about cosmology, society and state seems to be almost identical between the Indus people and the Rigvedic people.[368] This is a very interesting conclusion regarding the Indus/Harappa Civilization.

SR Rao has even deciphered the word "Manu" on the Harappan seals.[369]

From early times there are instances of the change of sibilants, "z, S and s" changing to the aspirate "h", especially as one goes west. The vedic word "asura" went west to Persia to become the Avesta "ahura" and "Sindhu" became "Hindu".[370]

Sanskrit/Indus/Brahmi Consonant Analysis

The Sanskrit guttural consonant "ka" is defined by Monier-Williams as "splendor, light". The Indus "ka" character looks like the upper body of a stick person with his arms either up or out or an upside-down "U" with a circular foot according to some scholars.[371] The Brahmi character is just a cross, and the Devanagari character is a cross with two almost-completed circles for arms.

The Sanskrit guttural consonant "kha" is defined by Monier-Williams as "a cavity, hollow, cave or an aperture of the human body (of which there are nine, the

[368] See Rao, SR, *New Frontiers of Archaeology*, n. 24, p. 46-47
[369] Id., p. 53
[370] Bharadwaj, OP, *The Rigvedic Sarasvati*, n. 14, p. 24
[371] See Jha,N & Rajaram, NS, *The Deciphered Indus Script*, Aditya Prakashan (2000)

mouth, the two ears, the two eyes, the two nostrils, and the organs of excretion and generation". Indus "kha" looks like a modern-day smiling face with closed eyes at the ends of the smile, perhaps signifying the mouth and two eyes. The Brahmi "kha" character is a vertical line with a ways hook on top. The Devanagari "kha" character is different, just a combination of the "ra" and "va" characters.

The Sanskrit guttural consonant "ga" is defined by Monier-Williams as "going, moving". The Indus character is an upside down "V" or outlined "V", almost like modern-day upwards-pointing arrows in subway tunnels that indicate "go forward" and similar to the Phoenician "g" character. The Brahmi "ga" character is almost exactly the same. The Devanagari "ga" character is different.

The Sanskrit guttural consonant "gha" is defined by Monier-Williams as "(used to lay stress on a word) at least, surely, verily, indeed". Indus "gha" character is very similar to the Indus "kha" character, but the line of the "smile" crosses into the 'closed eyes". The Brahmi "gha" character is a vertical line with a double "foot" to the right, somewhat similar to one of the Indus character's "closed eyes". The Devanagari "gha" character looks like the Brahmi "gha" character rotated 90 degrees.

The Sanskrit guttural consonant "nga" ("Ga") is defined by Monier-Williams as "an object of sense; desire for any sensual object". The Indus "nga" character is a simple circle, similar to the Phoenician letter 'aiyn. The Brahmi

"nga" character looks like the left half of a square-ish parenthesis. The Devanagari "nga" character looks like an "S" with an over-emphasis on the bottom circle.

The Sanskrit palatal consonant "ca" is defined by Monier-Williams as "and, both, also, moreover, as well as, moving to and fro". The Indus "ca" character is a vertical line with a triangular flag pointing to the left. The Brahmi "ca" character is similar, just the triangle has changed to a half-circle. The Devanagari "ca" character is a more stylized version of the Brahmi.

The Sanskrit palatal consonant "cha" is defined by Monier-Williams as "dividing; a fragment, pure, clean; a mark, sign". The Indus "cha" character is similar to the Indus "ca" character, but a more rounded triangular flag pointing to the left with vertical lines. The Brahmi "cha" character is less similar, the half-circle is now on both sides of the vertical line. The Devanagari "cha" character is a more stylized, rotated version of the Brahmi.

The Sanskrit palatal consonant "ja" is defined by Monier-Williams as "born, produced or caused by". The Indus "ja" character is either a vertical comb with six horizontal teeth in it, or six vertical lines or something like a capital "A". The Brahmi "ja" character is like a backwards "3" and the Devanagari "ja" character is just like one part of the "3" rotated 90 degrees.

The Sanskrit palatal consonant "jha" is defined by Monier-Williams as "asleep, playing a tune, beating time, a jingling, clanking ". The Indus "jha"

character is just like the Indus "ja" vertical comb with six horizontal teeth in it, but completely enclosed on all four sides with a small horizontal, enclosed comb with five teeth attached to the right side middle.

The Brahmi "jha" character is like a backwards version of an older Devanagari "jha", an upside-down, square-like "h", which nowadays has been substituted by a "S" with a tail.

The Sanskrit palatal nasal consonant "jna" ("Ja") is defined by Monier-Williams as "a singer, a jingling sound, an ox, the planet zukra". The Indus "jna" character is just like our handwritten number "6". The Brahmi "jna" character is an upside-down version of the Brahmi "jha" character. The Devanagari "jna" is a half circle attached to the left of a vertical line.

The Sanskrit cerebral consonant "Ta" is defined by Monier-Williams as "sound, a dwarf, a quarter, $4^{th}$". The Indus "Ta" character is like a little bull's eye (a tiny circle inside a circle) with a top and bottom vertical small line. The Brahmi "Ta" character is like a capital "C" and the Devanagari "Ta" is like a small "c".

The Sanskrit cerebral consonant "Tha" is defined by Monier-Williams as "a loud noise; the moon's disk". The Indus "Tha" character is the same as the Indus "Ta" character with two additional small vertical lines on the right. The Brahmi "Tha" character is a circle without a dot in the middle and the Devanagari "Tha" is a circle, like a small "o".

The Sanskrit cerebral consonant "Da" is defined by Monier-Williams as "a sound, a kind of drum, a basket etc. carried by a sling". The Indus "Da" character is like a little a sling to carry a basket, like a wide capital "M" with hooks on the bottom. The Brahmi "Da" character is like a mirror-image square "h", missing one bottom leg. The Devanagari "Da" is another one of those capital "S" forms.

The Sanskrit cerebral consonant "Dha" is defined by Monier-Williams as "a large drum". The Indus "Dha" character looks like a wheel with spokes or a drum with leather tie-down strings, similar to the Indian tabla drum of today; it also has the two small vertical lines on its right hand side. It does look similar to the cerebral Phoenician "t" letter. The Brahmi "Dha" character looks just like a capital "D" and the Devanagari "Dha" is a half-circle with a tiny circle at its foot, like a very small "o".

The Sanskrit cerebral nasal consonant "Na" is defined by Monier-Williams as" knowledge, a water-house". The Indus "Na" character looks like an upside-down version of the Indus character "jna", and upside-down "6", with a larger oblong object at the bottom, or four vertical lines. The Brahmi "Na" character looks just like a capital "I" and the Devanagari "Na" is either a "ra" with a small and larger vertical line following, or an upside-down "u" with a vertical line following.

The Sanskrit dental consonant "ta" is defined by Monier-Williams as "a tail, the breast, the womb, crossing". The Indus "ta" character is either an "X", an outlined "X", three vertical lines or an "X" with one leg missing or the two left legs joined by a line. It does look similar to the Phoenician "t" letter. The Brahmi "ta" is like an upside-down "Y". The Devanagari "ta" is like a mirror-image, small "h".

The Sanskrit dental consonant "tha" is defined by Monier-Williams as "a mountain, sign of danger". The Indus dental "tha" character is the same as the Indus cerebral "tha" character without any lines, just a small circle within a circle. The Brahmi dental "tha" character is extremely similar, a circle with a dot in the middle but the Devanagari dental "tha" is a half-circle, a backwards "c" with a small "o" at the top and the whole thing connected to a vertical line.

The Sanskrit dental consonant "da" is defined by Monier-Williams as "giving, offering, a gift, a mountain". The Indus "da" character is like a little mountain, a triangle pointing upwards, or an arrow pointing upwards, or two vertical lines. The Phoenician "d" is a triangle that points left. The Devanagari "da" is like a small "c" with small vertical lines coming from the beginning and end of the "c". The Brahmi "da" is almost mirror-image of the Devanagari.

The Sanskrit dental consonant "dha" is defined by Monier-Williams as "placing, putting, holding, having, bestowing, granting, virtue, merit, wealth,

property". The Indus dental "dha" character looks the same as the Indus cerebral "Dha" without the lines: like a wheel with spokes or a drum with leather tie-down strings, similar to the Indian tabla drum of today. It does look similar to the Phoenician "t" letter. The Brahmi "Dha" character looks just like a capital "D" and the Devanagari dental "dha" is a slanted "3" with a tiny circle at its beginning, like a very small "o".

The Sanskrit dental nasal consonant "Na" is defined by Monier-Williams as "no, not, knowledge,...unbroken". The Indus dental "na" character looks like one or two vertical snakes, four vertical lines, or a handwritten "9". The Phoenician "n" character is similar, but more sharp. The Brahmi dental "na" character looks just like a capital "I" without the top line and the Devanagari dental "na" is a horizontal line going left with a tiny circle at the end.

The Sanskrit palatal "pa" consonant is defined by Monier-Williams as "drinking, guarding, protecting, ruling, wind". The Indus palatal "pa" is either one or two backwards "C" character or similar to the Indus "ja" with five teeth to the vertical "comb" or five straight vertical lines. The Brahmi palatal "pa" is an upside-down "candy cane" with its hook to the right. The Devanagari palatal "pa" is more like a mirror-image of the Indus "pa", or a mirror-image, upside-down Brahmi "pa".

The Sanskrit palatal "pha" consonant is defined by Monier-Williams as "swelling, flowing, bubbling, boiling". The Indus palatal "pha" is similar to the Indus semi-vowel "va", a square with a small vertical line above; but he Indus "pha" also has a long "foot" going to the left. The Brahmi "pha" is like the Brahmi "pa" with a more pronounced "hook". The Devanagari "pha" is like the Devanagari "pa" with an extra "hook on the right.

The Sanskrit palatal "ba" consonant is defined by Monier-Williams as "varuna (relating to the sea or water), sindhu (a river or flood), bhaga (good fortune luck), vapana (the act of sowing seed)". The Indus palatal "ba" is extremely similar to the Devanagari "ba", because both of them draw a straight line though their respective semi-vowel "va" characters. The Indus script has a second character that is a half-circle with a line through it. The Brahmi "ba" also seems to be related, just a square.

The Sanskrit palatal "bha" consonant is defined by Monier-Williams as "of the planet Venus (zukra, which also means clear, bright, seed), light or beam of light". The Indus palatal "bha" is similar to the Devanagari "bha", because both are square with one side open. The Devanagari "bha" has little circles on two sides of the square. The Brahmi "bha" is related to both, a square with one side open, attached to a vertical line.

