

Introducing Anthropological Historiography as an Integral Component of Twenty-first Century Historiography: The Role played by Anthropological Historiography in the Attainment of Long-Term Anthropological Goals and Objectives

Sujay Rao Mandavilli

Abstract: - This paper is the last in our trilogy on Twenty-First Century Historiography. It attempts to bring all our endeavours to their logical culmination and as such may be construed to be our apotheosis in this regard. The first paper proposed a basic approach for Historiography in the Twenty-first Century and laid out the basic objectives of Twenty-first Century Historiography. The second paper laid out the core principles of Twenty-first Century Historiography, and these were seen a necessary adjunct for the accomplishment of the objectives of Twenty-first Century Historiography as defined in the first paper. In this paper, we introduce Anthropological Historiography as an integral, though not core component of Twenty-first Century Historiography and lay down its basic tenets and objectives. We also delineate the role that we expect will be played by Anthropological Historiography in the attainment of long-term Anthropological goals and objectives, and in promoting human welfare and well-being in general. Anthropological Historiography, with its myriad and multiple interfaces with other sciences is also expected to play a major role in promoting a scientific temper among the laity and the general public and trigger shifts in individual and societal orientations in due course by countering popular perceptions on many issues that impact their daily lives and making outdated and popular paradigms and ideologies redundant. We expect that Anthropological Historiography will play a major role in marginalizing fringe movements besides leading to an enhanced understanding of various aspects of science, history and ethnology among the population and ushering in intellectual movements where such movements are long overdue, and very indirectly leading to a quantum increase in scientific endeavours. We also believe that Anthropological Historiography should be taught as a specialized sub-discipline chiefly targeted towards higher grade students, or students pursuing advanced courses, and should be pursued not by general historians, but by specialized Anthropological Historians.

I. INTRODUCTION

This paper is the last in our trilogy on Twenty-First Century Historiography. The first paper which was published way back in 2015,¹ proposed a basic approach for Historiography in the Twenty-first Century and laid out the basic objectives of Twenty-first Century Historiography which included thirty-nine core objectives besides recommending a stake-holder driven approach with a clear focus and emphasis on transparency, objectivity and accountability and a layered approach to presentation. This paper also proposed an interface between Historiography and other sciences with an underlying objective of social and cultural emancipation, but we now propose to take this exercise to an altogether new level and forge new trajectories for the satisfaction and fulfilment of an altogether different category of objectives. The second paper which was published in 2016,² laid out the core principles of Twenty-first Century Historiography such as long-term approaches, integration with other sciences, avoidance of pseudo-scientific approaches, internationalism, pragmatism, transparency, openness, rigour, inter-disciplinary approaches, innovation etc, and these were seen a necessary adjunct for the accomplishment of the objectives of Twenty-first Century Historiography as defined in the first paper.

In this paper, we introduce Anthropological Historiography as an integral, though not core component of Twenty-first Century Historiography and lay down its basic tenets and objectives. We also delineate the role that we expect will be played by Anthropological Historiography in the attainment of long-term Anthropological goals and objectives, and in

¹ Historiography by Objectives: A new approach for the study of history within the framework of the proposed Twenty-First Century School of Historiography Sujay Rao Mandavilli, ELK Asia Pacific Journal of Social Sciences Vol 1, Issue 2 (2015)

² Enunciating the Core principles of Twenty-first Century Historiography: Some additional extrapolations and inferences from our studies and observations on Historiography, Sujay Rao Mandavilli, ELK Asia Pacific Journal of Social Science (ISSN: 2394-9392) in Volume 2, Issue 4 July to September 2016

promoting human welfare and well-being in general, also speculating on its possible eventual introduction in schools, at least for advanced students in the field in such a way that the underlying threads and principles of socio-cultural change and the underlying quintessential spirit behind human achievement can be brought out in a logical and cohesive fashion. Anthropological Historiography, with its myriad and multiple interfaces with other sciences is also expected to play a major role in promoting a scientific temper among the laity and the general public and trigger shifts in individual and cultural orientations in due course by countering popular perceptions on many issues that impact their daily lives and making outdated and popular paradigms and ideologies redundant. We expect that Anthropological Historiography will play a major role in marginalizing fringe movements besides leading to an enhanced understanding of various aspects of science, history and ethnology among the population and ushering in intellectual movements where such movements are long overdue, and directly and indirectly leading to a quantum increase in scientific endeavours. Anthropological Historiography can be taught to students pursuing advanced courses, and the discipline of Anthropological Historiography can be pursued by a small group of specialists given the fact that the general historian may be ill-equipped and ill-prepared to do so. We also look forward to a day (some time in the future) when History will be replaced by Anthropology in schools and colleges to usher in an intellectual revolution, but a study of history (which will undoubtedly form a part of it) along with its core objectives will still get its due place in the sun. This, we believe, is the way to counter the damage done to the human psyche by a cornucopia of egregious ideology-driven approaches. This appears to a distant pipe dream at present but can still happen in the very-long term (and may need to happen in the interests of science and scholarship) if ‘the stars and planets align’ (The latter may appear to be a cruel irony but we will need to reckon with the quantum and the breadth of vested interests that will be involved and will need to be transcended). One other approach may be to identify how and why each topic taught to students benefits them and society in general and proceed with syllabus-creation accordingly, but we expect that such an exercise will meet with stiff opposition similarly). A simpler and a via media approach may to introduce Anthropological Historiography as a precursor to detailed historical narratives. The entire canvas of pre-human life forms and basic human history may also be taught under the natural sciences, and suitable referenced in history courses. The proper teaching of Anthropology and Anthropological Historiography will, we believe form a part of what we call the ‘Sociology of Science’ – a formal study of how scientific knowledge and teaching can lead to cultural emancipation in various societies around the world.

Anthropological Historiography must also be differentiated from Historical anthropology which seeks to apply methodologies and objectives from Social and Cultural Anthropology to the study of societies. However,

there would be some overlap of intent and methodologies between the two.

II. CREATIONISM, SCIENCE AND PSEUDO-SCIENCE

In the beginning God created the heaven and the earth. And God said: 'Let there be light.' And there was light. And God saw the light, that it was good; and God divided the light from the darkness. And God called the light Day, and the darkness He called Night. And there was evening and there was morning, one day. (Genesis 1:1–2:3)

Thus began the idea of Biblical creationism. Humans had however begun to speculate on the origins of life much, much earlier. While our knowledge of Egyptian, Mesopotamian and Harappan beliefs is scant, we have a much better idea of the philosophical undercurrent of Greek thought from the writings of Aristotle, Herodotus and Empedocles. Aristotle believed in some form of evolution with old life forms making way for the new through constant adaptation and change. Both Herodotus and Empedocles developed similar ideas of evolution that were based on adaptation. Herodotus, who had perhaps travelled more extensively than anyone else till then, and was a pioneer historian and Anthropologist, also studied people from distant lands, and attempted to collect some evidence for evolution. Empedocles, who had proposed the four basic elements of air, water, wind and earth, also proposed the first theory explaining the origin of species. Anaximander proposed a more comprehensive theory of evolution that emphasized gradualism and discounted any idea of a divine hand. Early versions of pangenesis, which proposed that multiple organs of parents determined heredity, were also developed by Hippocrates, Democritus and Galen, and these came to exert some influence on Darwin’s ideas. Xenophanes was one of the first people to study fossils systematically, but failed to make major contributions to evolutionary theory. He proposed that life evolved gradually from lower forms to higher forms, culminating ultimately in man. Thales and Democritus also believed the life originated from inanimate objects. Aristotle proposed the world’s first crude biological taxonomy, preceding Carl Linnaeus by two millennia. Some Romans such as the poet Lucretius also speculated on evolution, though the Romans intellectual and scientific output is generally regarded as inferior.

The popularization of Christian and evangelical theories of creationism in the popular mindset after the dawn of the Christian era may have marked a step backwards for scientific pursuits. Creationist theories sought to popularize the untestable hypothesis that everything was attributable to Divine Will, thus beginning a popular transition into the realms of unsubstantiated faith. In the sixteenth century, Father Sudrez lent his weight to this theory and proposed that the earth was created in six days. In the seventeenth century, James Ussher proposed that the earth was created on the night before the 23rd of October 4004 BC, followed by Dr Charles

Lightfoot of Cambridge University who proposed the time of creation at 9 A.M. on this date. Most people in Europe believed in such theories in the Seventeenth and Eighteenth centuries, and to some extent, they still do. Theories of Cataclysm or Catastrophism may have been in some way related to such ideas even though they were promoted as scientific theories. According to Georges Cuvier, creation was destroyed several times, but each time higher species appeared. Sometimes, creationism was also used to justify racism. James Cowles Prichard believed that as descendents of Adam and Eve became lighter-skinned, they evolved into Whites who had a higher intellect than other human populations. They also believed that all humans would in due course evolve physically and intellectually and become whites; this assertion in effect, proclaimed the intellectual superiority of Europeans vis-a-vis other human populations.

Sometimes, a clear demarcation between science and pseudo-science has been difficult to establish, and well-established scholars themselves have proposed theories that have bordered on the incredulous. Anaximander, for example, proposed a mechanical model in which the Sun was a hole in a fire-filled ring that revolved around the Earth. According to Xenophanes, the Earth gave out combustible gases that ignited, creating the Sun in the process. Some Greek and later scholars also believed in panpsychism or the idea of a soul, examples being Thales, Plato, Parmenides, Baruch Spinoza, Gottfried Leibniz, Arthur Schopenhauer, Gerolamo Cardano, Ibn Rushd and William James. This idea was also supported by Ancient Indian and Chinese philosophies, but the whole concept is dismissed by many sceptics.

The transition to a more informed understanding was a slow and a long-drawn process that spanned several centuries. As early as the Seventeenth Century, Francesco Redi, and Leeuwenhoek had conducted controlled experiments to investigate whether generation of organic matter from inorganic matter or abiogenesis was possible, but the results of their studies were mostly inconclusive. Redi carried out a famous study whose results were published in 1668, and this appeared to negate the idea of abiogenesis. There was also a heightened interest in Human Anatomy and racial classification of humans with groundbreaking work done by Edward Tyson, Blumenbach and Retzius among others. In the Eighteenth Century, Comte de Buffon believed that the environment influenced life forms, causing them to change. Lord Monboddoo, likewise, proposed that man had evolved from monkeys as also did Charles Bonnet and others.

A precursor to evolutionism was Charles Lyell's Theory of Uniformitarianism which proposed that forces were in operation that reshaped the earth continuously, producing new life forms. Other early evolutionists were William Charles Wells and Charles Mathew. Erasmus Darwin, grandfather of Charles Darwin, also lend his weight to the idea of evolutionism, and suggested that life on earth had evolved gradually over millions of years. Though his ideas were crude,

they would be refined substantially over the course of the next one century. Jean Baptiste Lamarck took evolutionism a step further, and studied function as a mechanism to promote evolution. This theory is referred to as the 'Inheritance of Acquired Characteristics' and was published in 1802. The tenets of his approach were the use and disuse of characters and inheritance of acquired characteristics. This theory also proposed changes to species under external influence, internal urges in promoting evolution, and progressive evolution of species. The principles of Lamarckism were tested by August Weismann and others, but produced inconsistent results and seemed to negate Lamarck's ideas. Neo-Lamarckism was a modified version of Lamarckism which was promoted by George Henslow, Alpheus Spring Packard, Edward Drinker Cope, Alpheus Hyatt, McDougall, Kammerer, Guyer, Naegeli and F. B Sumner and was further supported by experiments performed by Griffith and Detleofson. Neo-Lamarckism gave less importance to internal urges and use and disuse of organs, and was essentially a highly modified version of LaMarckism.