The Sanskrit palatal "ma" is defined by Monier-Williams as "me, mother, to measure, time, the moon" and the Indus "ma" looks like tweezers or calipers, either sharp-edged or rounded or two circles joined. The Devanagari "ma" looks like a stylized version of the Indus "ma-tweezer" character. The Brahmi "ma" character looks like the Indus "ma-tweezer" character rotated 90 degrees and more rounded.

The semi-vowels were discussed above.

The Sanskrit sibilant "za" is defined by Monier-Williams as "zastra, ziva, zam" and the Indus "za" "Sa" and "sa" are interchangeable, either a vertical fish, a vertical arrow, a type of rectangular "box" with a horizontal line through it or seven vertical lines. The Devanagari "za" looks like a large number "2" and a vertical line. The Brahmi "za" character looks like the head of a very large arrow (just the lines).

The Sanskrit sibilant "Sa" is defined by Monier-Williams as "best, excellent, wise...eternal happiness, final emancipation, heaven, paradise, sleep". For the Indus "Sa" see "za" above. The Devanagari "sa" character looks like an upside-down, mirror-image "h" with a diagonal line through the body of the character. The Brahmi "Sa" looks like a mirror-image "J" with a left "hook".

The Sanskrit sibilant "sa" is defined by Monier-Williams as "a snake, air, wind, a bird, of ViSNu or Shiva.. knowledge, meditation..." For the Indus "sa" see

"za" above. The Devanagari "sa" character looks like the Devanagari "ma" character with an extra line on the left bottom. The Brahmi "sa" looks like the above mirror-image "J" with an extra small right hand horizontal line.

The Sanskrit sibilant "ha" was discussed above.

In their book, *The Deciphered Indus Script*, N. Jha and N.S. Rajaram come to the conclusion that the language on the seals of the ancient city in India, Harappa is Vedic Sanskrit.[372] They say that the "language is less archaic than that of the Rigveda and corresponds closely to that of the later Vedic works like the Sutras and the Upanishads."[373]

Jha and Rajaram say that the "Indus script is one of the more complex writing systems devised by the human mind."[374] The Indus script is the transitions from the pictorial with phonetic writing to the highly scientific Brahmi alphabet, the up-until-now source of Sanskrit characters known as Devanagari.[375]

When humans decide to express syllables instead of just pictures, that was a major advance in writing. For instance, within the Indus writing, a bird is used to represent the sound "sak" from the Sanskrit word for bird sakuni, and the sound "sva" came from asvattha, the Sanskrit word for pipul leaf.[376] Their theory is not perfect, but advances the quest for decipherment of the Indus Script.

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[372] See Jha,N & Rajaram, NS, *The Deciphered Indus Script*, n. 371
[373] Id., p. xii
[374] Id., p. 48
[375] Id., p. 48
[376] Id., p. 50

Conclusion to Chapter Five

The Indus/Harappa Civilization carvings on seals may indicate Rig Veda representations of gods as bulls. The Indus/Harappa Civilization character script on seals may be based on what is known as Tantric Theory or Chakra Theory, "sending energy to one's head".

The language of Rig Veda and Law Code of Manu is a form of Sanskrit. The Indus/Harappa Civilization written script may be Sanskrit; that theory has been examined using the definitions for each Sanskrit letter and the shape of each basic Indus/Harappa Civilization "script-letter".

# Chapter Six: Law Code of Manu Translations:

# Caste and Guilds

We now turn to discuss the class divisions or caste system of ancient India, especially that which existed at the time of the Law Code of Manu. Originally, it appeared that there was not a fixed-caste system in India. This supposition is born out by looking at the oldest "books" from India, the "Vedas", and particularly the oldest, the "Rig Veda".

The ninth chapter, or "mandala" ("maNDala") (circular, round) [377], is the chapter that is almost exclusively devoted to the god (Soma Pavamana or Indu) of the magical drink, Soma:

Soma is defined as: "juice, extract, (especially) the juice of the Soma plant, (also) the Soma plant itself (said to be the climbing plant Sarcostema Viminalis or Asclepias Acida) the stalks of which were pressed between stones by the priests, then sprinkled with water, and purified in a strainer; whence the acid juice trinkled into jars or larger vessels; after which it was mixed with clarified butter, flour &c., made to ferment, and then offered in libations to the gods [in this respect corresponding with the ritual of the Iranian Avesta] or was drunk by the Brahmans, by both of whom its exhilarating effect was supposed to be prized; it was collected by moonlight on certain mountains...it is personified as one of the

[377] See Monier-Williams, A Sanskrit-English Dictionary, n. 7

most important of Vedic gods, to whose praise all the 114 hymns of the 9th book of the Rig Veda besides 6 in other books and the whole Sama Veda are dedicated...Soma is identified with the moon [as the receptacle of the other beverage of the gods called Amrita, or as the lord of plants and with the god of the moon..."[378]

There were many verses of hymns of the Vedas that were dedicated to Soma. Those hymns are also rich in information about pre-Law Code of Manu societal structure.

In this ninth mandala of the Veda, hymn CXII, we can see very clearly that individuals get to choose their work rather than being born into it.

If we look at verse 3, we see that the author of this verse calls himself or herself the singer or the poet. And his/her father is an Ayurvedic physician and his mother is doing the cooking (or perhaps works as a miller). The author of this verse has a different task in society than that of his mother or father, a certain reference to not being trapped into one course of action or profession or caste or class:

"A bard (poet/singer) am I, my dad's a leech (an AyurVedic physician), mammy lays corn upon the stones (a miller)

[378] See Monier-Williams, A Sanskrit-English Dictionary, n. 7

Striving for wealth, with varied plans, we follow our desires like kine. Flow, Indu, flow for Indra's sake." [379] (explanations added)

It does not appear from this verse that the stratification of society has yet happened. The people do not seem "locked in" to one of the casts just by their birth to a father and mother of a particular cast. The first verse of this chapter talks about the different tasks in society, but makes no reference to being trapped into one course of action.

"We all have various thoughts and plans, and diverse are the ways of men. The Brahman seeks the worshipper, the wright seeks the cracked wheel, and leech (an AyurVedic physician), the maimed. Flow, Indu, flow for Indra's sake." [380] (explanations added)

In the first chapter of the Law Code of Manu, reference is made to the creation of human beings by the Creator and the division of human beings.

The Law Code of Manu—Chapter 1, Verse 31:Sir William Jones's Translation (1794):

"That the human race might be multiplied, he caused the Braahman, the Cshatriya, the Vaisya, and the Suudra (so named from the scripture, protection,

[379] See Monier-Williams, n. 8
[380] See Griffith, Ralph , *Hymns Of The Rig Veda* (1889, reprinted 1999)

wealth and labour) to proceed form his mouth, his arm, this thigh, and his foot."[381] Other translations are similar.[382]

There are many philosophers from India that read passages in the Rig Veda to mean that the gods actually "feed" on prayers and sacrifices made by human beings. And if such prayers and sacrifices are not made, the gods "starve", while longing for more human being to "feed" them. Medhaatithi ("medhAtithi") shares this world view.[383]

Since "prayers" and the kind of "sacrifices" that we are speaking about here are the kind that are mostly verbal, it makes sense that this kind of philosophy would emphasize the human mouth as one of the most important organs of the human body.

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[381] Jones, n.1, at Vol.3, 69

[382] Manmatha Nath Dutt's Translation (1895)
"For the furtherance of the (good of the) world, he created Brahmana, Kshatriya, Vaiya, and Südra from his mouth, arms, thighs, and legs."
George See Buehler's Translation (1896)
"But for the sake of the prosperity of the worlds he caused the Brahmana, the Kshatriya, the Vaisya, and the Sudra to proceed from his mouth, his arms, his thighs, and his feet."
Ganganath Jha's Translation (1920)
"With a view to the development of the (three) regions, he brought into existence the Braahmana, the Ksattriya, the Vaishya and the Shuudra, from out of his mouth, arms, thighs, and fee (respectively)."
Wendy Doniger and Brian K. Smith's Translation (1991)
"Then, so that the worlds and people would prosper and increase, from his mouth he created the priest, from his arms the ruler, from his thighs the commoner, and from his feet the servant."
Patrick Olivelle's Translation (2005)
"For the growth of these worlds, moreover, he produced from his mouth,
thighs, and feet, the Brahmin, the Kashtriya, the Vaiya, and the SUdra."

[383] See Jha, n.5, at 75
" *'With a view to the development of the regions*,' terrestrial and the rest ;-'*development*' stands for *Nourishment* and *expansion*; it is only when the four castes, Braahmansa and the rest, are there that there is development of the three regions; for the Gods live upon offerings made by these castes,--these castes alone being entitled to the performance of sacrifices; so that the action done by these nourishes the two regions (celestial and subterranean); then again, the Gods also are prompted by men's action to act ; from the Sun-God comes rain ; and thus the said creation (of the Braahmana) tends to the nourishment of this (terrestrial) region also."

Not only is that true, says these adherents, but also, a kind of opposite is true: that the god of creation has a type of "body", similar in many ways to the human body, and that different human beings are formed from different parts of that body. Of course, it follows, under this theory, that human beings, whose humanly task it is to verbally pray would be born from the mouth of the god of creation. And that other classes or castes of human beings would be created from various other "parts" of that same god of creation.

Medhaatithi ("medhAtithi") wrote one of the earliest commentaries on the Law Code of Manu and his insights will be presented here. Medhaatithi ("medhAtithi") talks about the castes being formed: "'He brought unto existence,'—i.e., produced, the Braahmana and other castes,——'From out of his mouth, arm, thighs and feet,' respectively; i.e., the Braahmana from out of his mouth, the Ksattriya out of his arms, the Vaishya out of his thighs and the Shuudra out of his feet.

The people of ancient India subscribed to the theory that there was a creator, and that different classes or caste of people were created from different organs of that spiritual creator.

Medhaatithi ("medhAtithi") justifies castes: "In reality however, what is stated here is merely commendatory, intended to show the relative superiority and inferiority of the castes;—the meaning being—'of all beings Prajaapati is the

highest,—among all the limbs of Prajaapati, the mouth is the highest,—similarly the Brahmana is the highest, most praiseworthy, of all the castes; 'and on the basis of this similarity the Braahmana is described as produced out of Brahmaa's mouth.

Medhaatithi ("medhAtithi") also said that the description of the Braahmana coming out of Brahmaa's mouth may be due to the fact that the work of the mouth, such as teaching and the like, belongs preeminently to the Braahmana; to the Ksattriya belongs the work of the arms, fighting; to the Vaishya the work of the thighs, such as wandering about with the cows, when tending cattle, and also traveling for trade on land and water; and to the Shrudra belongs the work of the feet, i.e., service).[384]

Dutt, on the other hand, tells us that originally there was no prejudice. He tells us that there is something called "universal evolution and that people wanted to be born at the "...beck and call of Ideation (Brãhmana), Protectiveness (Kshãtriya), and sustentative function (Vaisya), They respectively gave them the names of Kshatriya (soldier), Vaisya merchant or farmer and Südra (artisan or servant) Südratvam is held identical with Karmatvam, work, action, or service. Originally a Südra meant an evangelist of service to mankind, although by an unfortunate degeneration of its meaning, it subsequently came to be synonymous with something low or vile. [385]

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[384] See Jha, n.5, p. 75
[385] See Dutt, MN, n. 3, p. 11

This is a very interesting point that seems to make sense pre Law Code of Manu. Before the time of the Law Code of Manu was the time of the Rig Veda. As was pointed out above, the Rig Veda society seems to be much more flexible with moving from caste to caste based on one's action in life, not based on one's parents. The Law Code of Manu seems much more inflexible on these points.

Dutt continues his analysis by advancing the theory that the members of these different castes accepted this classification within their society and that it was much different than the divisions in modern society, which he considers arbitrary:

"These distinctions of castes have nothing of the hatred and the sense of inequality, which prompted many a civilized society of modern times to lay down an arbitrary barrier between man and man, to create an artificial gulf between the classes and the masses, only on the basis of money-qualification. The framers of the ancient Sathhitãs recognised the inevitable necessity of organising a division of labour among the several orders of the society. "[386]

Dutt continues to advance his theory about cooperation being at the basis of the caste system: "The caste system had its origin in the principle of co-operation and reciprocal help, and not in contempt and spitefulness as it is now erroneously believed in certain quarters. A good Südra (an artisan) was as much

[386] Id. p. 11

free and as much honourable as any Kshatriya, or any Vaisya or even any Brãhmana in ancient India." [387]

Dutt claims that Suudras enjoyed all of the civic rights that every other member of society enjoyed. That this was much different from the slaves that existed in most other societies throughout the world at that time.

Dvija ("dvijA") is defined as:"twice-born; a man of any one of the first 3 classes, any Aryan , (especially) a Brahman (re-born through investiture with the sacred thread {upa-nayana}..."[388]

If the Law Code of Manu stated that the most sacred members of the society of that time were produced from the Creator's head, then perhaps it was easier to convince the general populace of that time of the "correctness" of this philosophical position: that the some human beings were better than others. And the judgment had to do with a person's birth, and whether or not that person's parents were of a particular class or caste.

Movement from one class or caste to another was technically forbidden at the time of the Law Code of Manu, as was intermarriage between the classes. Although in practice, it must have been quite common, because one part of the Law Code of Manu has names for all of the children of the combinations.

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[387] See Dutt, MN, n. 3, p. 11
[388] See Monier-Williams, n. 8

The belief in reincarnation was strong at the time, and it was said that the only means by which a person could hope to change their class or caste was by doing a "good job" for an entire lifetime and hoping that they would advance in class or caste during their next incarnation.

Separate Duties For Each Caste Depending On Their Origin: The Law Code of Manu—Chapter 8, Verse 87: Sir William Jones's Translation (1794):

"For the sake of preserving this universe, the Being, supremely glorious, allotted separate duties to those who sprang respectively from his mouth, his arm, his thigh, and his foot."[389] Other translations are similar.[390]

This seems to be part of that extremely clever way of convincing people to "stay in their place" in society. At least that is the cynical view of telling people that they are "locked in" to a certain role in society. And the only way out is by reincarnation.

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[389] See Jones, n.1, p. Vol.3, 77

[390] M.N. Dutt's Translation (1895)
"For the preservation of all this creation, He, of great effulgence, laid down separate duties for those originated from his mouth (Brãhmanas), from His arms (Kshatriyas), from His thighs (Vaiyas) and from His legs (SUdras)."
George See Buehler's Translation (1896)
"But in order to protect this universe He, the most resplendent one, assigned separate (duties and) occupations to those who sprang from his mouth, arms,
thighs, and feet."
Ganganath Jha's Translation (1920)
"With a view to the protection of this entire creation, the Resplendent One ordained the distinct functions of those who sprang from the mouth, the arms, the thighs and the feet."
Wendy Doniger and Brian K. Smith's Translation (1991)
"But to protect this whole creation, the lustrous one made separate innate activities for those born of his mouth, arms, thighs, and feet."
Patrick Olivelle's Translation (2005)
"For the protection of this whole creation, that One of dazzling brilliance assigned separate activities for those born from the mouth, arms, thighs, and feet."

Braahman Duties: The Law Code of Manu—Chapter 8, Verse 88: Sir William Jones's Translation (1794)

"To Braahmans he has assigned the duties of reading the Veda, of teaching it, of sacrificing, of assisting others to sacrifice, or giving alms, if they be rich, and, if indigent, of receiving gifts." [391] Other translations are similar.[392]

The act of teaching and studying the Vedas was considered to be such a wonderful thing for the entire community, that it became codified that others in the society were to support that activity. It became "written" that one person from another class of society would receive religious or spiritual "merit" by giving money and other goods to Brahmanas. In addition to their memorizing functions, one could say that many of this caste were of the "sacerdotal order".

Throughout most of the ancient world, the idea of primogeniture (the eldest son inheriting everything) was popular.

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[391] See Jones, n.1, p. Vol.3, 77

[392] M.N. Dutt's Translation (1895)
"Study (of the vedas), teaching, performance of sacrifices, officiating as priests at other men's sacrifices, gift-making and acceptance of gifts are the duties of Bráhmanas."
George See Buehler's Translation (1896)"88. To Brahmanas he assigned teaching and studying (the Veda), sacrificing for their own benefit and for others, giving and accepting (of alms)."
Ganganath Jha's Translation (1920)
"For the Braahmanas he ordained teaching, studying, sacrificing and officiating at sacrifices, as also the giving and accepting of gifts."
Wendy Doniger and Brian K. Smith's Translation (1991)
"For priests, he ordained teaching and learning, sacrificing for themselves and sacrificing for others, giving and receiving."
Patrick Olivelle's Translation (2005)
"To Brahmins, he assigned reciting and teaching the Veda, offering and officiating at sacrifices, and receiving and giving gifts."

Medhaatithi ("medhAtithi") has something to say about the order of birth of the different castes, which, in my opinion, has something to do with primogeniture.

"This verse explains what follows from what has been said in the preceding verse. 'The best part of the body',--the head; from out of that sprang, was born, the Braahmana—He is also 'the eldest of all', the Braahmana was produced before the other castes—'Because he upholds the Brahman, i.e. Veda'; the upholding of the Veda has been specifically prescribed for him—'Hence',--for all these reasons—'the Braahmana is the lord',--i.e., as if he were the lord—'of this whole world'; i.e., he should be approached (treated) like the lord; and people should obey his orders in matters relating to Dharma.—'Dharmataha prabhuhu' means 'dharme prabhuhu'—Lord in matter regarding Dharma."[393]

Kshatriaya Duties: The Law Code of Manu—Chapter 8, Verse 89: Sir William Jones's Translation (1794):

"To defend the people, to give alms, to sacrifice, to read the Veda, to shun the allurements of sensual gratification, are, in a few words, the duties of a Kshatriya." [394] Other translations are similar.[395]

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[393] See Jha, n.5, at 1

[394] See Jones, n.1, p. Vol.3, 77

[395] M.N. Dutt's Translation (1895)
"Protection of the people, gift-making, performance of sacrifices, study of the Vedas, and abstention from luxury are, in general, the duties of Kshatriyas."
George See Buehler's Translation (1896)

If Kshatriya were the warriors, the kings and the soldiers, it was known that such activities required courage and strength. But the flip side to courage and strength is anger and attachment to sensual pleasures. The "writer(s)" of the Law Code of Manu knew this and thus wrote a "law" against any such behavior that would weaken members of that class.

Vaisya Duties: The Law Code of Manu—Chapter 8, Verse 90: Sir William Jones's Translation (1794):

"To keep herds of cattle, to bestow largesses, to sacrifice, to read the scripture, to carry on trade, to lend at interest, and to cultivate land are prescribed or permitted to a Vaisya."[396] Other translations are similar.[397]

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"89. The Kshatriya he commanded to protect the people, to bestow gifts, to offer sacrifices, to study (the Veda), and to abstain from attaching himself to sensual pleasures."
Ganganath Jha's Translation (1920)
"For the KSattriya he ordained protecting of the people, giving of gifts, sacrificing and studying, as also abstaining from being addicted to the objects of sense."
Wendy Doniger and Brian K. Smith's Translation (1991)
"Protecting his subjects, giving, having sacrifices performed, studying, and remaining unaddicted to the sensory objects are, in summary, for a ruler."
Patrick Olivelle's Translation (2005)
"To the Katriya, he allotted protecting the subjects, giving gifts, offering sacrifices, reciting the Veda, and avoiding attachment sensory objects."

[396] See Jones, n.1, p. Vol.3, 77

[397] M.N. Dutt's Translation (1895)
"Rearing of cattle (sheep, etc.) gift-making, performance of sacrifices, study (of the Vedas), merchandise, money-lending and agriculture are the duties of Vaiiyas."
George See Buehler's Translation (1896)
"The Vaisya to tend cattle, to bestow gifts, to offer sacrifices, to study (the Veda), to trade, to lend money, and to cultivate land."
Ganganath Jha's Translation (1920)
"For the Vaishya, tending of cattle, giving of gifts, sacrificing and studying; as also trade, money-lending and cultivating of land."
Wendy Doniger and Brian K. Smith's Translation (1991)
"Protecting his livestock, giving, having sacrifices performed, studying, trading, lending money, and farming the land are for a commoner."
Patrick Olivelle's Translation (2005)

The Viyasya were the original businessmen of Indian society at the time of the Law Code of Manu. They controlled the biggest businesses of the society at the time of the Law Code of Manu: the farming of crops and the running of cattle ranching and dairy farming. Obviously, there were also merchants in this class that were just traders or just money lenders, or did those businesses on the side.

The Law Code of Manu—Chapter 8, Verse 91: Sir William Jones's Translation (1794):

"One principal duty the supreme Ruler assigns to a shuudra; namely, to serve the before-mentioned classes, without depreciating their worth." [398] Other translations are similar.[399]

This was, by far, in my opinion, one of the most insidious ideas of the Law Code of Manu: that if you are born to a father and mother that were servants, you would automatically be expected to be a servant for your entire life.