Charles Darwin proposed his theory of evolution and natural selection in a famous book he published in 1859, and most of this evidence was collected during his famous 'Voyage of the Beagle' which commenced in 1831. He had however been greatly influenced by the earlier works of Alexander von Humboldt and T.R Malthus besides others. This work made him internationally popular, and ushered in a great revolution in scientific thought. Alfred Russell Wallace also contributed greatly to the Theory of Natural Selection, and is sometimes regarded as a co-contributor to this theory. Darwin talked about prodigality of over-production, variation, heredity, and descent with modification. According to Darwin, it was not the most intelligent of species that survived, or the strongest, but the one that was most responsive to change. The term 'survival of the fittest' is however, attributed to Herbert Spencer and the widespread usage of the term 'natural selection' is credited to a later date. Ronald A Fisher, Sewall Wright and J B S Haldane tried to modify Darwin's concepts, and this school is known as Neo-Darwinism. Neo-Darwinism adds new concepts such as differential reproduction, genetic variation and other factors to Darwin's ideas.³

Over the past couple of years, Synthetic theories of evolution have become extremely popular. Such theories describe processes that introduce new genetic variations in a population, and those that impact the frequencies of variations that already exist in a population. Such theories describe different types of mutations such as Gene Mutations, Chromosomal Mutations, Haploidy, Polyploidy, Addition of Genes, Loss of Genes besides introducing concepts such as sexual selection, social selection, Gene flow, Genetic drift etc. Other interesting ideas such as Louis Dollo's Law of Irreversibility have also added to scientific thought. The science of Genetics was born in the year 1866 with the work

³ Darwin: The Indelible Stamp, Edited with commentary by James D. Watson, Running Press book publishers, 2005

of Gregor Mendel on pea plants (He introduced the Law of Segregation and the Law of Independent Assortment and the idea of Dominant and Recessive traits) but his work remained obscure and forgotten until it was rediscovered in the year 1900 by Carl Correns, Hugo de Vries and Erich von Tschermak. The term Genetics was coined by William Bateson in 1905. ^{4 5 6 7}

Oswald Avery, Alfred Hershey, Martha Chase and others later showed that DNA was the only Genetic material, while the double helix structure of DNA was discovered by James Watson and Francis Crick in the year 1953, and this won them the Nobel Prize later in the year 1962. ^{8 9}

The general idea of evolution has also been complemented by a gamut of interesting theories in the recent years. The Theory of Punctuated Equilibrium proposed by Stephen Jay Gould and Niles Eldredge dismisses any notions of a constant pace of change preferring intermittent periods of evolution and non-evolution, while the Theory of Adaptive Radiation (Simpson, 1953) proposes rapid diversification of species and proliferation of numbers in a relatively small time horizon. ¹⁰

It must also be borne in mind that Christian creationism is by no means the only school of creationist thought, and there have been several etiological explanations for the creation of the Universe. According to an ancient Chinese creation myth, Phan Ku, a giant creator emerged from an egg, and created the world with a chisel, along with all the heavenly bodies in the sky, dying just after the process was completed. The Taoist view on the other hand, states that Tao is the principal force behind creation, giving rise to yin, yang and everything. According to the myth of Pangu, a God lived inside a cosmic egg, and the egg broke into two halves forming the sky and the earth. According to the Korean Cheonjiwang Bonpuri creation myth propagated by mudangs or shamans, the Earth and sky were initially one empty void. One day, a gap formed in the void, and the lighter elements moved upwards to form the sky and the heavier elements formed the Earth. According to the Icelandic epic myth Prose Edda, creation started with a contrast in the realms of Muspell and Niflheim, until the heat of Muspell melted the freezing snow and ice of Niflheim, sparking life in the form of Imir the giant. According to a legend held by the Krachi people of Togo, a giant, the vast blue God Wulbari, lay just above the earth, but a woman kept poking him till he awoke. Gradually, Wulbari kept moving higher and higher till he was out of reach of humans. According to the Yoruba people of West Africa, Olorun was the owner of the sky. He asked another diving being to take a

snail shell down to earth which was marshy then. The shell contained a pigeon, a hen, and some soil. The soil was sprinkled on the marshes, and the pigeon and the hen began scratching on it, until it became solid ground. ¹¹

Brahma is the creator according to Hindu mythology. He is also known as Svayambhu, and Vasiga, and the four Vedas are believed to have emanated from his mouth. The Rig Veda which was compiled between 1650 BC to 1380 BC too has speculated on creation, and its ideas on creation can be found in Mandala 10, hymns 129 and 130. According to the Rig Veda 10, 129:

Then was not non-existent nor existent: there was no realm of air, no sky beyond it. What covered in, and where? And what gave shelter? Was water there, unfathomed depth of water? Death was not then, nor was there aught immortal: no sign was there, the day's and night's divider. That One Thing, breathless, breathed by its own nature: apart from it was nothing whatsoever. Darkness there was: at first concealed in darkness this All was indiscriminated chaos. All that existed then was void and form less: by the great power of Warmth was born that Unit. Thereafter rose desire in the beginning, desire, the primal seed and germ of Spirit. Sages who searched with their heart's thought discovered the existent's kinship in the non-existent. Transversely was their severing line extended: what was above it then, and what below it? There were begetters, there were mighty forces, free action here and energy up yonder Who verily knows and who can here declare it, whence it was born and whence comes this creation? The Gods are later than this world's production. Who knows then whence it first came into being? He, the first origin of this creation, whether he formed it all or did not form it, Whose eye controls this world in highest heaven, he verily knows it, or perhaps he knows not.¹²

Ancient Indian philosophy also discussed the idea of four Yugas, the Krita Yuga, the Treta Yuga, the Dvapara Yuga and the Kali Yuga and the total time encapsulated by these four Yugas was four million years with cyclical repetition.

III. THE ENDURING WHEEL OF HUMAN PROGRESS AND THE ENDURING SAGA OF HUMAN ENDEAVOUR

Some early thinkers such as Lucretius, Vedel Simonsen, Montfaucon and Mahudel had speculated on early human pre-history. However, a thorough conceptualization of pre-history is only attributed to the Nineteenth century. Concepts of Pre-history were developed by scholars such as Christian Molbech, who was a Dutch Historian and literary critic. Christian Jurgensen Thomson proposed the three-age system of classification, although he never used the term pre-

⁴ Guns, Germs and Steel, Jared Diamond Vintage Books, London, 2005

⁵ Essentials of Human Genetics, Fifth Edition, Manu L Kothari, Lopa A Mehta, Sadhana S Roychoudhary, Universities Press 2009

⁶ Creation: The future of life, Dara O Briain, Viking, 2013

⁷ Evolution: Edward J. Larson, Modern Library, 2006

⁸ Genetics and Molecular Biology: David R Hyde Tata McGraw Hill, 2010

⁹ Genetics: Monroe W. Strickberger 1985

¹⁰ Ontogeny and Phylogeny, Cambridge MA: Belknap Press of Harvard University Press, 1977

¹¹ The Big Bang: The most important scientific discovery of all time and why you need to know about it: Simon Singh Harper Perennial, 2005

¹² Rig Veda, translated by Ralph T.H. Griffith, [1896]

history, and further contributions to a study of pre-history were made by Jens Jacob Asmussen Worsaae and others. According to Peter Rowley-Conwy, terms such as forhistorisk were in use in Scandinavia as early as in 1834. However, the popular use of the term pre-history began in France with Paul Tournal in 1833, and the term was probably first used in English by Daniel Wilson in 1851. John Frere and Boucher de Perthes discovered early pre-historic stone implements in France, and in 1859, Joseph Prestwich, Hugh Falconer, and John Evans confirmed these discoveries. In India, prehistoric studies were pioneered by Robert Bruce Foote, with many early discoveries having been made in present-day Tamilnadu.^{13 14}

John Lubbock divided the Stone Age into the Paleolithic or the Old Stone Age which began around the end of the Pliocene epoch and the beginning of the Pleistocene epoch of the quaternary period (again, later divided into the lower, middle and the upper Paleolithic) and the Neolithic or the New Stone Age. The Mesolithic Age was later introduced as an intermediary between the two, and the Copper Age was christened the Chalcolithic Age, and this was followed by the Iron Age.

The demarcation between history and pre-history is generally taken to be the invention of writing, after which systematic records began to be kept. However, the development of writing was itself a protracted and long-drawn process, and this necessitates the introduction of another term, proto-history. Proto-history is sometimes taken to be a phase where proto-writing (pre logo-syllabic writing) was in use. In some cases it may refer to pre or proto literate societies that were in contact with early full literate ones. In some cases, it may be synonymous with a period before full-blown civilization comprising of literary records, architecture and trade networks emerged. This term originated from the French term 'la proto-historique' which was first used in the Nineteenth century.

The term prehistory is often used for the period beginning with the Neolithic age some 14,000 years ago, but may sometimes be used for much older periods beginning with the Pleistocene epoch or the Paleolithic age 2.6 million years ago corresponding to the age of Australopithecus and Paranthropus hominins, and other early members of the genus homo that included Homo Habilis and Homo Ergaster and even preceding the appearance of Homo Erectus. However, popular use of the term only corresponds to the appearance of early stone tools or the emergence in the Archaeological record. Techniques used for the study of prehistory and protohistory differ from the techniques used for a study of history given the absence of writing or full-fledged historical records, and tend to rely on paleontology, and sometimes archeology.

The story of man has, for millennia, been one of enduring grit and determination, to conquer nature against all odds to ensure for himself a unique role in the ecosystem. In the recent past, man has also been making valiant efforts to learn from his past mistakes and has been making an effort to live in harmony with nature. Man's intellect and innovative and creative thinking have set him apart from all other species, and have played a major role in his success. We strongly believe that man and society should be future-oriented and eschew a blind belief in tradition at the cost of an expansive view of society and the world at large. At the same time, we also strongly believe that a scientific and integrated overview of human endeavor across space and time would benefit man enormously in all his intellectual pursuits and help him avoid the perils associated with repeating the mistakes of the past.

Intellectuals like Henry Ford have rubbished history ("I don't know whether Napoleon did or did not try to get across there and I don't care. I don't know much about history, and I wouldn't give a nickel for all the history in the world. It means nothing to me. History is more or less bunk. It's tradition. We don't want tradition. We want to live in the present and the only history that is worth a tinker's damn is the history we make today")¹⁵, and yet his dismissal of such a vital field can hardly be justified. If his views were true, Anthropology, Archeology and Paleontology would need to be tarred with a similar brush. Santayana ("Progress, far from consisting in change, depends on retentiveness. When change is absolute there remains no being to improve and no direction is set for possible improvement: and when experience is not retained, as among savages, infancy is perpetual. Those who cannot remember the past are condemned to repeat it")¹⁶ and others ("History does not repeat itself, but it rhymes": this is attributed to Mark Twain) ("History is an early warning system": This is attributed to the Norman Cousins) have tended to view history in a rather more positive light, and the role of DPPF techniques in fostering a healthy and a vibrant society and understanding the mistakes of the past can hardly be discounted. "Science must begin with myths, and the criticism of myths", said Karl Popper modern philosopher of science famously. Our approach with its emphasis on integration with multiple sciences will even form the basis for logical and rational thinking and prove to be an antidote to dogmas, superstitions and blind faith. This is extremely important given the central role that history has come to occupy in human consciousness. As James Baldwin put it very succinctly, "People are trapped in History, and history is trapped in them."^{17 18} It would therefore be naïve to discount the importance science plays in people's lives.

¹³ The concept of pre-history and the invention of the terms prehistoric and prehistorian: THE SCANDINAVIAN ORIGIN, 1833-1850. Peter Rowley-Conwy Department of Archaeology University of Durham

¹⁴ The invention of words for the idea of pre-history, Christopher Chippindale, Proceedings of the Pre-historic society, volume 54, 1988, pp 303-314

¹⁵ Interview in *Chicago Tribune* (25 May 1916)

¹⁶ Santayana, George: *The Life of Reason* 1905-06

¹⁷ James Baldwin, *Notes of a native son* (Boston, Beacon Press, 1955)

¹⁸ Norman Cousins Saturday review, April 15th 1978

According to Frances D. Burton and Richard Wrangham, the discovery of fire a few million years ago was an important trigger in human evolution because it paved the way for other complex discoveries. It also had a far more profound effect than most would imagine not only because it provided warmth, chased away the darkness, dispelled the fear of wild animals and the forces of nature, but also because it led to other discoveries such as cooking, which may have triggered the need for agriculture much later, and further complexity in society. Fire also had some use in early tool-making, and was later used to bake clay. According to some researchers, fire may have been used by the Homo Erectus and Homo Ergaster as early as 1.5 million years ago, and perhaps by other Hominins even earlier. According to J A J Gowlett and others, the idea of fire may have come from observations of wildfires and even volcanic events and its control achieved over a span of time only through repeated trial and error. Humans may have produced fire by burning wood or animal dung. Microscopic analysis of material unearthed from Wonderwerk cave of South Africa, indicated the controlled use of fire one million years ago. Other evidence for the early use of fire has emerged from East and North-East Africa. However, evidence suggests that the use of fire may have become widespread only 300,000 years ago.^{19 20 21}

The earliest stone tools were discovered way back in 1679 in Gray's Inn Lane, London, and many others were subsequently unearthed in different parts of the world, particularly close to river banks. Some early stone tools were also found in the Paleanthropological site of Olduvai Gorge site in Tanzania, and these are dated to 1.85 million years ago. Acheulean tools first appeared 1.7 million years ago in France in the Early Acheulean stage, and this technology comprised handaxes and cleavers gradually increasing in complexity and refinement in the Late Acheulean stage. Mousterian tool technologies are associated with Neanderthal man, and this technology pertains to the Middle Palaeolithic stage. This stage marked the emergence of flake-based tools, where flakes were struck off from a core in a systematic fashion. Acheulean tools were also found in Africa and Asia, and some Paleontologists think these were a successor of Olduvai tools. Mousterian tools are usually associated with Centripetal flaking. Another technique is known as the Levalloisian technique dating from 400,000 years ago in France and Morocco. This technique involved knapping or making flint and other types of stones into arrowheads and edged stone tools, usually through the use of anvils. Clactonian tools which comprised of flake tools, flints and chopper tools were thought to have been produced by Homo Hiedelbergensis, and may have been contemporary to Acheulean tools. Other tool cultures include the Ahrensburgian tool culture and Hamburgian tool culture of

Europe. These consist of harpoons, tanged points and wooden arrow shafts and are sometimes referred to as epi-Palaeolithic tools, as these occur towards the end of the Palaeolithic age. This period also saw a sophistication and diversification of microliths which were small and sharp tools with specialized uses. Examples of such tools were found in England, France, Scandinavia and India. Even though early tools are associated with stone, they were often made of bone and wood.