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"And to the Vaisya, looking after animals, giving gifts, offering sacrifices, reciting the Veda, trade, money lending, and agriculture."

[398] See Jones, n.1, p. Vol.3, 77

[399] M.N. Dutt's Translation (1895)
"Only one work did the lord ordain for Sudras, viz, to ungrudgingly serve the three above-said social orders."
George See Buehler's Translation (1896)
"One occupation only the lord prescribed to the Sudra, to serve meekly even these (other) three castes."
Ganganath Jha's Translation (1920)
"For the Shuudra, the Lord ordained only one function; the ungrudging service of the said castes."
Wendy Doniger and Brian K. Smith's Translation (1991)
"The Lord assigned only one activity to a servant: serving these (other) classes without resentment."
Patrick Olivelle's Translation (2005)
"A single activity did the Lord allot to the Sudra, however: the ungrudging service of those very social classes."

It did not matter if you had more intelligence than the king or any Brahmana. It did not matter if you were born with the skills of an excellent businessman.

You were "stuck" as it were, to "...serve meekly even these (other) three castes", and then patiently wait, and hope and pray that you would be born to a higher class in your next lifetime.

"'The Lord', Prajpati, ordained 'one function, for the Shuudra' ; [in the form]—' Thou shalt perform the 'service of the said castes',—i.e., of the Brahmaa, Kattriya and Vaishya ;—'Ungrudging'--i.e., without complaining; no resentment should be felt even in the mind." [400]

By the time that the Law Code of Manu was composed, foreign influences must have been much stronger in India, witness the similarities in text to the Code of Hammurabi, etc. The strength of the Brahmana class or caste was growing and the desire of certain members of that caste to carve out a protected niche in their society of the time.

Let us compare and contrast that with the more ancient "writing" of the Vedas, especially Rig Veda. Most the Rig Veda "laws" were "spiritual laws" or "natural laws" in the sense that most of the rewards and punishment for most actions were thought to be dictated by the various gods, the god of fire, wind, wealth, etc. This meant that if a person was "good" or prayed sufficiently well as

[400] See Jha, n.5, v. 3 at 134

to positively influence a god (read this as meaning usually "offer a combination of prayers and some sort of "sacrifice", whether or not the "sacrifice" involved the killing of an animal and the cooking or roasting of the sacrificial animal by the sacrificer, in the hopes that the specific god would be pleased enough by "eating" the sacrificial animal and "listening" to the sacrificer's prayers to grant a "boon" to the sacrificer, in answer to the sacrificer's prayers.

The words spoken at the sacrifice were quite specific and had been "cognized" by rishis or "seers". These poems or hymns contained lots of abbreviations. That is to say, using the name of one god did not just mean that god, but also all of the forces in man and nature that such a word entailed.

Here is another indication that the Law Code of Manu were not completely written by one person: The passage on the origins of the divisions of caste were taken from the Rig Veda. "The Creation Hymn of Rig Veda (10.90.12) has described not only the origin of four castes but at the same time thrown some light on their status...Braahmanas sprang forth from his (Primordial Man) mouth, ksatriyas were originated from his arms, vaisyas came out from his thighs while sudras were born from his feet. " [401]

That all seemed to change by the time of the formation of the Law Code of Manu. The laws of the Law Code of Manu dictate the change and codify the change. Every citizen is locked into a societal position based on birth and the

[401] Pranati Ghosal, *Lifestyle of The Vedic People,* n. 191, p. 180

social position of one's parents. The only availability for social mobility is reincarnation into a higher (or as punishment for wrong action—lower) social position.

Guilds

JP Joshi believes that the Indus/Harappa Civilization Mature internal trade could have been done by guilds in an organized fashion.[402]

Indus/Harappa Civilization crafts were very specialized; people probably devoted their lives to their specialties, like the carnelian necklaces that took a craftsman a whole year to make.[403] All of these engraved seals point to the existence of a guild of engravers.[404]

Just like Law Code of Manu, guilds were in existence and certain laws were crafted specifically for guild members. For instance, Law Code of Manu: 8.41. "(A king) who knows the sacred law, must inquire into the laws of castes (gati), of districts, of guilds, and of families, and (thus) settle the peculiar law of each."[405]

Law Code of Manu: Guilds: 8.219. "If a man belonging to a corporation (guild) inhabiting a village or a district, after swearing to an agreement, breaks it through avarice, (the king) shall banish him from his realm."[406]

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[402] See Sharma, DP & Maduri, *Panorama of Harappan Civilization*, n. 104, p. 60
[403] See McIntosh, Jane, *A Peaceful Realm*, n. 58, p. 81
[404] Sankalia, HD, *Pre-Historic Art in India*, n. 55, p.64
[405] See Buehler, G., LAWS OF MANU, n. 3
[406] Id.

Medhaatithi ("medhAtithi") commented about Guilds this way: that the King is the most superior member of society, followed by persons authorized by the king, then Tribes, the Guilds, then Families.[407]

Medhaatithi ("medhAtithi") addresses what must have been an interesting "business-type" of association, popular and powerful during the time of the Law Code of Manu:

"...(b) If however one party should have no confidence in these, and should say—' these persons are more nearly related to you,'— then the case shall he referred to the guilds,—this term 'guild' standing for a body of traders and others who may he following the same profession ." [408] Guilds are weightier than relatives, because they are more careful before the king, require members to pay fines for wrongdoing, etc.

Breach of "Guild" Contract By Greedy Member: The Law Code of Manu—Chapter 8, Verses 219-221: Sir William Jones's Translation (1794):

"The man, among the traders and other inhabitants of a town or district, who breaks a promise through avarice, though he had taken an oath to perform it, let the king banish from his realm. Or, according to the circumstances, let the judge, having arrested the promise breaker, condemn him to pay six nishcas, or four suvernas, or one satamana of silver, or all three if he deserves such a fine.

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[407] See Jha, n. 5, p. 6
[408] See Jha, n. 5, p. 6

Among all citizens and in all classes, let a just king observe this rule for imposing fines on men, who shall break their engagements." [409] Other translations are similar.[410]

Sir William Jones translates: "among the traders and other inhabitants of a town or district who breaks a promise"; Dutt translates: "oath to abide by the rules of the guild or assembly of his village or country"; See Buehler translates: "belonging to a corporation inhabiting a village or a district, after swearing to an

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[409] See Jones, n.1, p. Vol.3, 275

[410] M.N. Dutt's Translation (1895)
"Him, who having promised on oath to abide by the rules of the guild or assembly of his village or country, breaks that promise (i.e. transgresses the rules) out of greed, (the king) should banish from the country. Having thus punished the breaker of promise, (the king shall impose upon him) a fine of four Suvarnas, or six Nishkas, or one hundred silver coins. A virtuous king shall adopt this law of penalty (i.e. inflict these penalties on) in respect of persons who have violated their compacts with their caste-guilds or village-assemblies."
George See Buehler's Translation (1896)
"If a man belonging to a corporation inhabiting a village or a district, after swearing to an agreement, breaks it through avarice, (the king) shall banish him from his realm.
And having imprisoned such a breaker of an agreement, he shall compel him to pay six nishkas, (each of) four suvarnas, and one satamana of silver. A righteous king shall apply this law of fines in villages and castes (gati) to those who break an agreement."
Ganganath Jha's Translation (1920)
"If a man, after having entered into a compact under oath *with* a village, a country or a confederation, should break it, through greed, him the king shall banish from his kingdom." (emphasis added) Having caught such a breaker of compact, he
shall make him pay six "nishkas" of four "survanas" each and also one "shatamaana". "This is the law of punishment which the king shall follow in the case of the breakers of compacts relating to villages and caste-federations."
Wendy Doniger and Brian K. Smith's Translation (1991)
"If a man enters into a sworn agreement with a group from a village or district and then breaks it out of greed, (the king) should banish him from the kingdom. He should arrest a man who violated an agreement and make him pay a fine of four'gold coins', six 'gold ornaments' and a silver 'hundred-weight'. A just king should apply this rule of punishment to those who violate agreements with village or caste communities."
Patrick Olivelle's Translation (2005)
"When a man belonging to a village, region or corporate entity enters into a contract truthfully and then breaks it out of greed, the king should banish that man from his realm. He should arrest that man who has violated the compact and fine him six nishkas, each weighing 4 suvarnas and a silver satamana. In this manner, righteous king should apply the rules of punishment to individuals who
violate compacts within a village, caste or association."

agreement"; Jha translates: "having entered into a compact under oath with a village, a country or a confederation"; Doniger and Smith say, "sworn agreement with a group from a village or district"; and Olivelle gives us, "belonging to a village, region or corporate entity enters into a contract".

These are all very different concepts. Is it just "any contract"? Is it a "compact under oath with a village, a country or a confederation"? Or is it an "oath to abide by the rules of the guild or assembly of his village or country"?

Patrick Olivelle, in his commentary on verse 219, says, "The contract dealt with here is not a private one but pertains to a corporate body. When a contract is made with the stipulation that all those who belong to that corporate entity will do something, then each individual is bound by it.

Here the corporate entities are a village, a region (group of villages) and a corporation (traders, artisans, sect.) Some interpret the compound graamadesasamgha as a corporation located in a village or region (so See Buehler). The term satyena ("satya") is also interpreted by some to mean an oath..." [411] (emphasis added). Orville's commentary seems much more correct than his translation, as will be explained below.

Medhaatithi ("medhAtithi") starts to by defining define small words: "'Village' is a group of households; and the term here stands for the inhabitants of the village; as it is only among men that there can be a compact; Similarly,

[411] See Olivelle, n. 1, p. 317

'country" is a group of villages." [412] First, it appears that women cannot enter into such agreements. Second, there is nothing like modern law that allows corporations or villages to enter into a contract.

The next part refers to an inhabited place or a village. But the word "village", translated from the English to the Sanskrit, can give us some additional insight into the general concept and framework of the word "village".

Village can also mean: Kalapa ("kalApa")-"that which holds single parts together", a bundle, band; a bundle of arrows, a quiver with arrows, ... totality, whole body or collection of a number of separate things." [413] If "that which holds single parts together" is broken, by one "weak link", then potentially, then whole chain can fall apart.