Examples of Lower Paleolithic culture in South Asia include the Soan Valley Culture of Pakistan, sites from the Kortallayar valley of Tamilnadu, sites from the Kurnool and Cudappah basins of Andhra Pradesh, Kaladgi and Bhima basins of Karnataka, Chota Nagpur region of Bihar and Jharkhand, hill-tracts of Uttar Pradesh, Narmada and Son valleys of Madhya Pradesh, the Siwalik zones of Punjab and Nepal, the Konkan coast etc. The Middle Paleolithic Culture in India is characterized by flake tool industries. Such sites are found in Maharashtra, the Godavari valley, Budh Pushkar Lake, Didwana and the Luni Valley. Examples of Upper Paleolithic sites in India include Palmau, Singbhum, Garo Hills, Banda, Mirzapur, Mandla etc.

Tool making also gradually led to a better control over wild animals, natural elements, an increasing diversity in diet and specialization of labour, and as such corresponded to an increasing complexity and sophistication in society. This also partly contributed to early primitive clothing, a diversification of habitats and even better dwellings. Harpoons were developed and used to catch fish. Some Anthropologists even think tools contributed to barter because they came to be associated with some degree of specialization.^{22 23}

The earliest rafts and boats may have been used one hundred thousand years ago, and this may have constituted the earliest form of transport, long before the invention of the wheel, the bullock cart and the chariot. These may have been made of hollow barks or reeds. It is now believed that boats were developed independently in different parts of the world, including far-away Australia, and were used to travel over rivers, streams and small bodies of water. Some Anthropologists think that boats played a role in early human migrations, but this is extremely unlikely from our perspective.

Agriculture may have begun independently in different parts of the world, and different types of crops may have been cultivated. This may have led to a transformation from hunter-gatherer societies to a more settled way of life. Many scholars believe that Western Asia, China and South Asia were early centres from which expansion was triggered to other parts of the world. However, grains were probably collected and eaten much earlier, from perhaps as early as 20,000 BC, and were cultivated from around 10000 BC. Some fruits and vegetables

¹⁹ Fire: The spark that ignited human evolution Frances D. Burton University of New Mexico Press 2009

²⁰ Catching fire: How cooking made us human Richard Wrangham Profile Books, 2009

²¹ A History of Greek Fire and Gunpowder By J. R. Partington, 1960

²² Welsh, Jennifer (2012-02-29). "Tools May Have Been First Money"

²³ Ian Tattersall, Masters of the Planet, the search for our human origins, 2012, Palgrave Macmillan

began to be grown from around 5000 BC, followed by specialized crops such as cotton. Irrigation may first begun in Egypt from where it may have spread to Mesopotamia and the Indus Valley.

Even though it is widely believed that domestication of animals began around 10000 BC, Robert K. Wayne believes that dogs may have been first domesticated in the Middle Paleolithic around 100,000 BP, perhaps even earlier. Sheep, goats, cattle and pigs may have been domesticated starting from around 8000 BC, and the domestication of animals played a role in food-gathering and animals were also used for dairy products and meat besides providing other non-utilitarian uses. Other sources place the domestication of animals somewhat earlier than this.

Pottery is another early human invention, at the earliest pottery dates to around 15000 BC. Pottery had many uses, including storage and cooking. Early pottery mainly comprises clay-based pottery, but in later dates includes the use of ceramic as well. Early pottery was fired in pits and kilns and was also hand-shaped. The invention of the Potter's wheel in Mesopotamia around 5000 BC revolutionized pottery production. Eventually, pottery began to be glazed for a vastly superior appearance. Later, pottery became more ornate, often incorporating art forms, and often became more representative of a specific culture. The use of porcelain did not begin until a few thousand years ago, and became widespread only after the Christian era.²⁴

The Neolithic Age saw the emergence of Agriculture around 10,000 BC. Weaving of textiles began in the Neolithic Age, apparently after the domestication of sheep. Both cotton and wool may have been used in textile production, and these not only protected man from the environment, but also were an important constituent of culture. Production of basketry, mats and nets may also have begun in the Neolithic period, if not earlier.

Housing also greatly improved in the Neolithic Age, and the dwellings of this period were vastly superior to the dwellings of the Mesolithic period in terms of strength, complexity and durability. During this period, the first villages also began to appear and villages of this period typically had a thousand inhabitants each. The earliest well-known example of a Neolithic settlement in India is Mehrgarh, now in Baluchistan.

Early communication involved the use of symbols, which may have evolved from cave paintings and other forms of art and early art representations were noted in different parts of the world during the Upper Paleolithic period, including Bhimbetka in Madhya Pradesh around 30000 BC, and Ketavaram in Kurnool in Andhra Pradesh, both in India. Signs became increasingly complex and standardized over a large region and in due course, they also became more abstract. Stone Age writing in sometimes attributed to Edakkal caves in

Kerala. Pairing and sign complexity further increased around 5000 BC to provide enhanced meanings and representations, as these became logographic writing systems, but these were still essentially pictograms wholly unrelated to the spoken word. These further morphed into fully-developed logosyllabic writing systems with sound capture having been accomplished through acrophony and the rebus principle. Logosyllabic writing systems are associated with full-blown civilizations and represent true writing and there therefore a boundary between proto-history and history. This is one of the disputes with regard to the Indus script, but we have shown that these were essentially true writing.^{25 26}

The invention of the wheel is another milestone in human history, and its invention of the wheel is believed to have occurred around 6000 BC in the Late Neolithic Age. This later came to play a major role in wheeled transport, and were also used in making pottery. The earliest bullock carts, it is believed were put to use in Mesopotamia around 3500 BC from where they quickly spread to Egypt and the Indus. Old theories placing the domestication of the horse in 1500 BC in Central Asia are now passé. Horse domestication still began in Central Asia (and not South Asia or elsewhere), though with the latest evidence, the date may need to be pushed back to 2500-3000 BC. The use of horses in carts was perhaps a much later invention and may have begun in Western Asia after 2200 BC, from where they spread to Egypt, and later the Ganges Valley.

The Chalcolithic or the Eneolithic age is characterized by the use of the metals, and this period is also known as the metal age. The first metal to be used was Copper, and tin was later added to Copper to make Bronze. The former is also known as the Copper Age, while the latter was known as the Bronze Age. Arsenic was also known during this age, though not Iron. The Bronze Age also coincided with the development of writing, and the emergence of the first civilizations. Chalcolithic Cultures in India included the Ahar Culture, the Kayatha Culture, the Malwa Culture, and the Jorwe Culture. The Iron Age in India is generally associated with the later Painted Grey Ware Culture of the Gangetic plains, even though some sources place the origin of Iron in India at an earlier date.

Metallurgical skills greatly improved in Old World Civilizations. This included Egypt, Mesopotamia (Sumerians,

²⁵ The reconfirmation and reinforcement of the Indus script thesis: A logical assessment and inquiry as to the elusive and enigmatic nature of this script Sujay Rao Mandavilli Published in the ICFAI Journal of History and Culture, January 2011

²⁶ Why the Indus Script WAS true writing and why a larger corpus of texts existed in the Indus Valley civilization: Simple proof addressed to mainstream researchers & archaeologists Published in the International Journal of Philosophy and Social Sciences (IJPSS), Vol II, No 2, 2012 Sujay Rao Mandavilli

²⁴ Kramer, Samuel Noah (1963). *The Sumerians: Their History, Culture, and Character*. Chicago, Illinois: University of Chicago Press.

Akkadians, Assyrians, Babylonians) and the Indus Valley. Precious metals and other precious stones were also in use. This period also saw an emergence of major urban centers besides elaborate architectures. Agriculture further diversified during this period, and major irrigation systems were developed. Trade networks encompassed the whole of the known Ancient world, besides lesser known cultures. The Harappans built planned cities and developed elaborate drainage systems in their cities. True writing also emerged in this period, as also did elaborate political structures and documented religious beliefs. People of Old World Civilizations also had some knowledge of mathematics, astronomy and medicine. The Mesopotamians used a calendar and a sexagesimal numeral system. Geometry was known to both the Mesopotamians and the Harappans. The Harappans had a very accurate weighing system.

During the 26th Dynasty of Egypt, there was an expansion of trade and increased contacts between Egypt and Greece. Many Greek scholars such as Thales and Pythagoras travelled to Egypt, and brought with them new skills and knowledge. The Greeks were also exposed to Mesopotamian ideas through the kingdom of Lydia. The Greeks however took science to altogether new heights, and developed the deductive approach which is still in use today. The Greeks also did not usually demarcate between scientific and non-scientific disciplines, and sometimes mixed science, philosophy and mysticism. The Greeks also speculated on the origin of the Universe, and Thales was one of the first scholars who proposed the idea of a world without resorting to supernatural explanations. Anaximander and Empedocles also contributed to early evolutionary thought. Ptolemy developed a geocentric model of the Universe that was in use for many centuries. Philolaus and Aristarchus were one of the first scholars to develop a heliocentric model, but their works were lost, and they were not taken seriously. Thales also is sometimes credited with discovering the solstice and the equinox. Aristotle was one of the first people to study logic and his work exerted great influence for many centuries in different parts of the world. The Greeks also contributed greatly to mathematical sciences besides Astronomy, Geography, cartography and time measurement techniques, and examples of Greek mathematicians were Pythagoras, Thales, Euclid, Nicomachus and Eudoxus: they made many important contributions to geometry as well, and Pythagoras was a polymath with many contributions to Astronomy as well. Archimedes contributed greatly to Physics and practical science. Hipparchus is credited with pioneering the field of Trigonometry. Socrates, Plato and Xenophon were important Greek philosophers, who also made an attempt to investigate the nature of truth. Anaxagoras and Democritus were other important Greek astronomers and Anaxagoras was the first to study eclipses in detail. Aristotle was a polymath and made contributions to Astronomy and Zoology. Theophrastus was one of the world's earliest Botanists. Eratosthenes was one of the earliest geographers, and made some of the world's earliest

maps. Hippocrates and Galen made stellar contributions to the study of medicine, by devising treatments for many ailments and devising new techniques. Herodotus was a traveler and made contributions to Historiography and what would later become Anthropology.^{27 28 29}

The Romans had begun the process of assimilating Greek science from the Second century BC, and modified it to suit their own requirements. Romans in general had great respect for Greek scholars and there was a marked continuity of tradition from the Greek period to the end of the Roman period and this was visible in most fields and branches of science. Egyptian works had also influenced the Romans, but to a smaller degree. Romans also excelled in the application of science and attempted to use scientific knowledge in the daily lives particularly for irrigation projects, construction etc. Examples of Roman scientists included Cato the Elder who was also a historian, Pliny the Elder, Aulus Cornelius Celsus, Varro, Vitruvius, Seneca, and Nigidius the Polymaths, Columella the Agriculturalist, and Lucretius and Cicero the Philosophers. In addition, Pomponius Mela was a geographer, Marcus Manilius was an Astrologer, Scribonius Largus a medical practitioner, while Frontinus specialized in military science. Later, in the fourth and the fifth centuries, Martianus Capella was a Mathematician and Astronomer, while Calcidius was a Cosmologist. Marcellus of Bordeaux was a medical practitioner during this period, as were Theodorus Priscianus, Caelius Aurelianus, and Vegetius. Roman contributions particularly stand out in the fields of Agriculture, Engineering, Road-building and Architecture, though their contributions to Mathematics, Medicine, Astronomy and Astrology are also notable. Although the Romans made great breakthroughs and were highly influential, some of their works lay forgotten in the aftermath of the collapse of the Roman Empire.

Post-Harappan India also saw great advances in Mathematics and Geometry. Early Indian mathematicians included Baudhayana who lived around 800 BC. Astronomy also developed during this period and the most notable early Indian Astronomical text is the Vedangya Jyotisa (after 1400 BC). Sushruta was an early Indian physician who lived around 600 BC. Panini was a great linguist and compiled the earliest extent Sanskrit grammar. In the fifth century AD, Aryabhatta was a great Indian mathematician and made many important contributions to Mathematics and Astronomy.

²⁷ The Presocratic Philosophers: A Critical History with a Selection of Texts, by G.S. Kirk and J.E. Raven

²⁸ "Chaldaean Astronomy of the Last Three Centuries B.C.," by George Sarton; *Journal of the American Oriental Society*, Vol. 75, No. 3 (Jul. - Sep., 1955).

²⁹ Geographical Knowledge in China, by Kenneth Ch'en and Matteo Ricci; *Journal of the American Oriental Society*, Vol. 59, No. 3 (Sep., 1939)

Science in Ancient China was incredibly advanced and developed largely independently uninfluenced by other advances elsewhere in the world. The Chinese recorded comet appearances and solar eclipses very early. Chinese medical systems were very advanced and included acupuncture and traditional Chinese herbal medicine. Other Chinese technological advances included gunpowder, counting machines, time-measuring apparatus, paper, compasses, printing, porcelain and alchemy.

Science in the Medieval Islamic world flourished between 800 AD and 1429 AD. This is sometimes referred to as the Islamic Golden Age of Science. This included advances in various fields of Mathematics such as Algebra, Geometry, Trigonometry and even Calculus. Impressive strides were also made in medicine during this period, and treatments for many diseases such as smallpox were developed. Major advances were made in the fields of Astronomy, geography, physics, ophthalmology, botany and zoology besides cartography. Alchemy was developed the Arab world, and this was the forerunner of Modern Chemistry. In addition, Ibn-al-Haytham made many contributions to scientific method, and is regarded by many as the world's first true scientist. Some advances were made in the fields of sociology, historiography, demography and economics as well. However, after the fourteenth century, Islamic science declined and faded into obscurity, and the baton was then passed on to Europe. The causes for the rise and decline of science in this region, as with other regions needs to be systematically probed, to identify generic causes, even though some work has already been done on this. One of the causes of the decline of the Islamic Golden period may have been the increase of religious dogma and an increase in the power of the Islamic orthodoxy.^{30 31 32}

The Middle Ages or Medieval Period is taken to be the period from the 5th to the 15th century in European history. The trigger for the start of the Middle Ages was the collapse of the Western Roman empire, while the Renaissance and the Age of discovery marked the end of the Middle Ages. The medieval period is further sub-classified into the Early, High, and Late Middle Ages.

The Byzantine Empire, which was the eastern offshoot of the Roman Empire, survived into the Early Middle ages and remained a major power with its capital as Constantinople till 1453. During the Byzantine Empire, much of ancient scientific knowledge was retained, and further developed. Much of

³⁰ Hillel Ofek, "Why the Arabic World Turned Away from Science," *The New Atlantis*, Number 30, Winter 2011, pp. 3-23.

³¹ George Saliba (1994), *A History of Arabic Astronomy: Planetary Theories During the Golden Age of Islam*, pp. 245, 250, 256–7. New York University Press,

³² Hassan, Ahmad Y (1996). "Factors Behind the Decline of Islamic Science After the Sixteenth Century". In Sharifah Shifa Al-Attas. *Islam and the Challenge of Modernity, Proceedings of the Inaugural Symposium on Islam and the Challenge of Modernity: Historical and Contemporary Contexts*, Kuala Lumpur, August 1–5, 1994. International Institute of Islamic Thought and Civilization (ISTAC). pp. 351–399

Europe came under Christianity in the early Middle Ages, as its de-paganization continued. In Western Europe, the Franks established the Carolingian Empire in the late Eighth and the early Ninth Centuries with its capital at Aix-la-Chapelle or Aachen, and this empire reached its zenith during the time of Charlemagne. After 1000 AD, in the High Middle ages, there was a minor upsurge in technological and agricultural innovations in Europe, including developments in theology and philosophy. Aristotelean logic was introduced into theology, The Crusades, first launched in 1095 AD, were military attempts by the Christians to take back control of the Holy Land from Muslims. This period was also marked by scholasticism, a philosophy that emphasized blending faith with reason, and the earliest cathedral schools and universities were founded during this period. There was also a study of law during this period, both secular law and ecclesiastical law. The earliest windmills and mechanical clocks were also developed during this period as were also technologies to manufacture gunpowder. New technologies in Agriculture were also adopted during this period.

The Late Middle Ages was marked by famine, plague, and war, which lead to many deaths; between 1347 and 1350, the Black Death killed nearly twenty million people, according to one Estimate. One of the important intellectuals of this period was William of Ockham who is known for Occam's Razor. Literary output in Vernacular languages increased during this era, and the earliest literature in the English Language dates to this period barring Beowulf.

The Middle Ages were followed by the renaissance which lasted from the 14th Century to the 17th Century. The term 'renaissance' which meant rebirth in French, however, was first used only in the 1830's. The renaissance began in Italy, particularly around Florence, and spread to the rest of Europe. Greek philosophy was resurrected and adapted for the new age: this resulted in the philosophy of Humanism which emphasized human thought and action. Literature flourished during this period, as also did music, sculpture and the arts. There was also an emphasis on education, intellectualism, exploration and learning. In science, observation, and inductive reasoning was encouraged. Other renaissances were the German Renaissance, which saw advances in architecture, arts, sciences, printing and particularly the Protestant reformation. The French renaissance was associated with arts, literature and architecture besides science and exploration. The English renaissance saw the emergence of influential writers such as William Shakespeare and Christopher Marlowe, and this age was succeeded by the Industrial Revolution in England. This age was also associated with exploration and the discovery of the New World. Christopher Columbus, Vasco da Gama and Magellan were some of the great explorers of this era.

Nicholas Copernicus was the first after Aristarchus to promote a Heliocentric model of the Universe. Science also reached new heights of glory starting from the 15th Century. Tycho Brahe was a Danish Astronomer and made accurate planetary

observations. According to him, the moon orbited the Earth and the planets orbited the sun. However, he wrongly believed that the Sun orbited the Earth instead of the other way around. Johannes Kepler developed the three laws of planetary motion which led to Isaac Newton's theory of Universal Gravitation. Galileo Galelei invented the telescope based on earlier work by Hans Lippershey and promoted the doctrine of Heliocentrism, for which he was branded as a heretic by the Church and put under house arrest. This was a relatively mild punishment by the standards of the day: Giordano Bruno had been burnt at the stake in the year 1600, after having been tried for heresy and blasphemy. He also taught pantheism and reincarnation among other things, and his ideas did not go down well with the church. Great progress was made in the other sciences too. Valerius Cordus produced ether from Sulphuric Acid and Alcohol. Jan Baptiste Van Helmont discovered the Carbon dioxide gas. William Harvey of England discovered the process of blood circulation. One of the factors behind the renaissance was the invention of the printing press and the increasing spread of knowledge. Researchers such as Peter Abelard and Roger Bacon emphasized reason and warned against blind faith, and this in turn triggered an increase in knowledge.

The Colonial Period began in the Fifteenth Century when European countries began to establish colonies in Asia and Africa. Although there were some benefits associated with colonialism such as the spread of new technologies around the world, the effects of colonialism were largely negative, and led to economic stagnation and oppression in colonies. The Colonial age ended when colonies won their economic and political freedom after the end of the Second World War. India was one of the largest colonies, and was often referred to as the 'Jewel of the British Empire'.

The Enlightenment, which is known as 'The Age of the Enlightenment' or 'The Age of Reason' lasted for most of the Eighteenth Century. The Enlightenment began with the Scientific Revolution which was spearheaded through the works of John Locke, Rene Descartes, and Thomas Hobbes. Enlightenment ideals spread through the works of Adam Smith, John Miller, Adam Ferguson, Immanuel Kant, Voltaire and Jean-Jacques Rousseau. One of the most important works of this era was the encyclopedia which was published between 1751 and 1772 by Denis Diderot in thirty-five volumes. Rene Descartes was an important philosopher whose doctrine of rationalism greatly influenced the course of the Enlightenment. Montesquieu's 'Spirit of the Laws' Rousseau's 'Discourse on Inequality' were important works of this period, as was also Adam Smith's 'The wealth of nations'. The Enlightenment also led to the separation of the Church and the state, an idea that was promoted by John Locke. The Enlightenment also took root in other countries such as England, Italy, Russia and Poland, but to a lesser extent. One of the causes of the Enlightenment was the Thirty years war which led to introspection and revolt against tradition. Scientific progress and new inventions enabled people to see the world in a new perspective and critically examine their

own beliefs. Another factor for the Enlightenment was the falling power of the Church, and the birth of skepticism and reason.

The Industrial Revolution referred to the adoption of new technologies and manufacturing processes from 1760 to 1840, and involved replacing hand production methods by machines using machine tools and the factory system. The Industrial Revolution began in Great Britain, and this made it an economic superpower with vested interests and colonies throughout the world. The industrial revolution influenced all aspects of daily life, and led to a quantum increase in standard of living. The First Industrial Revolution culminated in the use of the Steam Locomotive, Steamships, the Telegraph, besides other machinery. The Second Industrial Revolution began in 1870, and this led to dissemination of existing technologies besides development of new technologies such as electricity and telephones. These technologies led to a quantum increase in standard of living for many people, but hid ugly truths such as disparities of wealth, and wealth was often supported by slavery and colonialism.

The French Revolution was a period of great turmoil and unrest which began from 1789 and lasted till 1799. This revolution was largely triggered by economic conditions and the government's taxation policy. It was also triggered by the domination of the clergy and the aristocracy in many spheres of public life. This revolution was largely led by Napoleon Bonaparte who later became ruler of France. This led to the overthrow of the French monarchy and a new dictatorship under Napoleon Bonaparte. It also led to a decline of monarchies in other parts of the world, replacing them with republics or liberal democracies. More than a century later, similar conditions would lead to the Russian revolution, and this would lead to the dismantling of the Tsarist regime, and the institution of the USSR.

The rise of technology and consumerism marked the Twentieth century: this included new technologies such as the automobile, the radio, the aeroplane and the television. Two world wars, an economic depression and a cold war were also defining features of this century. The century ended with the collapse of the USSR and the great internet boom which triggered globalization. The axis of economic and political power has gradually shifted away from the West to other parts of the world, and most developing nations have tried to showcase their technical, military and economic might. The renewable energy revolution and the 'Globalization of Science' are bound to transform the world further.

Anthropological Historiography can, if properly applied, make a major difference in the Twenty-first century and beyond by analyzing undercurrents and common threads across cultures and civilizations, and can help trigger intellectual and creative revolutions where such revolutions are long overdue. Undercurrents and common threads and causes can be culled from an analysis of cultures using an inductive approach; while the details may differ in each instances, there would be

many common principles that can be applied for the study of other cultures as well: The Indian psyche, for example, is largely a product of Indian culture which itself is a medley of inter-related beliefs and ideas. Indian culture despite its relative openness and receptivity to new influences and ideas, is relatively problematic given the all-pervasiveness of Indian religion, myths and legends in most facets of daily life. These are undoubtedly core to the Indian identity, and while there are regional and cultural variants, there is an underlying current of unity among the myriad cultures of the sub-continent, due to the cultural space they have shared for aeons; These have also been sufficiently ingrained in the Hindu religion to impinge upon intellectual and other quotidian endeavours, and worldviews and mindset as well. The Author was alarmed to note that even the educated elite (some of them Ph.D's) believed in Rig Vedic flying saucers and early ancient aircraft, and were willing to defend such theories to the hilt. Any criticism was brushed aside as "Anti-India" and "Anti-Hindu". This was not a random observation; such beliefs persist widely in India even today across all echelons. This would provide good food for thought (and the necessary ammunition) for the Anthropological Historian and make his endeavors more meaningful and purposeful.

Like Islam, whose teachings have greatly influenced the thoughts of its followers for ages, Hinduism has come to exert a major influence on its practitioners and other non-practitioners residing in the region. Even Indian intellectuals (or at the very best, an infinitesimally small percentage among them) have not been able to, for the most part, transcend the realms of Indian cultural constraints to an adequate degree and have not been sufficiently neutralized to judge issues from a global or a pan-cultural perspective. Even among the intellectual class and the elites, an unwavering and an unflinching commitment to tradition and ritualism exists (And, this is often juxtaposed with thoroughly modern thoughts and ideals: This is not necessarily a happy marriage, but an uneasy co-existence). What is unique in India is the wide difference that prevails across communities, religion, caste and linguistic groups along with an over-arching and an underlying sense of unity. Thus, a larger than ideal or intellectually stimulating or provoking level of cognitive dissonance persists: uncomfortable questions are summarily or perfunctorily brushed aside or under the carpet; this should have theoretically and ideally triggered a revolution of sorts, but there are intricacies and nuances here such as the omnipotence of religion and the relative complexity of issues that make any over-simplification an anathema to success; furthermore, solutions to complex issues that can potentially move us to a higher state of understanding are nowhere in sight.