Kheta ("kheTa ") a village, residence of peasants and farmers, small town. Village can additionally mean: Pura ("pura")-a fortress, castle, city, town (a place containing large buildings surrounded by a ditch and extending not less than one Kos in length; if it extends for half that distance it is called a {kheTa} , if less than that , a {karvaTa} or small market town; any smaller cluster of houses is called a {grAma} or village." [414]

"Confederation" is a combination formed by persons professing the same faith or path, even though inhabiting different countries and belonging to different

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[412] See Jha, n. 5, p. 266
[413] See Monier-Williams, n. 8
[414] Id.

castes. For instance, there is a confederation of mendicants, the confederation of traders, the confederation of persons learned in the Vedas and so forth." [415]

What kinds of people make "combinations" among themselves, one of the most common one being cattle-owning Vaishya ("vaizya"), who unite to prevent the encroachment of neighbors' cattle on their grazing land:

"There are several kinds of business in which inhabitants of villages, etc. make a combination among themselves. For instance 'our village is being encroached upon of the inhabitants of another village, --very frequently they graze their cattle on our pasture-lands,--they cut our embankments and carry away water,--if you be all agreed, then we shall prevent their doing all this,--and when we prevent the, it is possible that we may come to blows, or may have to appear before the court; --if we remain combined in all this, then we shall go forward to prevent the encroachment; otherwise we shall let it be.' On this compact being proposed, men may agree to it saying—'yes, which should the ancient privileges of our village be trespassed by them?' Now, after having thus entered in compact and encouraged it, if some one were to shirk away and make common cause with the other party, and become lukewarm towards his own neighbors,--such a person should be banished by the king from his kingdom." [416]

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[415] See Jha, n. 5, p. 266-267
[416] Id, n. 5, p. 266-267

Next, greed is defined: "'Through greed';--'greed' here stands for succumbing to one's own selfish interests as served by the inhabitants of the rival village. For cases of such breach, through ignorance, there is another remedy." [417]

If Medhaatithi's Commentary (in Jha) is correct and Ganganath Jha's translation of Medhaatithi ("medhAtithi") is correct, then all three of the translations of this section of the Law Code of Manu are somewhat misleading, with Jha's being the most correct. The commentary by Olivelle seems to correct his misleading translation, and then comes the inevitable question: why does Olivelle translate correctly in his commentary and not in the text?

Olivelle's translation uses the words "corporate entity", which the modern legal reader would probably misinterpret. Medhaatithi's use of the word "confederation" is clearer than Olivelle's "corporation", although both seem to correct the misunderstanding in their respective translations.

One part of Medhaatithi ("medhAtithi")'s commentary surprises me, that "'Confederation' is a combination formed by persons professing the same faith or path, even though inhabiting different countries and belonging to different castes. For instance, there is a confederation of mendicants, the confederation of traders, the confederation of persons learned in the Vedas and so forth."

It makes sense that there is a confederation of mendicants, traders, etc., but the fact that they might "belong to different castes", seems to indicate that either

[417] See Jha, n. 5, p. 266-267

the Law Code of Manu were not followed closely with regard to caste separation rules. Perhaps that is why there were so many inter-caste marriages, since the Law Code of Manu has one part that just gives the technical names for all of the children of these "mixed" marriages.

A confederation, according to Medhaatithi ("medhAtithi") can be individuals inhabiting different countries and belonging to different castes. This is much different than the Olivelle commentary. The Medhaatithi ("medhAtithi")'s commentary seems to indicate the seriousness of promising "just to join" or to be a member of a type of "mutual aid society". If Medhaatithi ("medhAtithi")'s commentary is correct, then, for instance, if 100% of the cattle-owning Vaishya ("vaizya") men of a village, unite to prevent the encroachment of neighbors' cattle on their grazing land and those men of that village agreed to form a confederation to defend the village grazing field against encroachment, and when the time came to "come to blows" with the neighbors who did the encroaching, and 50% of the confederation members quit during the battle, having been bribed the night before, those 50% who actually went into battle might well be injured or killed. The injury would have been the direct result of the greed of the members who accepted the bribe (through greed), quit the confederation and refused to join in the fight.

The rule for the people of the time might have been: don't enter into any confederations (guilds) lightly, without much thought of the requirements and

consequences, and for the possibility of permanent banishment from the kingdom, don't go back on your membership-required promises out of greed.

Jha's translation may actually indicate a pre-cursor of the future crime of treason: "If a man, after having entered into a compact under oath with a village, a country or a confederation, should break it, through greed, him the king shall banish from his kingdom." [418]

Was this one of the first "written" legal concepts of the crime of treason? It almost seems like rules relating to military rules of war, joining an army and then becoming a "traitor" and/or "giving comfort to the enemy" for money or a bribe.

If the inhabitants of "Village A" form a confederation (just like a tiny army) to enter into a kind of "battle" with "Village B", even if the "battle" is a battle of words or the threat of force (which might lead to minor physical skirmishes), then those citizens of "Village A" who had agreed to become a "soldier" of Village A, but were then persuaded by greed (e.g. a bribe paid by Village B) to not "fight" on behalf of Village A, must be punished (by banishment or another monetary fine).

Medhaatithi ("medhAtithi") next focuses on the difference between Guilds and Tribes: "...(c) 'Tribes '—consist of persons who always move about in groups; e.g., masons, temple-priests, and so forth. They would investigate the cases of disputes arising among themselves; and for the enforcing of decisions they shall appoint committees.

[418] See Jha, n. 5, p. 267

The difference between these two ('Guilds' and 'Tribes') is that the former (Guilds) consists of persons following the same profession and they can act singly also, whereas Tribes always act collectively. And it is because the Tribes act collectively that the disputants are afraid of them.

"According to others however, the term 'Families' stands for neutrals; and such persons, even though not members of the same guild, are conversant with all the ins and outs of the case, and as such capable of coming to a decision."[419]

Conclusion to Chapter Six

The caste or class system seemed to be just beginning to form at the time of the composition of the last Chapter of Rig Veda. One could still easily "switch" professions. By the time of the Law Code of Manu, the caste system was "fixed" by law, probably by the "higher" classes. Although the jury is still out, the Indus/Harappa Civilization, with its "town divisions" looks like the tangible result of the Law Code of Manu.

Many scholars have analyzed the "production of goods" by the Indus/Harappa Civilization and have concluded that guilds must have been used to facilitate such production. The Law Code of Manu is filled with laws pertaining to guilds. Once again, it appears as if the Indus/Harappa Civilization is strongly related to the Law Code of Manu.

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[419] Jha, n. 5 at 7

# Chapter Seven: Comparative Law

Ancient Legal Codes/Extantness

2350 BC: Urukagina's Code - This code is Not Extant, meaning that an original or copy of it has never been found. It is simply mentioned in other documents. It is now considered harsh by modern norms.

2050 BC: Ur-Nammu's Code - This code is close to Not Extant, since only five articles can be read, and even the five articles have words missing. Other evidence seems to show a legal system with judges and sworn testimony.

2900-1900 BC: The Law Code of Manu –As described above, a Law Code containing more than 2500 laws, about 1000 of which are what we today would classify as civil or criminal law, the rest about philosophy, "sacred" and otherwise.

1700 BC: Hammurabi's Code – The Code of Hammurabi is very interesting. Not only have many copies (in stone and clay) survived, more of the actual text survived. The Code of Hammurabi is, arguably, the best existing evidence of a law code that was widespread at its time. Its most famous form is one giant slab of stone, carved in cuneiform script, currently housed in Paris, at the Louvre Museum.[420]

The Code of Hammurabi also appeared to be used throughout an entire country, not just in a smaller kingship, as seems to the case with slightly older

[420] See King, LW, *The Code of Hammurabi*, Kessinger Publishing (2004)

codes, the 2350 BC: Urukagina's Code, and the 2050 BC: Ur-Nammu's Code. King Urnammu of Ur wrote a legal code about 400 years before Hammurabi; so did King Bilalama of Eshunna. Urnammu's and Bilalama's codes were short lists of laws, only obeyed in one city-state. Hammurabi's Code was meant to help govern a vast empire. Copies of his code, written in clay and stone, have been found all over Mesopotamia.

1400 BC: Hittite Code - The Middle Assyrian law was called the Hittite legal code. It has no preamble or epilogue. It does not mention any god, but deals with some crimes, like assault and murder. It also deals with inheritance, marriage, slave law and incest. More than 13,000 clay tablets have been found representing mostly business receipts and some law written front and back in cuneiform characters.[421]

1300 BC: The Ten Commandments – Moses received the Ten Commandments directly from God, according to the Bible. Later, these laws were written in what became the Book of Moses in the Bible. Many Christian legal scholars believe that the Ten Commandments were the most influential of all ancient legal codes for modern law. Other legal scholars disagree with this thought.

Many of the laws were similar to the codes before and after, including "thou shalt not kill", "thou shalt not commit adultery" and "thou shalt not steal".

[421] See Hoffner, Harry, *The Laws of the Hittites*, Brill (1997)

The Chapter of the Bible, Exodus, has other legal rules, some very similar to Hammurabi's Code, such as, an "eye for an eye, tooth for a tooth" legal philosophy.[422]

621 BC: Draco's Law – In the ancient city-state of Athens, in what is now Greece, a Greek citizen was chosen to write a code of law. Draco thought that the death penalty should be used for many crimes, even relatively small ones, and therefore his name, Draco, became synonymous with unreasonably harsh laws; that is the origin of the word "draconian".[423]

This legal code seems harsh by modern standards. But it did create a uniform set of laws for the citizens of Athens.

600 BC: Lycurgus' Law – In another ancient city-state of Greece, Sparta, the King Lycurgus became renowned lawgiver. His laws were transmitted orally and were designed to support the military calling of all Sparta men. Women had a duty to have children; boys became wards of Sparta at the age of seven to prepare them for military duty.[424]

550 BC: Solon's Laws – In Athens, following Draco, was Solon. Solon refined Draco's laws and made courts more accessible to citizens of Athens. One common practice that was outlawed by the laws of Solon was the forbidding

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[422] Exodus: Thou shalt give life for life, eye for eye, tooth for tooth, hand for hand, foot for foot, burning for burning, wound for wound, stripe for stripe.
[423] See Carawan, Edwin, *Rhetoric and The Law of Draco,* Oxford Univ. Press (1998)
[424] See Rollin, Charles, *The Ancient History of the Egyptians*...Harper (1839)

mortgages on human beings. Formerly, creditors could enslave a debtor and his entire family. A type of trial by jury was developed by Solon as well as modifying the government.[425]

536 BC: The Book of Punishments/Confucius – Castration, feet amputation and death were mentioned as means to punish a lawbreaker in the Book of Punishments (536 BC) in China. Confucius (Kong Fuzi) (551–479 BC) was a great philosopher of China, whose teachings have greatly influenced East Asia for more than two thousand years. Confucius wanted all people to strive to become a "perfect man", that is, one who combined with qualities of saint, scholar and gentleman.[426]

450 BC: The Twelve Tables – Although the twelve tables were considered very famous for the time, and mentioned in many historical accounts, no extant evidence of them exists today. All copies of the twelve tables were destroyed. From what we can decipher from the commentaries, these laws are considered to be the foundation of most of modern public and private law. There was public prosecution of crimes and a way for injured parties to seek compensation.

529 AD: Justinian's Code - The relatively non-ancient, "super-sophisticated" Code, Corpus Juris Civilis, that was ordered by the Emperor

[425] See Buckley, Terry, *Aspects of Greek History 750-323 BC*, Routledge (1996)
[426] See Parker, Edward H., *China and Religion*, J.Murray (1905)

Justinian and formed the basis of the Napoleon's Code and other modern-day law civil law codes.[427]

Comparative Law: The Law Code of Manu vs. Other Codes Ancient And Modern

There is no doubt that Hammurabi's Code influenced many of the legal codes that followed it, especially throughout the Middle-East and with the frequent trading partners. Much of Mosaic Law seemed to come directly from the Code of Hammurabi. Besides the Law Code of Manu, it is definitely the most sophisticated extant ancient legal code.

Possibly the Law Code of Manu influenced the Code of Hammurabi. Although the Law Code of Manu is less harsh than the Code of Hammurabi, depending on which one is older, it seems that one influenced the other and most likely the Law Code of Manu influenced the Code of Hammurabi.

From the analysis presented above, it certainly appears that the Law Code of Manu is older than Hammurabi's Code. As detailed above, the Law Code of Manu and its predecessor, the Rig Veda both mention the River Sarasvati as being a mighty and wide river that flows to the ocean. Within the last 30-40 years, since space satellites have been taking pictures of the earth, the "now dried up path" of a great river, probably the Sarasvati, has been photographed from space. Scientists have dated that occurrence at about 1900 BC. If that is correct, then both the Rig

[427] See Bury, John B., *The Cambridge Medieval History*, Macmillian (1913)

Veda and the Law Code of Manu are older than 1900 BC, making the Law Code of Manu older than the Code of Hammurabi, which is commonly dated at 1700 BC, several hundred years before the Code of Hammurabi.

International trade between India and contemporaneous civilizations in the Middle East seems to have taken place, based on evidence of the sea-voyages of the Indian and Arab traders and goods from India of the time being discovered in the Middle East. And finally, as will be presented in detail below, there is a striking similarity between some of the specific laws of the Law Code of Manu and the Code of Hammurabi.

Trial by Ordeal was in both Codes. The Law Code of Manu had some instances of trial by ordeal, when there was no other way to decide a case. In the Code of Hammurabi trial by ordeal was quite common:

2. If any one bring an accusation against a man, and the accused go to the river and leap into the river, if he sink in the river his accuser shall take possession of his house. But if the river prove that the accused is not guilty, and he escape unhurt, then he who had brought the accusation shall be put to death, while he who leaped into the river shall take possession of the house that had belonged to his accuser.

Judicial Misconduct: The Law Code of Manu had seemed to expect judicial misconduct if the judge came from the lowest class, the Shudras. In the Code of Hammurabi judicial misconduct may have been much more common:

5. If a judge try a case, reach a decision, and present his judgment in writing; if later error shall appear in his decision, and it be through his own fault, then he shall pay twelve times the fine set by him in the case, and he shall be publicly removed from the judge's bench, and never again shall he sit there to render judgment.

Curse if One Does Not Respect the Laws: The Law Code of Manu said that harsh punishment both during this life and especially in the life after death awaited one who did not follow the law. In the Code of Hammurabi deals with that in one long curse, in which Hammurabi describes what will happen to anybody who does not respect his laws. "May the mighty gods in heaven and earth curse him," says the king, "and his children, and his land, his people..."

Punishment Based On Class: The Law Code of Manu had different punishments depending on the class or caste to which one belonged, generally the lower the caste, the harsher the punishment. In the Code of Hammurabi a different kind of thinking applied, for instance, the higher the societal status of the victim, the harsher the punishment:

8. If any one steal cattle or sheep, or an ass, or a pig or a goat, if it belong to a god or to the court, the thief shall pay thirty fold; if they belonged to a freed man of the king he shall pay tenfold; if the thief has nothing with which to pay he shall be put to death.

Negligence: The Law Code of Manu had punishment for negligence. In the Code of Hammurabi had punishment for negligence:

53. If any one be too lazy to keep his dam in proper condition, and does not so keep it; if then the dam break and all the fields be flooded, then shall he in whose dam the break occurred be sold for money, and the money shall replace the corn which he has caused to be ruined.

Ferry Boat Negligence: The Law Code of Manu had punishment for ferry negligence. In the Code of Hammurabi also had punishment for ferry negligence:

240. If a merchantman run against a ferryboat, and wreck it, the master of the ship that was wrecked shall seek justice before God; the master of the merchantman, which wrecked the ferryboat, must compensate the owner for the boat and all that he ruined.

Mosaic Code (1300 BC) vs. Law Code of Manu and Influence of the Ten Commandments (1300 BC) On Modern Law: Many Christian legal historical writers look to their most ancient religious law to see if they can find a link between their religious law and their modern law. Those Christian writers start

with the supposition that the Hebrew or Mosaic (Moses) Ten Commandments are the most important Ancient Law to influence modern Western Nation-States, who at least at the time of their Nation-State beginnings, had a population that was majority Christian.

Possible Law Code of Manu Influence On The Ten Commandments: In order for the possibility to even exist that the Law Code of Manu influenced the Ten Commandments, the follow conditions need to apply:

1. The date of codification of the Law Code of Manu; that is, if the Law Code of Manu must pre-date the Ten Commandments;

2. There must have been sufficient international trade or other contact at the time between Ancient India and either the Hebrews themselves, or one of their trading partners; and

3. The Law Code of Manu must have contained content similar to the Ten Commandments.

We shall start with the last point first. The Law Code of Manu does contain many similarities to the Mosaic Ten Commandments. In the 12th chapter of the Law Code of Manu, Verses 5, 6, and 7 contain many of the Ten Commandment concepts, although in different order and slightly different language:

5. Coveting the property of others, thinking in one's heart of what is undesirable, and adherence to false (doctrines), are the three kinds of (sinful) mental action.

6. Abusing (others, speaking) untruth, detracting from the merits of all men, and talking idly, shall be the four kinds of (evil) verbal action.

7. Taking what has not been given, injuring (creatures) without the sanction of the law, and holding criminal intercourse with another man's wife, are declared to be the three kinds of (wicked) bodily action."[428]

The Ten Commandments--Six Of The Commandments Are Very Similar To The Law Code Of Manu: In Exodus Chapter 20, Verses 12-17, six of the ten commandments bear an amazing similarity to that section of the Law Code of Manu described above:

20:13. Thou shalt not kill.

20:14. Thou shalt not commit adultery.

20:15. Thou shalt not steal.

20:16. Thou shalt not bear false witness against thy neighbor.

20:17. Thou shalt not covet thy neighbor's house; neither shalt thou desire his wife, nor his servant, nor his handmaid, nor his ox, nor his ass, nor any thing that is his.

[428] See Buehler, G., LAWS OF MANU, n. 3

No Keeping Seventh Day Holy: There is no law exactly the same in the Law Code of Manu about keeping the Seventh Day Holy, but there are multiple prescriptions for days of worship, etc.

Not Exactly Honoring Thy Father And Mother: There is no law about honoring both Father and Mother in the Law Code of Manu. Instead, there are laws that state that a Father has control over his household and that one should take care of one's Mother.

The Law Code of Manu Pre-Dates the Ten Commandments: There appears to be strong evidence to suggest that the Law Code of Manu does pre-date the Ten Commandments. As detailed above, the predecessor to the Law Code of Manu, the Rig Veda, and the Law Code of Manu both mention the River Sarasvati as being a mighty and wide river that flows to the ocean. Within the last 30-40 years, since space satellites have been taking pictures of the earth, the "now dried up path" of a great river, probably the Sarasvati, has been photographed from space. Scientists have dated that occurrence at about 1900 BC. If that is correct, then both the Rig Veda and the Law Code of Manu are older than 1900 BC, making the Law Code of Manu at least six hundred years older than the Ten Commandments, which is commonly dated at 1300 BC.

There appears to be ample evidence to suggest that there was international trade between Ancient India and Hebrew trading partners. As was discussed in

chapters above, strong archeological evidence exists that there was international trading between ancient India and both Mesopotamia and Egypt. Moses was raised in the house of the Pharaoh of Egypt. He must have known about both the Code of Hammurabi and probably the Law Code of Manu.

Assura Code (1075 BC) vs. Law Code of Manu: The Assura Code seems much harsher than the Law Code of Manu. I would conjecture that the Assura Code therefore does not seem to have been influenced by the Law Code of Manu.

Women Criticized But Honored In The Law Code of Manu: Even though in the Law Code of Manu, women are criticized, they are not treated as having little or no rights. In Chapter 8, Verse 17, the Law Code of Manu states: "(When creating them) Manu allotted to women (a love of their) bed, (of their) seat and (of) ornament, impure desires, wrath, dishonesty, malice, and bad conduct."[429] But in other places in the text, the Law Code of Manu say to honor women.

In Chapter three, Verse 55, women must be honored. "Women must be honoured and adorned by their fathers, brothers, husbands, and brothers-in-law, who desire (their own) welfare."[430] And in the next Verse, 56, even a spiritual angle is invoked to honor women. "Where women are honoured, there the gods are pleased; but where they are not honoured, no sacred rite yields rewards."[431]

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[429] See Buehler, n. 5
[430] Id., n. 5
[431] Id., n. 5

Women Get Harsher Punishments Than Men In Assura Code: On the other hand, in the Assura Code, a woman cannot even strike a man:

"I.7. If a woman bring her hand against a man, they shall prosecute her; 30 manas of lead shall she pay, 20 blows shall they inflict on her.' And a husband may even beat his wife without punishment:

"I.58. Unless it is forbidden in the tablets, a man may strike his wife, pull her hair, her ear he may bruise or pierce. He commits no misdeed thereby."

Divorce--No Payment To Woman in Assura Code: In the Law Code of Manu, a divorced wife gets some money. In the Assura Code, it is entirely up to the husband. He can give her nothing.

"I.37. If a man divorce his wife, if he wish, he may give her something; if he does not wish, he need not give her anything. Empty shall she go out."

Negligence More Harshly Punished in Assura Code: In the Law Code of Manu, a man who meddles with his neighbor's field must pay back for his damage. In the Assura Code, not only must the lawbreaker pay three times the damage, he gets one finger cut off, receives one hundred blows and has to do volunteer work for the king.