Of course, culture and tradition propagate vertically (Refer our Vertical-Horizontal Model), though their influence may be weakening. Horizontal influences exist in multitudinous domains and spheres of life, either consciously enforced and adopted or otherwise. Wherever tradition is strong, exerts a larger-than-ideal influence and otherwise presents flawed or

incomplete perspectives, horizontal influences need to be commensurately stronger: they need to be publicly and widely known and made available, and not remain obscure or arcane. The role that an Anthropological Historian can play here is immense and unique. No one else is poised to don such a hat and play such a crucial and an all-important role in the context of a long-term amelioration or transformation of society. This can span perspectives on topics and subjects as wide apart and far removed as the origin on language (To counter 'Divine origin theories', for example), the origin of religion, the origin of myths and legends or even the origin of tradition. This would encompass different facets and approaches of Cultural Anthropology such as Historical Particularism, and would yet warrant holistic, water-tight and culture-neutral approaches with a latitude for locale and context specific issues and concerns.

Any prospects for the introduction of Anthropological Historiography in any guise or form, have thus far been marred or put paid to by the presence of unhealthy vested interests. Marxists despite their over-sized presence have been a feeble force to reckon with intellectually given their adherence to dogma. Marxism may have been a quasi-political ideology at best, and a badly outdated one, throwing up a serious of counter-reactions ad infinitum and as some would argue, possessing even an intellectual-numbing characteristic. To this, religious inspired constructs can be no beneficial solution, and this will prove to be inimical to the interests of society.

In this connection, a recent article on a speech by eminent historian Ramachandra Guha states, "Eminent historian Ramachandra Guha expressed concern over historians with right-wing ideological affiliations playing a decisive role in chronicling our past. Speaking at an interactive session at the Sahitya Sambhrama here on Friday, Mr Guha said that Marxist Historians who ruled the academic institutions earlier, may have been "imperfect, flawed, limited and narrow-minded", but replacing them with RSS ideologues would result not only in bad history, but also in street violence."³³

According to Wafa Sultan, Ayaan Hirsi Ali and others, Islam is a single core creed based on the Qu'ran, and the Hadith, despite sectarian differences. This would therefore mark it as a completely different religion from Hinduism. In spite of this, Islam presents its own unique sets of problems, and molds and influences that thought worlds of its followers to varying degrees. This may present its own unique case for remediation, naturally calling for strategies that are distinct, yet at the same time similar to those followed in other instances. To begin with Islam is Monotheistic, and shuns idolatry completely. It also seeks to govern its follower's way of life, but may not represent a way of life the same way as Hinduism does. It sought to replace Pre-Islamic sects and

³³ Allowing RSS ideologues to write history can lead to street violence: Guha The Hindu, Dharwad, January 20, 2018

creeds completely and yet may have borrowed some aspects of religion from them. Islam also prescribes a rigid code of conduct, with death for apostasy, hanging for homosexuality, and stoning for adultery. According to Ayaan Hirsi Ali, Muslims live in cognitive dissonance throughout their lives, like followers of any other religion, trapped between faith and real-world experience. Per our theories, this alone represents a ticking time bomb that is bound to fuse in the long-term. According to Ayaan Hirsi Ali, seventy-five percent of people in Pakistan believed that the death penalty was necessary for those leaving Islam. Eighty-five percent of individuals in Pakistan even believed that converting others to Islam was a moral and a religious duty. Eighty-eight percent even believed that Western entertainment was immoral. To what extent can our proposals remediate this situation? They can, we will argue, make a whole world of a difference at least in the long-term. Wafa Sultan has even argued that Muslims had to be “carefully taught” and re-oriented given the fact that most were religiously inspired or driven and thought it was acceptable for people to be compartmentalized or strait-jacketed based on their faith. While formal studies may be lacking, there are many examples that can be cited that would seem to indicate that our approach would indeed work. The Author has learnt about the son of an Islamic cleric became a skeptic and a rationalist after reading a book on dinosaurs. This induced in him cognitive dissonance that led him to question the fundamentals of his faith.

Over the past couple of decades, beginning with the early 1990’s, astronomers have discovered over three thousand five hundred planets orbiting neighbouring stars other than our sun. Our Milky Way galaxy alone, with over 400 billion planets (there are millions of galaxies just like the Milky Way) may contain between four hundred billion to two trillion planets, and using a very conservative application of Drake’s equation, several tens of thousands of intelligent civilizations, perhaps even more. This figure has to be multiplied by the number of galaxies to arrive at the number of intelligent civilizations in the universe. These theories are far removed from Biblical and Hindu theories of creationism, and as would be very obvious, are at complete odds with one another. It is also extremely obvious that older theories were reflections of man’s limited knowledge when such theories were developed or formulated. Without delving into controversial aspects such as the existence of ‘God’, a term which perhaps has not even been adequately defined, thereby rendering any debate hollow at this juncture, the historian can make an attempt to integrate his science with allied sciences, starting from the point scholars of other sciences have ended, to present a cogent and a coherent picture to the uneducated layman. While most historians would consider such an effort to be wholly outside their gamut, this would unlikely to be an exercise in futility, and the rewards in terms of raising the general levels of knowledge and awareness in the common man and battling superstition and blind faith may be very great indeed. This is likely to have a major impact on the well-being of societies as a whole, and religious dogma and superstition may eventually be discarded

and eliminated. Since some of these endeavours would be outside the realm of historiography or its allied disciplines, the Anthropological Historiographer can at least ensure, through a collaborative approach with other scholars, that the necessary changes are introduced to other fields of study as well. Who can understand the wide range of issues involved in a remediation more thoroughly than an Anthropologist or an Anthropological historian?

Yet many religions have eluded reform, and other attempts have barely scratched the surface. In October 1517, Martin Luther decried the Church’s practice of selling indulgences for salvation and likewise exposed other corrupt practices of the church. His efforts which were targeted at the city-dwellers and the rich and used print as a medium, led to the Protestant reformation, and marked a major turning point in human history. Several reformist movements have sprung up within Hinduism, and these have included the Bramho Samaj, the Arya Samaj and others, and many movements have sought to rid Hinduism of its undesirable elements such as the Caste system, Sati, Child marriage and Sati. The Vedic faith declined after the birth of Buddhism owing to the exploitative and the corrupt practices of the Brahminical orthodoxy, but made a major comeback in succeeding centuries. Thus, societal forces have indeed brought about change, but these may have been either tardy or erratic. Hindu and Islamic societies have not been modernized sufficiently and have not yet seen any scientific enlightenment in recent times. This may be one reason why scientific output in these societies is relatively low. In a majority of cases, modernity has not effaced aspects of tradition that were not compatible with it.

Thus, Anthropological Historiography along with the universalization of education and the introduction of suitable pedagogical techniques and methods, holds great promise for the emancipation of society, by molding religion and culture to suit the requirements of evolving society as a part of an overarching framework of the sociology of science. However, time alone can bear testimony to its efficacy in this regard.³⁴
³⁵ ³⁶

Anthony F C Wallace defined religion as “beliefs and rituals concerned with supernatural beings, powers and forces.”³⁷The term religion itself may have originated from the Latin term ‘religare’ which means to bind. There have been many theories on the origin of religion. One of the earliest modern perspectives on the origin of religion was the evolutionary perspective. According to EB Tylor, Animism was the most primitive form of religion and referred to a belief in a soul or a life force in all inanimate objects as well as human beings. According to the idea of Animatism proposed RR Marett, humans believed in impersonal forces in nature which created

³⁴ A God who hates Wafa Sultan Saint Martin’s Griffin, New York, 2009

³⁵ Heretic: Why Islam needs a reformation now Ayaan Hirsi Ali, Harper Collins, 2015

³⁶ Cultural Anthropology, Barbara Miller, PHI, Sixth Edition 2011

³⁷ Religion: An Anthropological view, Anthony F C Wallace, 1966

awe, wonder and respect. According to Max Muller, Gods arose primarily from natural phenomena such as thunder, trees, animals, forests etc, and this concept was known as naturism. According to Emile Durkheim and Claude Levi Strauss, Totemism was the earliest form of religion, and according to this type of religion, humans, clans and groups evolved from, or were associated with certain plants and animals which were endowed with a divine status. James Frazer believed that human thought began in magic, evolving to religion and then to science. EB Tylor also thought Monotheism was the pinnacle of evolution in religion. Some Anthropologists also believe that religion began with ancestor worship or offering obsequies or funerary rites to the dead, and deities were even created to honour the dead.

Another school of thought is the functional school of thought. According to functionalists, religion comprised of rules, taboos, sacred spaces, secular spaces, auspicious times, different types of rituals and ceremonies such as confirmatory rituals, transformatory rituals, rituals of liminality and rites de passage. Rituals can be religious, magical, calendrical, sacred, secular, private, public, sacrificial or totemic. Functionalists also try to identify the roles played by various aspects of religion in the larger cultural context. This school seeks to determine the roles played by various religious and non-religious institutions in securing social harmony, and the roles played by religious specialists like priests and shamans as well. Many Anthropologists subscribed to a functionalist study of religion. These were Bronislaw Malinowski, Evans-Pritchard, Radcliffe Brown, M N Srinivas and others. Arnold van Gennep, Max Gluckman and Victor Turner also contributed to a study of rituals forming a part of religion and religious practices.

According to the Psychological approach towards religion, various psychological forces drove the evolution of religion and were responsible for cementing its role in society. According to the psychoanalysis of Sigmund Freud, who also developed the concept of the Oedipus complex and the psychological conflict between father and son, religious rituals and beliefs were homologous with neurotic symptoms and arose from subconscious psychological conflicts within social groups. Freud also saw religion mostly in a negative light, believing fear and lack of self-confidence were responsible for religious beliefs. Similar approaches were also developed by Carl Jung, Abram Kardiner, Erikson and others, but these theorists tended to view religion more positively. Erich Fromm believed that religion gave people a framework of values, while Abraham Maslow believed it provided a transcendental understanding of the world.³⁸

The Structuralist approach towards religion was proposed by Claude Levi Strauss who rejected functionalist and evolutionary perspectives. He proposed a universal logical

pattern to the human mind, akin to grammar, and believed that this approach be used to study religion as well. This could also be used to analyze myths and legends. This school of thought was heavily influenced by the work of Ferdinand Saussure, the Sapir-Whorf hypothesis, and linguistic relativism.

The Marxist approach looked down upon religion and saw it as wholly unnecessary and undesirable. According to Marx, religion was the opium of the masses, the heart of a heartless world and the sigh of an oppressed creature. According to him, religion reflected false consciousness of people that diverted attention from the miseries of their lives, and had to be got rid of, if social progress were to be made. The Marxist approach towards religion was further extended by Maurice Godelier, Maurice Bloch and others in the study of various societies. Marxists also believe that religion was created by dominant groups to control and dominate their followers, and also lull them into a sense of complacency. Thus, religion was historical baggage that had to be eliminated.

The symbolic approach to religion was first developed by Evans-Pritchard and was extended by the works of Victor Turner, Mary Douglas and Clifford Geertz. Of these, the contributions of Geertz are most noteworthy. According to this approach, symbols are very powerful, and convey meanings to their followers. They induce moods in them, and may inspire them to commit certain acts. Symbols are further arranged into patterns and these patterns convey further and additional meanings.

While there has been no dearth of Anthropological theories on religion, the field may have been marred by over-theorization, conjectures and over-generalizations based on context-specific studies. This field was not just tainted by Eurocentrism, it was also marred by the focus on primitive and tribal religions as opposed to more influential ones. What may also perhaps be needed is a thorough understanding of why people become religious, the role that religion plays in people's lives, and how undesirable aspects of religion can be suppressed and marginalized. We may also need to understand how religion can be channelized to the common human good, if it cannot be eliminated, or at least the problems associated with religions can be overcome. We may also need to correlate thought worlds, world views and scientific endeavors with different religious predispositions such as anti-modernism, fundamentalism and agnosticism to identify remediation channels and paths and chalk out courses of action. These may be some of the crucial tasks of a Twenty-first Century Anthropologist (and an Anthropological Historian), but cannot be accomplished through the looking-glass of a Euro-centrist or an Indo-centrist, or even a person who is insensitive to religious impulses. It may warrant a globalized approach, and what we call the 'Globalization of Science'. Needless to say, this must be thoroughly strategized, and executed in the true spirit of this approach, if any success is to be achieved, and suitable changes in society are to be instituted.