"II.8. If a man meddle with the field of his neighbor, they shall convict him. Threefold shall he restore. One of his fingers they shall cut off, a hundred blows they shall inflict upon him, one month of days he shall do the king's work."

Hittite (Nesilim) Code (1700 BC) vs. Law Code of Manu: The Hittite (Nesilim) Code seems much harsher than the Law Code of Manu. I would conjecture that the Hittite (Nesilim) Code therefore does not seem to have been influenced by the Law Code of Manu.

Appeal in The Law Code of Manu vs. No Appeal in Hittite (Nesilim) Code

The Law Code of Manu allowed an appeal from the King's judgment, or from a judgment made by a judge appointed by the king. The losing party had to pay double the amount of the judgment to start the appeal.[432] In the Hittite (Nesilim) Code, harsh punishment was the rule for someone who was foolish enough to challenge a judgment.

"173. If anyone oppose the judgment of the king, his house shall become a ruin. If anyone oppose the judgment of a lord, his head shall be cut off. If a slave rise against his master, he shall go into the pit."[433]

Solon's Code (1700 BC) vs. Law Code of Manu: Solon's Code provided reforms that seem in part to be modeled after the Law Code of Manu. I would conjecture that Solon's Code may have been influenced by the Law Code of Manu.

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[432] Jha, n. 5 at 7

[433] Oliver J. Thatcher, ed., The Library of Original Sources (Milwaukee: University Research Extension Co., 1901), Vol. III: The Roman World, pp. 9-11

Ending Slavery Based on Debt: Solon enacted a law that cancelled loans granted on the person or property of the creditor. People whose debts had turned them into slaves were freed.

Classes of People Very Similar To The Law Code of Manu: Four classes of people were described based on their actions, not by their birth. These four classes of people seemed somewhat similar the Law Code of Manu. The classes were the upper class, usually with money, called the Pentacosiome dimni, the horsemen, called the Hippeis, the farmer, called Zeugites and the servant class, called Thetes.

Will Writing By Individuals: Solon's Laws allowed a will to be written by individuals and property left to one's descendants, similar to the Law Code of Manu.

Twelve Tables (450 BC) vs. Law Code of Manu: Influence of Twelve Tables On Justinian Code (529 AD): Even the compilers of the super-sophisticated, non-ancient, Justinian's Code (Corpus Juris Civilis) said that they were influenced by the Twelve Tables. No originals survived, so the Twelve Tables are not considered extant by many legal historical scholars.

Possible Law Code of Manu Influence On The Twelve Tables: The Law Code of Manu may well have influenced the Twelve Tables. The Twelve Tables are harsher than the Law Code of Manu, but, as discussed above, the Law Code of Manu is definitely older, international trade definitely existed between the regions,

and there is some similarity between some of the laws of the Law Code of Manu and the Twelve Tables.

Treason In Both Codes: The Law Code of Manu, as we discussed above, had some beginning notions of treason, although the activity specifically was turning against a village or city. In the Twelve Tables, Table IX: Public law, said:

5. Treason: he who shall have roused up a public enemy or handed over a citizen to a public enemy must suffer capital punishment.

No Marriage Between Classes In Both Codes: The Law Code of Manu had more classes than the Twelve Tables, but both tried to forbid intermarriage. In the Twelve Tables, Table XI: Supplementary laws, said:

1. (Marriages) should not take place between plebeians and patricians.

Punishment For Perjury In Both Codes: The Law Code of Manu treated perjury much more as a sin against the gods that had to be cured, than the Twelve Tables, which treated perjury very harshly, with the death penalty.

In the Twelve Tables, Table VIII: Torts or delicts, said:

23. A person who had been found guilty of giving false witness shall be hurled down from the Tarpeian Rock.

Debt In Both Codes: The Law Code of Manu had less severe punishments than the Twelve Tables for someone who did not pay their debts, but both tried to prevent such occurrences.

In the Twelve Tables, Table III: Debt, said: 1-6. When debt has been acknowledged, or judgment about the matter had been pronounced in court, thirty days must be the legitimate time of grace. After that, then arrest of debtor may be made by laying on hands. Bring him into court. If he does not satisfy the judgment, or no one in court offers himself as surety on his behalf, the creditor may take the defaulter with him. He may bind him either in stocks or in chains; he may bind him with weight not less than fifteen pounds or with more if he shall so desire. The debtor, if he shall wish it, may live on his own. If he does not live on his own, the person [who shall hold him in bonds] shall give him one pound of grits for each day. He may give more if he shall so desire. On the third market day, creditors shall cut pieces (divide the debt?). Should they have cut more or less than their due, it shall be with impunity.

Usury: Ancient Legal Codes vs. Modern Code: The following is a simple legal exercise to give a more complete picture of the influences of ancient legal thought to modern legal thought. We shall compare and contrast one narrow topic, usury, within the most ancient extant legal codes, the Law Code of Manu and the Code of Hammurabi and with one modern code, that of the US State of California.

Classes of People:

A. Law Code of Manu: In the Law Code of Manu, as we have seen, all human beings were divided up into four classes or castes (seemingly unchangeable

by birth, but the commentaries seem to suggest that some movement was possible). Those four castes, as were discussed above, were the Braahmana (the literate class, who memorized sacred and other books and used that knowledge for sacerdotal and judicial functions), the Kshyatria (the kings, warriors and protectors of the people), the Vaisaya (the landowners, traders, farmers and shopkeepers) and the Shuudra (the lifelong servant class). Women were part of the four castes, but also in a "lesser" category themselves.

B. Code of Hammurabi: In the Code of Hammurabi, the classes were the amelu (landowners), the muskinu (non-landowner) and the ardu (the slave).

C. California Law: Under California Law, there is supposed to be no distinction of people by class or caste. Under Article 1 of the California Constitution, the Declaration of Rights, Section 1 states, "All people are by nature free and independent and have inalienable rights. Among these are enjoying and defending life and liberty, acquiring, possessing, and protecting property, and pursuing and obtaining safety, happiness, and privacy."

For our purposes here, I am mostly putting aside race or ethnicity in modern-day California. Instead, I am focusing on a different type of class system, the one determined by annual income, coupled with a "credit-report", that modern day watchdog that often incorrectly reports to potential creditors how often a debtor has been late in their payments.

Usury—The Amount of Interest That One Could Legally Charge

A. Law Code of Manu; In order to understand the Law Code of Manu on investment that influenced international investment law, we will first turn to the topic of Return on Investment and specifically, Annual Percentage Rate Interest.

With regard to the monthly and annual percentage rate that the Law Code of Manu say that a money-lender may charge, the section starts out at 1.25% per month (the eightieth part of a hundred) or 15% per year (annual percentage rate):

"A money-lender may stipulate as an increase of his capital, for the interest, allowed by Vasishtha and take monthly the eightieth part of a hundred." (Vasishtha was another learned sage, author of the seventh mandala of Rig Veda, that pre-dates the time that the Law Code of Manu was handed down).[434]

That was sufficient interest for money-lenders during the time of Vasishtha (pre-Manu), but during the time of the "writing" of the Law Code of Manu, the money lenders wanted to charge a little more. Can it be done and still be within the law? The first answer is yes, up to two percent (2%) per month or twenty-four percent (24%) annual percentage rate yield: "Or, remembering the duty of good men, he may take two in the hundred (by the month), for he who takes two in the hundred becomes not a sinner for gain." [435] The next verse differs dramatically

[434] See Buehler, Laws of Manu, Chapter VIII, Verse 140
[435] Id., Verse 141

from the above and brings us to one of the most interesting parts of ancient society in India: the different treatment that is accorded to the different classes or castes:

"Just two in the hundred, three, four, and five (and not more), he may take as monthly interest according to the order of the castes (varna)." [436]

That is to say that the higher up in the caste of society one was, the more interest one was allowed to charge (24% annual percentage rate for the lowest caste, 36% annual percentage rate for the next higher caste, 48% annual percentage rate for the next higher caste and 60% annual percentage rate for the highest caste). "Two things are of note here: one that the interest rate must be fixed or stipulated. The other, involving liquor, that the rate of interest is "eight times the principal", which, if I am reading that correctly, is 800%.." [437]

B. Code of Hammurabi: In the Code of Hammurabi, Loans: Merchants (and even temples in some cases) made ordinary business loans, charging from 20% to 30%.

C. California Law: Under California Law, there is to be no usury. And usury here is defined under Article 15 of the California Constitution, Section 1, which states, "The rate of interest upon the loan or forbearance of any money, goods, or things in action, or on accounts after demand, shall be 7 percent per annum but it shall be competent for the parties to any loan or forbearance of any

[436] See Buehler, Laws of Manu, Chapter VIII, Verse 142
[437] See Jha, n. 5, p. 164

money, goods or things in action to contract in writing for a rate of interest: (1) For any loan or forbearance of any money, goods, or things in action, if the money, goods, or things in action are for use primarily for personal, family, or household purposes, at a rate not exceeding 10 percent per annum."

Conclusion to Chapter Seven

The Law Code of Manu probably did influence other legal codes of the time, especially the Code of Hammurabi and the Mosaic Code, if the Law Code of Manu was the code used by the Indus/Harappa Civilization. Then, the dates and times and international trade fits. If the Law Code of Manu was not the code used by the Indus/Harappa Civilization, then the amount of influence may have been very little.

# Chapter Eight: Conclusion

Conclusion re Dating of The Law Code of Manu with Indus/Harappa Civilization.

We have been looking at the History of the Law Code of Manu (Manusmriti) (ancient India) with the emphasis on the date of the composition of the Law Code of Manu and conclude that it may very well have been composed during the height of the ancient Indian Indus/Harappa Civilization, in approximately 3000-2000 BC.

The Law Code of Manu must have been composed after Rig Veda was composed and prior to the time of the Indian Buddhist King, Ashoka, approximately 250 BC.

The Law Code of Manu must have been composed during an urban period. Urbanization fell off after the collapse of the Indus/Harappa Civilization, triggered in part by the earthquake that dried up the River Sarasvatii in 1900 BC. Urbanization did not come back to India until the time of King Ashoka in about 250 BC, and even then, not in the orderly, Rig Vedic-worshipping-way that probably was present in the Indus/Harappa Civilization and definitely present for the Law Code of Manu society.

The Law Code of Manu must have been composed during a time when water and bathing were very important. Such was the case during the Indus/Harappa Civilization and almost at no time since.

The Law Code of Manu must have been composed when international trade was alive and well. Such was the case during the Indus/Harappa Civilization and almost at no time since.