³⁸ Anthropology, Twelfth edition, Carol R Ember, Melvin Ember, Peter N. Peregrine Pearson

History has indeed already been integrated with all the fields of study that we believe should characterize the field of Anthropological Historiography to some degree and measure. Yet the relationships have been oblique and seldom substantial. There was a general drift from the history of great men and political history to social and economic history in the Twentieth century, largely driven by Marxist intellectuals and historians. There is however no palpable or tangible shift towards Anthropological Historiography the way we see it with a complete canvas of man's activities across time and space –leave alone one designed with the objective of performing a Deep Historical Analysis (DHA), identifying common causes, performing a DPPF Analysis, and identifying paths to cultural remediation. History has this far, not been seen as a tool for cultural emancipation, intellectual stimulation or the promotion of a scientific temper which may be defined as the fullest use of scientific method in everyday life and all aspects of human endeavour such as acquiring knowledge and understanding daily problems.³⁹

Some progress has however been made in the general direction of Anthropological Historiography. The Arab historian Ibn Khaldun is the father of universal history which chronicles the history of the entire humankind. Likewise, Immanuel Kant spoke of a history which explained progress in human history from a cosmopolitan and international point of view. There have been other perspectives of history too. Hegel, Karl Marx, August Comte, Herbert Spencer, Croce and Arnold Toynbee have greatly contributed to the philosophy of history and most have argued that history should cover most aspects of human culture. Other historians who believed in an integrated approach to human history were Wilhelm, Oncken, Walter Goetz, Gustave, Glotz, Louis Halphen and Henry Berr.

Moreover, many thinkers have laid emphasis on an integration between History and other sciences, and have viewed history as an emancipating force in some form. As Collingwood remarks, "History's teachings are useful for human life simply because the rhythms of its changes are likely to repeat themselves, similar antecedents leading to similar consequences; the history of notable events is worth remembering in order to serve as a basis for prognostic judgments, not demonstrable, but probable, laying down not what will happen, but is likely to happen, indicating the points of danger in the rhythms going on." Likewise, Sir Thomas Munro states, "A few pages of history give more insight into the human mind and in a more agreeable manner than all the metaphysical volumes ever published." Lecky likewise states, "He who has learnt to understand the true character and tendency of many succeeding years, is not likely to go very far wrong in estimating his own".

History has also been related to sociology. The intersection between history and sociology fructified due to the efforts of Emile Durkheim who favoured precise comparative methods for arriving at historical facts. Professor E H Carr states, "Sociology, if it is to become a fruitful field of study, must, like history, concern itself with the relation between the unique and the general, but it may also become dynamic – A study not of society at peace, but of social change and development. For the rest, I would like to say that the more sociological history becomes, the better it is for both. Let the frontier between them be kept wide open for a two-way traffic."

Professor H E Barnes also writes about the importance of the knowledge of sociology for the historian, "Embracing as it does, both the causes and results of group life. It is the basic social science and one which can hope to give a generalized view of the social process and of social causation as a whole. Since history is in small part devoted to the behaviour of groups in economic, political, military, aesthetic and religious situations, it should be appreciated that the accuracy and insight of the historian would be mutually enhanced by a knowledge of the elementary principles of sociology."^{40 41 42}

Like Historiography, Anthropology also deals with the study of man, but the scope of Anthropology is wider, and deals with all aspects of man across time and space. It is also related to natural sciences, but the interfaces and boundaries between them are poorly and only loosely defined. Present interfaces between Anthropology and Historiography may not be designed for the satisfaction of our objectives of promotion of a scientific temper and socio-cultural emancipation. History is also related to psychology, and both Barnes and Collingwood have spoken of the interface between History and psychology. However, Thucydides, an Athenian Historian may have been the father of Psychological Historiography because he studied the role of human nature in influencing human events. We believe that an interface between history and psychology serves an altogether different purpose. Human history must be presented to the public in such a way that it will work against popular perceptions and cause paradigm shifts in thinking. For this, a knowledge of psychology may be important because it will enable an Anthropological historian to look at issues from the point of view of the common man who may lack specialized knowledge in any of the fields listed above, but will still stand to benefit from Anthropological Historiography.

There have been many different approaches to history; Nationalist historians insist that history should be written to boost national pride or otherwise aiding in national

⁴⁰ Concepts and methods of Historiography: Dr K L: Khurana Lakshmi Narain Agarwal Agra 2006

⁴¹ An introduction to Historiography Bikash Bhattacharya Dominant Publishers and distributors Pvt Ltd, New Delhi, 2011

⁴² History: Its Theory and Method B.Sheik Ali, Second Edition, Macmillan, 1981

³⁹ An overview of Science and technical education in India D. S Hooda Everyman's Science Vol LII No.1 (Indian Science Congress Association, Kolkata)

development or national integration. In this school of thought, objectivity or balance is not necessarily paramount, and some aspects can be emphasized over the others. Subaltern history tries to write history from the point of view of the downtrodden and the marginalized sections of society, or in some cases, the colonized. In India, subaltern history has been represented by R P Dutt, Sumit Sarkar, Ranjeet Guha, Shahid Amin, David Hardiman and Gyan Pandey. Another approach to Historiography is that of Marxists. Marxists have tried to look for economic reasons behind events and have also focused on class struggle resulting from the exploitation of the working class by the Capitalists. Karl Marx stressed the importance of material factors in studying history and gave a study of non-material aspects of history a short-rift. Imperialist approaches to history emphasized history as a tool for the expansion of imperialist power. This approach went into decline after 1950, and was replaced by nationalist and subaltern schools. In some parts of the world such as India, Marxist historiography was dominant from the 1950's, but in recent times has been challenged by nationalistic and quasi-religious constructs. In post-modernist approaches, secularism and objectivity have been emphasized. Proponents of this school were H G Wells, Ranke, Oswald Spengler, and Arnold Toynbee. The Annales School was developed by French historians in the early Twentieth century. This school emphasizes long-term evolution in the economy and civilization. Adherents to this school of thought were Fernand Braudel, George Duby etc.

IV. TWENTY-FIRST CENTURY HISTORIOGRAPHY

Historiography by Objectives or HBO was the new approach towards Historiography proposed by us in an earlier paper as a part of the proposed Twenty-first century school of Historiography. We had recommended that one of the key roles of a Twenty-first century historian would be to combat superstition, dogma and blind faith by promoting a scientific view of history. We proposed that stakeholders would be central to the process of history-writing and would play a major role in determining the direction of historiography along with scholar-defined objectives and pre-defined or standard objectives proposed as a part of the aforesaid approach. This, we believed could be accomplished by identifying stakeholders, the setting of objectives (which would include a set of standard or core objectives), identifying of stakeholder-driven objectives and a layered approach to study and presentation with different approaches for different target audiences. We also recommended a process to evaluate whether approaches followed objectives or not. We also recommended different techniques such as the DPPF (Dialogue between past, present and future techniques), DHA (Deep Historical Analysis), and the GOWEST approach or Goals, Opportunities, Extraneous factors, Threats, Strengths and Weaknesses approach. We had also identified the core

principles of Twenty-first century Historiography in another paper.^{43 44}

V. APPROACH FOR ANTHROPOLOGICAL HISTORIOGRAPHY

The approach for Anthropological Historiography that we present at this juncture is fairly simple and straightforward. However, given the complexity of the subject, and the promise that it holds, we believe that other scholars should formulate their own approaches, such that the objectives of the discipline are met. All the techniques proposed as a part of Twenty-first century Historiography would be applicable for Anthropological Historiography too, such as stakeholder-driven approaches, and a layered approach to study and presentation.

VI. OBJECTIVES OF ANTHROPOLOGICAL HISTORIOGRAPHY

The first step would be to define the core objectives of Anthropological Historiography. These objectives would comprise some objectives of Core Twenty-First Century Historiography and some other additional objectives for the satisfaction of the objectives of Anthropological Historiography. From our perspective, the complete list of core objectives of Anthropological Historiography is as follows. However, additional objectives may be defined by any scholar, and some of them may apply in specific circumstances, while some others can be added to the basic list:

1. To look for ways and means to build up a scientific temper through the medium of Anthropological Historiography by creating a popular awareness on various Anthropological topics especially those that can accomplish a change in individual and societal orientations.
2. To collaborate with psychologists and sociologists to look for ways and means to build up a scientific temper among students (within the realms of Historiography and Anthropological Historiography). This can also be accomplished by creation of suitably designed 'Eureka Points' as discussed elsewhere in the paper, and indeed this may constitute an art by itself.

⁴³ Historiography by Objectives: A new approach for the study of history within the framework of the proposed Twenty-First Century School of Historiography, Sujay Rao Mandavilli, ELK Asia Pacific Journal of Social Sciences Vol 1, Issue 2 (2015)

⁴⁴ Enunciating the Core principles of Twenty-first Century Historiography: Some additional extrapolations and inferences from our studies and observations on Historiography, Sujay Rao Mandavilli, ELK Asia Pacific Journal of Social Science (ISSN: 2394-9392) in Volume 2, Issue 4 July to September 2016

3. To collaborate with educationalists to understand how suitable changes can be incorporated in the school curricula for the furtherance and fulfilment of the objectives of Anthropological historiography both in history teaching and other subjects.
4. To focus on the scientific and unbiased history of religion and use it to quell superstition, dogma and fanaticism (and not brush it aside as a bagatelle)
5. To focus on the scientific and unbiased history of myths, legends and folklore as applicable and use it to quell superstition, dogma and fanaticism (and not brush it aside as a bagatelle)
6. To play a role in developing Anthropological models for understanding religion by providing the necessary historical inputs. To work with Anthropologists, based on past and historical data, the anticipated role of religion in society, and evolve theories that will help predict and model future scenarios as opposed to current theories on religion such structural, functional and psychological theories.
7. To work with sociologists and Anthropologists to understand the historical basis of cultural dispositions and propose remediation strategies accordingly.
8. To work otherwise with Anthropologists and Ethnographers towards a better understanding of culture and aiding in cultural remediation. This may be done keeping in mind the Seven Societal orientations.
9. To work with sociologists if necessary to understand other issues plaguing society and then design suitable historiographical and anthropological frameworks. This may be done keeping in mind the Seven Societal orientations but also by analyzing social and locale-specific issues to boot.
10. To identify how Anthropological historiography can be used, based on historical data, and all the factors above, to create an intellectual revolution in places where such revolutions are long overdue.
11. To contribute to a critique of all pseudo-scientific and pseudo-historical constructs in the interests of rationality (E.g. Pushpaka Vimana, works by Erich von Daniken). This should be done with a fair amount of rigor, and the reasons for their inclusion in non-science clearly explained to students, instead of merely brushing them aside as being irrelevant or unimportant to the course of future events.
12. To help other researchers in carrying out a logical assessment of other traditions and traditional sciences by providing the necessary historical inputs. E.g. A scientific study and a critique of Ayurveda in all its dimensions which is considered to be a proto-science rather than a full-fledged science that has been internally and externally revalidated may be in order.
13. To work towards a comprehensive history of science and scientific endeavour and the underlying causes and common threads such that this can be used for further increasing the quantum of scientific output in future.
14. To work towards a comprehensive history of intellectualism and intellectual awakenings with root cause analyses as applicable with inbuilt DPPF techniques.
15. To work towards cross-cultural frames of reference, cross-cultural historical models and use them for other inter-cultural studies. Thus, the Anthropological Historiographer can play a role in understanding the basis of History in determining cultural traits, for example in different contexts, as this can be of use in Ethnographic studies.
16. To help build up awareness of other cultures and help students understand the appreciable aspects, strengths and weaknesses of other cultures. This can, likewise be used for cultural remediation.
17. To inculcate well-informed individuals and eschew bias and prejudice of various kinds among students and the general public.
18. To work with psychologists and sociologists to understand what changes are required to society to make it progressive and dynamic. This can be done through the creation of 'Eureka points' and 'Mini Eureka points' at an individual level, an aggregated individual level (Group level) and a societal level. The Anthropological Historian may have a small role to play here, as he may be able to evaluate cultural backgrounds better and may be in possession of historical data as well.
19. To work towards better integration of history and proto-history to bring out the compass of human effort and endeavour such that other specialists may study causal effects and relationships. This can be done by developing suitably integrated models and frameworks.
20. To work towards better integration of proto-history and pre-history. This can be done by developing suitably integrated models and frameworks which should be accompanied by all the attendant benefits described above.
21. To develop suo moto, and through collaborative approaches, historical models in such a way that they are of use to Physical Anthropologists, and those pursuing genetic studies and studies on human migrations.
22. To develop historical models in such a way that they are of use to Archaeological Anthropologists. This is necessary because tradition has always played a key role in Archaeological Anthropology. Identification of sites for exploration has relied on tradition, and corroboration has been widely used for further evaluation.
23. To critique and critically evaluate erstwhile approaches to historiography, with a view to bringing out appreciable effects and studying their lacunae and limitations as well.

24. To play a role in developing Anthropological models for understanding substantive economic frameworks in traditional societies by providing the necessary historical inputs, and by developing cross-cultural frames of reference.
25. To bridge socio cultural distances between cultures in all dimensions by promoting better cross-cultural understanding. To play a role in developing Anthropological models for understanding kinship and other aspects of culture in different types of societies by providing the necessary historical inputs.
26. The Anthropological Historiographer can provide crucial historical inputs for Applied Anthropological pursuits.
27. To help integrate sub-altern studies into Anthropology in a way that will aid in cultural emancipation by provide the necessary historical information. The historian may have a small role to play here.
28. Better integration with Linguistic Anthropology. The Anthropological Historiographer can provide historical inputs that may be of use in formulating new theories and hypotheses. This can counter theories in Linguistic Anthropology, or misconceptions such as the Divine Origin theory of the origin of language.
29. Primatology and evolutionism may be taught to students though not primarily as a part of Anthropological Historiography. The Anthropological Historiographer may play a role in ensuring that the basics of different facets of Anthropology are taught to students as an integral part of different sciences.
30. The Anthropological Historiographer may work with General Anthropological practitioners to ensure that Anthropology is suitably integrated with relevant fields of study, and introduced in school curricula wherever applicable. For example, even integration with recent advances in Astronomy may be necessary to provide an antidote to superstition and blind faith.
31. To work towards the introduction of new-fields of study as applicable, particularly those that will impact public consciousness. We may recall our concept of mindspace here. A introduction of a study of the history of modern technology, for example, may work well and introduce paradigms shifts in thinking by making people aware of the origins of technology that so greatly impacts their daily lives.
32. To help General Anthropologists towards better integration of various fields of Anthropology, and identifying and eliminating paradoxes of all kinds. This can again be done by identifying the historical bases and underpinnings of different aspects of culture and society. From the point of view of the laity, the emphasis has to be on the reduction or elimination of cognitive dissonance so that creative thinking can be triggered.
33. To work towards the greater good of society, and act in the interests of science and strive towards the enhancement of scientific knowledge. This will be one of the key objectives of any scholar, and any scholar would be advised to take this seriously. This may be referred to the scholar's social responsibility and he must never waver from this principle and adhere to it steadfastly. One example of this is that a critique of other scholars' research must be done responsibly and constructively keeping in mind the greater interests of society. Social responsibility is another key principle of this approach. We may reiterate here, that many specialists such as anthropologists have already proposed and have been adhering to professional codes of conduct, and it is time for others to follow suit.
34. To enable and facilitate a synthesis with various fields of science, and to follow a multi-disciplinary approach wherever possible: This should be one of the core objectives of a 21st century historian. Inter-disciplinary approaches or IDA's, are a key part of Twenty-first century Historiography.
35. To proactively work towards solving unresolved issues in science and history and to facilitate an environment where vexatious problems in science and history can be solved. Wherever there are a large number of unresolved issues, it would be necessary to identify the importance of the resolution of such issues to the advancement of science, and by adopting techniques such as an Opportunity Loss Approach or OLA and Social Benefit Analysis or SBA so that a prioritization is possible.
36. To create a framework where specialists such as anthropologists, linguists, comparative historians and other scholars can carry out their research.
37. To work towards a situation where the distinction between various fields of science gets blurred.
38. He can then collaborate with other scholars as required. These are known as Inter-disciplinary approaches or IDA's from the point of view of our paper. Thus, as a possible extension of his traditional work, a historian can, based on his knowledge and database of the past, and his ability to carry out a root- cause analysis of events, work on building scenarios of the future in collaboration with non-historians. He can also partially shape it, as many concepts in this paper are aimed at such a scenario.
39. To consider history as a science as work towards bridging the gap between arts and sciences in such a way that the distinction between arts and sciences is bridged to the extent possible.
40. To work towards the creation of a seamless framework so that history across regions can be studied.
41. To work towards the creation of a seamless framework so that history across periods can be studied.

42. Globalized approach: All problems and solutions must be re-examined from an international background to ensure scholarship is global in nature.
43. To combat alternative historiographies by rendering them meaningless in the long run.
44. To look for avenues where he can impact society positively as a historian and play a role in shaping the future in collaboration with other scholars: For example, an interesting variation of DPPF techniques is to generate a list of problems in a given region or worldwide, and then use techniques in historiography to study past events and actions and approaches used in the past, including Deep History Analyses (DHA). These can then be used to provide solutions for the future. Thus, the historian can begin to play a role in shaping the future. Areas of study can include the history of drug and substance abuse, population control, female infanticide, an analysis of historical data in learning abilities in deprived children etc.
45. To understand the realities of a multi-polar world and desist from adopting Euro-centric or other region-centric approach in a way that would affect his judgment or impartiality. Understanding issues from the points of view of different cultures would help a scholar broaden his horizons and act in the greater interests of scholarship. We also propose that all research teams be multicultural as far as practicable, and such teams must not only include specialists from various fields, but also some non-specialists as well.
46. To encourage a critical analysis of religion and constantly re-examine the role of religion in society; to work towards purging unhealthy aspects of religion using a critical analysis approach, and by acknowledging that fact that not all religions are the same. Criticism of ideology-driven discrimination between religions must be discouraged, and an evaluation and criticism of all ideology-driven approaches to historiography is encouraged, and the standard principles of epistemology must be followed to prove whether they are bona fide or not. The scholar may also contribute towards analysing and critiquing, in conjunction with other specialists in the respective fields, so-called sciences such as astrology, palmistry, Vedic mathematics, and contribute his perspective with a view to fighting pseudo-science.
47. To constantly analyse all pseudo-historical claims made from time to time such as the existence of Lemuria, the existence of Atlantis, claims of a heavier-than-air flight by Shivkar Bapuji Talpade in India in 1895, expose fraudulent claims wherever applicable and spread scientific awareness among the masses. To help a scholar achieve this, we propose a tool 'Formal Evaluation of Prerequisites and Implications of claims' (FEPIC), where all the implications of a claim, and bearings on all other fields of study, along with a study of pre-requisites such a claim would entail, and its violation of known

laws and principles are formally listed out in collaboration with other scholars, so that fraudulent claims can easily be identified and eliminated. A discussion of evidence for and against the claim may also be presented, and used in conjunction with other approaches in this paper.

48. To focus on the history of science both within a specific region, and across the world by focussing on the history of physics, chemistry, mathematics, writing systems and metallurgy to name a few, and to use such study to draw inferences and directly and indirectly enhance scientific output. We expect this would be a major area of study, and regrettably, this has been ignored largely in past approaches.
49. To keep religious fanatics in check by facilitating higher standards in education. To constantly look for innovative ways to eradicate blind faith and superstition and fight pseudo-science by promoting scientific versions of history. To help combat superstition and blind faith by promoting scientific versions of history.

These core objectives must always be borne in mind by the Anthropological Historiographer, and must be the guiding force and light in all his endeavours. He will need to check, at every stage, whether these objectives are fulfilled or not. He must keep in mind the Core principles of Twenty-first century historiography, and ensure that they are adhered to at every stage.

VII. APPROACHES THAT CAN BE ADOPTED FOR PRESENTATION OR TEACHING

Either of the following approaches may be followed in the teaching of Anthropological Historiography, and what approach is appropriate will depend from context to context.

1. The whole canvas of human history, proto-history and pre-history is presented and integrated with other fields of science as explained. Basic history is taught from a very young age, but an integration with various sciences as explained in this paper is progressively introduced at a later date and referenced in history courses. Per this approach, history alone is taught in history courses, but other components of Anthropological historiography and inter-linkages are taught in other courses. This approach requires a collaborative effort with scholars of other sciences.
2. The whole canvas of human history, proto-history and pre-history is presented and integrated with other fields of science as explained. These topics are taught from a very young age in various sciences but are suitably integrated and referenced in history even in basic courses such that even young students of history understand the nature of integrations with other fields of science. Per this approach, history

alone is taught in history courses, but other components of Anthropological historiography and inter-linkages are taught in other courses. This approach. Likewise, requires a collaborative effort with scholars of other sciences.

3. The whole canvas of human history, proto-history and pre-history is presented and integrated with other fields of science as explained. This is taught in more advanced courses as a part of history and is taught at a fairly great level of detail. This is a precursor to more detailed historical narratives. Per this approach, most components of Anthropological historiography and some inter-linkages are taught in history courses.
4. The whole canvas of human history, proto-history and pre-history is presented and integrated with other fields of science as explained. This is taught from a very young age as a part of history but is deliberately and intentionally kept simple in the initial stages. This is a precursor to more detailed historical narratives. Per this approach, most components of Anthropological historiography and some inter-linkages are taught in history courses.
5. History is itself replaced with Anthropology in schools, but adequate space is retained for traditional historical narratives. The subject may be referred to as Anthropology (or by any other name), but the essence must be retained. This would be the ideal approach from our perspective, but one that may not be possible to implement immediately, given the quantum of changes that will be involved.

VIII. CULTURAL REMEDIATION

We had dwelt at great length on Cultural remediation in our previous papers. We had also discussed the idea of Societal orientations, individual mind-orientations, mind space, mindsets, thought worlds and worldviews in great detail. We had also introduced the concept of 'Eureka points' which can be used to model paradigm shifts. Eureka points may be a pre-requisite for intellectual enlightenment, and the institution of 'Eureka points' must be done with great care and this would constitute an art and a specialized technique by itself.

The approach that may need to be followed here is as follows (much of the basic work has been done in our previous papers):

- Understand societal orientations with regard to a specific culture or society, as the approach that would need to be followed for different cultures and societies may be different repudiating any possibilities of a one-size-fits-all model. (Refer to our work on Societal Orientations)
- Understanding the frequencies of modal and non-modal mind-orientations in different societies and

cultures and using this in conjunction with societal orientations to model human behaviour in different societies. This can be a useful starting point for remediation efforts.

- Understand mind space and thought worlds in different contexts, and also cultural drivers (such as ideologies for example) that mould human behaviour. Thoughtworlds must be carefully constructed by the Cultural Anthropologist as discussed by us in a previous paper and used to beneficial effect by the Anthropological Historian.
- Identify undesirable constituents of thought worlds, especially those that lend themselves to pseudo-scientific beliefs, perspectives and pursuits. While this may not be as easy as meets the eye, effective approaches will readily suggest themselves: Neo-centrism or an examination of issues from a long-term perspective may help, as also will a conscious identification of paradoxes that are internal and external to cultures and different components of culture besides an assessment of cognitive dissonance in individuals. An identification of Cultural Bottlenecks in a society will also undoubtedly help here. All these issues were discussed by us at great length previously. The idea of Cognitive Dissonance was initially developed by Leon Festinger and others, and expanded by us in some measure. Cognitive dissonance is present in individuals regardless of cultural background, and only the nature, depth or extent may vary. A total or a near-total absence of Cognitive dissonance is effectively impossible save in utopian or idealistic scenarios given the broad spectrum of unresolved or unattended to issues in most aspects of culture that impact or govern daily life. 'Eureka points' may trigger changes in individuals and may propagate in society in due course through intellectualism. All revolutions and enlightenments across the world have always involved 'Eureka points' whether explicitly-defined or not. As a crude rule of thumb, all enlightenments and revolutions have reduced the quantum of cognitive dissonance as a pre-requisite to sustainable progress. Those that have not, tend to provide only temporary or illusory benefit from a neo-centrist perspective, and will necessitate and induce further changes in the long-run.
- The idea of 'Eureka points' however comprises a gamut of issues not included in all the other concepts which were discussed above. For example, Darwin's theory of Evolution was an important Eureka point which revolutionized human thought because it dealt with issues that were central to human consciousness and an inseparable part of the human psyche. This idea is of paramount importance here, and must be the core driver in all our endeavours. Simply put, issues that are central to the popular imagination will

take precedence over other fields of work or study and will constitute core agents of change. Thus, changes to popular ideas of human evolution are central to driving change, as are well- thought out strategies to counter religious dogma and blind faith. On the other hand, fields of study such as Quantum mechanics and Nanotechnology may not trigger ‘Eureka points’ from our perspective given their non-centrality to popular culture or imagination, even though they may induce cultural and technological changes or transformations in other planes.