The Law Code of Manu must have been composed when technology was great. Such was the case during the Indus/Harappa Civilization.

The Law Code of Manu must have been composed when craft guilds were formed. Such must have been the case during the Indus/Harappa Civilization.

The Law Code of Manu must have been composed when a sophisticated government was in control. Such was the case during the Indus/Harappa Civilization and almost at no time since, until King Ashoka.

The Law Code of Manu must have been composed when standardized weights and measures were used extensively, especially since the Indus/Harappa Civilization weights and measures correspond almost exactly with the Law Code of Manu weights and measures. Such was the case during the Indus/Harappa Civilization and almost at no time since.

The Law Code of Manu must have been composed somewhat contemporaneously, (or somewhat before) the abbreviated, but somewhat similar

laws in Ur, Sumaria, Law Code of Hammurabi and the Jewish Torah or Christian Bible, Old Testament. Such was the case during the Indus/Harappa Civilization and at no time since.

The Law Code of Manu must have been composed prior to Greek astronomy. The Law Code of Manu must have been composed prior to Greek mathematics. Such was the case during the Indus/Harappa Civilization and almost at no time since.

Conclusion Re the Law Code of Manu ("mAnusmRti"), from ancient India, is the world's first sophisticated extant Legal Code:

The evidence presented in this book points very strongly to the conclusion that the Law Code of Manu ("mAnusmRti"), from ancient India, is the world's first sophisticated extant Legal Code. After examining its historical context, taking a detailed look at selected legal topics with plain and hidden meanings and comparing the Law Code of Manu to other ancient and modern legal codes, drawing the above conclusion is logical.

This seems to be the case because of the following:

1. Strong evidence exits supporting the conclusion that the Law Code of Manu is older than 1900 BC, in light of satellite images showing the course of the Sarasvati River, which dried up in approximately 1900 BC.

2. The Sarasvatii River was described as mighty and flowing from the mountains to the sea in both the pre-Manu Rig Veda and the Law Code of Manu,

3. The Law Code of Manu appears to have been transmitted orally for at least two thousand years BC before being written down in documents in the AD that also survived, or are "extant" today.

4. Such oral transmission appears to have been carried out by a societal class or caste in ancient India, called Brahmins or Brahmana, whose main task in life appears to have been to become a "human library books" or "human computers" regarding knowledge that was important to that ancient society of India, whether that knowledge was philosophical, spiritual, historical, scientific, medical or legal.

5. This oral transmission appears to have been done so carefully, word-for-word, as to actually qualify to be categorized as "extant" or existing from its original date.

6. The Law Code of Manu is much more sophisticated (with its thousands of laws) than the only other contender to the title of World's First Sophisticated Extant Legal Code, the Code of Hammurabi. The Code of Hammurabi is extant (the best representation having been carved on a very large stone on which the 282 laws were carved, which stands in Paris, in the Louvre museum today).

7. The number of laws contained in each code is important to compare as another measure of sophistication. The Code of Hammurabi has 282 laws compared to the Law Code of Manu, which has more than 2500 laws, although about 1000 of them would qualify for what we today call civil and criminal law and procedure.

"Extant-ness" Of Ancient Legal Codes: The word "extant" is usually defined as still existing or not destroyed; there are both extant and non-extant ancient legal codes. The Law Code of Manu is an extant Code, in spite of the fact that it was preserved orally for most likely several thousand years.

The reason that we can count that "extant-ness" is the fact that the ancient society in India developed a means of exactly preserving first their spiritual and philosophical texts and then other texts, by means of creating a class of human beings that I call "Human Library Books" or "Human-Computers".

By receiving social and political "rewards", these "Human-Computers", called Brahmins or Braahmana continually memorized, and recited on request, word-for-word, passages from important "texts". The world of this educated elite can perhaps be compared in some of their duties with Medieval Monks in Europe.

Super-Sophistication Of Corpus Juris Civilis (Body of Civil Law)

Justinian's *Corpus Juris Civilis* (Body of Civil Law) does not qualify as the world's fist sophisticated extant legal code. It is not that old and rather than being

sophisticated, I believe it is in a class by itself and easily qualifies as the world's first "super-sophisticated" legal code.

It is not an ancient code, as it was compiled in the sixth century AD by the emperor Justinian (sometimes it is called Justinian's Code), but it is quite detailed and complicated. Corpus Juris Civilis was "lost" for several hundred years and "rediscovered" about 1000 years ago to form the basis for European legal education and modern civil codes, such as the Code of Napoleon.

Ancient Civilizations Developed In "Fertile Crescents": Civilizations in the ancient world were more easily developed where agriculture was easy, often in a "fertile crescent" of land, near a great river. In the West today, the phrase "fertile crescent" has been the name given to the crescent-moon shaped area in the Middle East that incorporated ancient Mesopotamia (mostly modern-day Iraq), the Levant and ancient Egypt. There was another fertile crescent in northern ancient India, next to the then mighty Sarasvati River.

Conclusion To Dating Law Code of Manu by 1900 BC Drying Up of River Sarasvatii and International Trade: The date and time of the Law Code of Manu can be arrived at through the use of modern satellite imagery and evidence of ancient India international trade. Satellite Photography Of Sarasvati River As Historical Marker-Pre 1900 BC. The "now dried up path" of a great river, most likely the Sarasvati, has been photographed from space by space satellites.

Since the Sarasvati River went dry around 1900 B.C. as a result of tectonic upheavals, it implies that the pre-Manu, Rig-Veda, must be dated prior to this date. The reason for that conclusion is that the Sarasvati River is frequently mentioned in the Rig Veda as a mighty river flowing from the mountains to the sea. I also contend that since the Law Code of Manu also makes such a mention, that it too, can be dated prior to 1900 BC.

Ancient India Cities And International Trade: There exists evidence of large cities dated from about 6000 BC in ancient India. There also exists evidence of international trade by ancient India with other civilizations that produced legal codes. Wood from India has been found and dated in Mesopotamia. India also produced boats, sewn boats called dhows, that were capable of international voyages and mentioned by ancient writers from civilizations other than from India.

Archeologists in India have found a series of weights conforming to the Heavy Assyrian standard for international trade. The Law Code of Manu, itself, talks about sea voyages and marine insurance. This is then clear evidence that the ancient civilization of India conducted international trade.

Conclusion To Formation And Preservation of The Law Code Of Manu, Including Philosophical and Spiritual Influences: The Law Code of Manu was formed by reliance on principles of the Rig Veda, the most important composition of ancient India and preserved by means of precise memorization.

Preservation of the Law Code Of Manu: As discussed above, the Law Code of was preserved orally for most likely several thousand years by means of creating a class of human beings that I call "Human Library Books" or "Human-Computers". It was correctly predicted by that society that most writing would be destroyed over time.

Shruti v. Smrti ("zruti") v. ("smRti"): Smrti ("smRti"), that which was remembered, as the Law Code of Manu was considered, was not as pure as Shruti ("zruti Shruti ("zruti") that which is heard or perceived with the ear (from the divine), as the Rig Veda was considered by the ancient civilizations in India.

Conclusion To Law Code of Manu Translations: Castes and Guilds:

Caste or Class System of Ancient India: The society of ancient India at the time of the Law Code of Manu had four classes or castes, that were fixed by birth, not by action, as formerly in the Rig Veda.

The Braahmana caste were the ones who preserved knowledge.

The Kshatriaya caste were the warriors, the kings and the soldiers.

The Vaisya caste were the farmers, dairy owners and merchants.

The Shuudra caste were supposed to serve the other castes.

Kingship Example In Ancient India: Although the word Raaj ("rAj" )means to reign, be king or chief, rule over, direct, govern; to be illustrious or resplendent,

shine, glitter...to reign, rule; to illuminate, make radiant..., the king was really meant to protect the people from each other and outsiders.

Powerful Groups: Families, Guilds & Tribes: During the Time of The Law Code of Manu, people were grouped into families, guild and tribes. Breach of a guild contract was especially punished harshly and probably the precursor to later Nation-State laws on treason.

Conclusion To Comparative Law: The Law Code of Manu vs. Other Codes Ancient And Modern: Hammurabi's Code (1700 BC) vs. Law Code of Manu: Besides the Law Code of Manu, Code of Hammurabi is definitely the most sophisticated extant ancient legal code. Although the Law Code of Manu is less harsh than the Code of Hammurabi, the Law Code of Manu is most likely older and seems to have influenced the Code of Hammurabi.

As detailed above, the Law Code of Manu and its predecessor, the Rig Veda both mention the River Sarasvati as being a mighty and wide river that flows to the ocean. Satellite pictures show the "now dried up path" of a great river, probably the Sarasvati, dated at about 1900 BC. The Law Code of Manu is then older than 1900 BC, before the Code of Hammurabi. International trade between India and contemporaneous civilizations in the Middle East seems to have taken place, based on evidence of the sea-voyages and artifacts found in the Middle East.

Also, there is a striking similarity between some of the specific laws of the Law Code of Manu and the Code of Hammurabi, like Trial by Ordeal, Judicial Misconduct, Punishment Based On Class, punishments for negligence.

Mosaic Code (1300 BC) vs. Law Code of Manu: There is definitely possible Law Code of Manu Influence on the Ten Commandments. Six of the Commandments Are Very Similar To the Law Code Of Manu, and artifacts from ancient India have been found in Egypt dating from the time that the Hebrews lived there.

Assura Code (1075 BC) vs. Law Code of Manu: The Assura Code seems much harsher than the Law Code of Manu. The Assura Code therefore does not seem to have been influenced by the Law Code of Manu. Women were criticized but honored in Law Code of Manu, but women received much harsher punishments than men in the Assura Code. Negligence was much more harshly punished in the Assura Code.

Hittite (Nesilim) Code (1700 BC) vs. Law Code of Manu: The Hittie (Nesilim) Code was much harsher than the Law Code of Manu. For instance, no appeal was allowed in Hittite (Nesilim) Code.

Solon's Code (1700 BC) vs. Law Code of Manu: The classes of people in society were very similar in Solon's Code compared to the Law Code of Manu.

Twelve Tables (450 BC) vs. Law Code of Manu: Justinian's Code (529 AD) said that it was influenced by the Twelve Tables, even though not one copy of the Twelve Tables survived. It is possible that the Law Code of Manu influenced the Twelve Tables. There was punishment for treason in both codes, no marriage between classes, and punishment for perjury in both codes.

Usury: Ancient Legal Codes vs. Modern Code: Even though usury was outlawed by the Law Code of Manu and by modern codes, such as the California Code, somehow, lenders in both cases manage to "get around the law".

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