- ‘Eureka points’ may operate at individual levels, group levels or at the level of a culture or a society. The last two may be particularly useful and beneficial for remediation as they provide a much better fulcrum for control and are economical to use as well. ‘Mini Eureka points’ are much smaller than ‘Eureka points’, though multiple ‘Mini Eureka points’ can have a profound snowball effect, and as many are formulated at the level of an individual or a group, can be replicated to other individuals and groups either within, or outside the culture.
- Eureka points may be identified through different techniques for proactive remediation, and we would like to keep the terminologies simple and consistent throughout. One may be the identification of internal and external paradoxes in a culture, which may include, or be triggered by unresolved issues. The second may be the identification of Cultural bottlenecks. The third may be the assessment of cognitive dissonance in individuals as a springboard to action. The fourth may be an identification of areas of Cultural lag in a society. The fifth technique that may be used is cross-cultural comparisons, and these may encompass and address a gamut of issues in turn such as individual mind-orientations and societal orientations.
- Different aspects of a culture and society may also be ranked on the basis of how harmful they are for prioritization of remedial action, and suitable course-corrections identified accordingly. The tools and techniques to be employed by an Anthropological Historian in this regard will only form a subset of the tools and techniques that will be employed by the Cultural Anthropologist.
- The Anthropological historian may use the concept of mind space to find out how changes can be brought about. Other suitable techniques for Cultural remediation may also be devised and used without resorting to dogma.
- The basis of this approach is proactive, down-to-earth intellectualism that eschews an ivory-tower approach or intellectual aloofness: This is, in fact, the edifice upon which the whole approach of Cultural Remediation unequivocally rests. Thus, we believe that intellectuals cannot constitute anything more

than a microscopic percentage of the population in any society whether simple or complex, at the very best (Refer our Theory of Mind-Orientations), but will still need to play a crucial role in society in triggering Horizontal Changes (Refer our Vertical-Horizontal model) that will then spread to other sections of society. This usually spreads through a Top-down mode wherever intellectual elitism is involved as opposed to any change involving critical mass. (Refer our ‘Modes of Internal Spread’ of Cultural Elements for a suitable analogy)

IX. AN OVERVIEW OF THE DIFFERENT APPROACHES THAT CAN BE USED IN ANTHROPOLOGICAL HISTORIOGRAPHY

We propose that the following approaches be used in Anthropological Historiography. The approach that needs to be used in a context or situation will need to be determined by the Anthropological Historiographer based on his own judgment and careful evaluation. The concept of ‘Societal Orientation’ will undoubtedly play a crucial role here, and the approaches to be followed in any context will unquestionably rest largely on this analysis as well. In most contexts and situations, more than one approach or a combination of different approaches will need to be followed, and the approaches presented here are only suggestive, and formulated to bring out the diversity of possibilities. Thus, the elements of each of the approaches presented here are not necessarily mutually exclusive.

X. GROUNDS UP OR PRACTICAL NEEDS APPROACH

This approach seeks to cater to the practical needs of society and uses the practical needs of society (As identified by the Anthropological Historiographer) as a starting point to define requirements of any historical method. This approach seeks to carry out a critical analysis of what is required in a society and uses this as a base to define historical methods or techniques of history writing. Thus, the needs of Islamic societies may vary from that of Europe, and the needs of Europe may vary from that of India. We have explained the process of socio-cultural change at great length along with the Ten enablers, and this should serve as a useful starting point.^{45 46} Hindu and Islamic societies have not witnessed the intellectual awakening that Europe has, and the causes for this may need

⁴⁵ Articulating Comprehensive Frameworks On Socio-Cultural Change: Perceptions of Social and Cultural change in contemporary Twenty-first century Anthropology from a Neo-centrist perspective Sujay Rao Mandavilli

⁴⁶ The relevance of Culture and Personality Studies, National Character Studies, Cultural Determinism and Cultural Diffusion in Twenty-first Century Anthropology: As assessment of their compatibility with Symbiotic models of Socio-cultural change ELK Asia Pacific Journal of Social Science Volume 4, Issue 2, 2018 Sujay Rao Mandavilli

to be studied on a case to case basis. Intellectualism may be a pre-requisite and a point of entry for popular cultural change, but even Intellectualism has not proven to be a torchbearer in such societies. The Middle East is slowly awakening from its slumbers, but a similar revolution is nowhere in sight in India. Such approaches must form a part of what we refer to as the 'The Sociology of Science', and this must become an intensive focus of study: This must study how science can be used to usher in social and cultural revolutions and intellectual awakenings, particularly in places where such revolutions are long overdue and must adopt context-specific and interdisciplinary approaches. Moreover, a study of human psychology is of paramount importance given the fact that all issues and approaches will need to be formulated from the point of view of the common man in the street. Needless to argue and state, Anthropological Historiography as well as our doctrine of Neo-centrism will play a pivotal and an indispensable role here, and we sincerely look forward to well-conceptualized, well-integrated and tightly-knit approaches in this regard. A variation of this approach would be the 'Special Emphasis Approach', where a special emphasis is placed on aspects of a culture needing remediation.

XI. COUNTERBALANCE APPROACH

Historiography is used as a countervailing force to negate the negative effects associated with religious-derived constructs and dogma. In this method, the effects of culture and tradition on the psyche of the society are assessed, and in most cases, this would be negative, given that appreciable aspects would be outside the scope of intensive inquiry and remediation. However, the nature and the bearing tradition has on society may vary from context to context. This may often require a reconciliatory approach. For example, we have traditional, Puranic narratives of Indian history on one hand which constitute the staple diet of all historically-minded Indians, and one that most Indians, the more educated ones (including the 'cream of the cream' included) take to be the gospel truth. On the other hand, archaeology throws up evidences such as the Ochre Coloured pottery, the Painted Gray Pottery, and the Boghaz Kuei inscription which are at variance with 'Hindu memories'. Likewise the concept of the Ten avatars of Vishnu or the Bhagavad Gita date to the Mauryan epoch. To remediate this unnaturally large gap, we require a counterbalance (something that Marxist Historians, in their own perverted way, have sought to provide, but may have failed for reasons that must now be critically assessed), that must result in credible narratives, foster synthesis and lead us to a higher state of understanding. The greater the centrality of religion and the stronger the dogmatic forces in a society, the greater will be the importance of a 'counterbalance approach'. Per this approach, an Anthropological Historian may seek to critique the role played by religion in society, or in extreme scenarios may collaborate with other philosophers in evaluating alternative approaches and paradigms. This approach may be seen as a via-media solution i.e. one between Complementary approaches and Supplementary approaches,

but one that will work in most contexts and societies admirably.

XII. COMPLEMENTARY APPROACH

This approach seeks to complement popular tradition wherever learnings and takeaways from such tradition provide to be inadequate or insufficient. This approach may not be adequate in most cases, but may work well in situations where other approaches are not workable or politically feasible given the political or intellectual constraints most societies still operate under; in some countries, it may not be possible to stop religious influences or education completely, or even argue or rebel against them. This approach may still work in the long-run; it is bound to trigger cognitive dissonance among the denizens and usher in cultural and social revolutions in the long-run. Per the tenets of this approach, the Anthropological Historiographer avoids conscious criticism of religion or any unsavoury aspects associated with a tradition, but still cleverly exploits the fact that most nations want to embrace modernity to the hilt, and uses this latent and innate desire among the political leadership of most nations as a fulcrum for social change. He thus operates silently, tactfully, and even by stealth but without sacrificing long-term efficacy.

XIII. SUPPLEMENTARY APPROACH

In this approach, Religious inspired approaches (or other approaches inimical to science and the well-being of society) are stopped completely, and the Anthropological Historiographer takes on a more aggressive stance. He often argues openly against the role of religion by arguing for the elimination of religious education in schools completely, seeks to stop teaching old-fashioned creationism (at the same time, critical analysis is encouraged – refer our doctrine of 'Neo-centrism'), tries to seek a control on RSS Pracharakas, Madrasas and other institutions. For all this a collaborative approach will undoubtedly be required. He will also insist that Religious studies in Universities be based on a critical analysis and not treating all religions as equal, or introducing other dogmas and Eurocentric perspectives. This has been a major weakness of religious studies in the West, and one that may have been fostered by Marxist intellectuals.

We had classified approaches towards religion into the following three categories from the point of view of our approach, and the Anthropological Historiographer must only follow a 'Critical Analysis Approach', at the same time treading carefully and cautiously.

A. The religious fundamentalists approach or an ideologically-driven discrimination between religions.

Examples of ideological bias or ideological communalism of which religion forms an integral part are presented below. While it must be admitted that this list is partial to India, its principles are more or less universal across the globe, and

must be fought wherever it conflicts with objectivity. If this happens, and objectivity is systemically or routinely compromised, it qualifies as a pseudoscience, and one of the objectives of an Anthropological Historian is to counter pseudoscience as well.

- The Hindutva contempt for the Mughal chapter in Indian history
- The Hindutva tendency to glorify the Indian past
- The over-arching Hindutva obsession about the origin of the ‘Aryans’
- The Hindutva contempt for the rise of Buddhism
- Bias arising out of Marxist preference for periods where the caste system was not on force or the Marxist notion that religion can be wished away or forgotten through suppression of specific periods in Indian history.
- Anti-Dalit viewpoint of Hindutva historians
- Anti- upper class view point of Dalit historians
- Pro-Semitic tendencies of Hindutva ideologues
- Anti-Semitic tendencies of Marxist ideologues
- The Dravidian nationalist’s view point

B. The Secularists Approach: This is a well-intentioned, if somewhat naïve approach to religion. It assumes, and in most cases, wholly in good faith, that all faiths, religions, doctrines and ideologies are equal and ought to be respected equally. A key aspect of this approach is to ensure that sentiments of different religious groups are not hurt. This approach may work well in the short to medium term and help establish a modicum of communal harmony. However, this approach fails to take into account the fact that all religions are not equal and different religions contain differing amounts of good and bad. It does not seek to eliminate the ill-effects of religion from society. Another key reason for adopting the aforesaid approach was because a critical analysis of religion may have been beyond the capability or purview of local historians in various societies.

C. The Critical Analysis Approach: The critical analysis approach calls for a critical analysis of all religions against the backdrop of the twenty-first century (To the extent they conflict with science or desirable mind or societal orientations) and encourages new areas of inter-disciplinary study devoid of any religious or ideological underpinnings. As per the tenets and postulates of Anthropological and Twenty-first century historiography, this would be the way forward, and must ideally be carried out as subtly and effectively as possible without offending the feelings of any community. All religions and religious dogmas are unequal; not acknowledging this would be fallacious. Equating Islam and Jainism or Hinduism and Christianity for example, would be an exercise in futility as these are all very different ideologies or philosophies which originated under different circumstances or were shaped by different forces at different points in time, or may contain different philosophies that are either compatible or

incompatible with modern notions of civility and decorum. This must not be construed as quixotism; it is the crying need of the day. This is a process that may take several decades or more, but it must be initiated nonetheless, and scholars would be well-advised to tread cautiously, and set in motion a process that would eventually mitigate the ill-effects of religions. However, it would be natural for a scholar to adopt a localized approach or one driven by local considerations. For example, an Indian scholar would not be expected to take up the analysis of a religion that under ordinary circumstances has no relevance in India. We also propose that vendetta-driven approaches and reactions against earlier prejudices and biases should have no place in twenty-first century historiography in so much as they interfere with unbiasedness.

XIV. PSYCHOLOGICAL APPROACH

In this approach, the Historical Anthropologist tries to understand the thought worlds of individuals in different cultures and societies (concepts that we have discussed in great length earlier) and uses these as a starting point for remediation. This approach will also, we believe, form an integral approach of the ‘Sociology of Science’ of which Anthropological Historiography will form a part. In what way does a belief in Lemuria shape a Dravidian nationalist’s thought world and worldview? In what way do Dravidian nationalists influence the common man in Tamil Nadu? In what way do the common people of Karnataka, Telangana and Andhra Pradesh think differently from the common man of Tamilnadu and why? Do different communities of Tamil Nadu think differently and why? Why do Tamils have different thought worlds from North Indians? How does Vedic creationism impact the thought worlds of Brahmins? How does Vedic creationism impact the thought worlds of educated Indians? How does Vedic creationism impact the thought worlds of uneducated Indians? Has education really made a difference here? How does Vedic creationism impact the thought worlds of Dalits, if at all? To what extent is each of the thought worlds scientific? To what extent is each of the thought worlds unscientific? How will different approaches to history, change thought worlds and in what way? These are the questions that a psychological approach must seek to address. It is not just religion that plays a role here, but different sub-components and elements of a culture. For example, the Divine origin theory of language has had different adherents, but may be wholly unscientific from any standpoint. Thus, our approach may need to be meshed with a cultural taxonomy – however, all issues may not interface with Anthropological Historiography equally: some may fall within the domain or be the prerogative of a Cultural Anthropologist. Some may be within the jurisdiction of both. Can the history of superstition and superstitious beliefs aid in remediation?

Elimination of cultural bottlenecks and societal flaws driven approach

The underlying principle behind the elimination of cultural bottlenecks is the theory of Cultural Lag. Culture usually takes time to catch up with technological innovation, In other words, technological changes happen faster than cultural related changes and there is a mismatch between the rate of material progress and non-material progress involving intangible elements. This phenomenon may lead to social conflicts and often bring about cognitive dissonance to varying degrees and various forms of distress or maladjustment. This theory also states that different aspects of culture tend to change at different rates. The term was first used by William F. Ogburn in his work “Social change with respect to culture and original nature” in the year 1922⁴⁷ and revalidated by several other studies. Different components and subcomponents of culture change at different speeds, and the Anthropological Historiographer can identify bottlenecks bearing in mind his areas of competence and focus. Societal flaws can also be the starting point for the identification of suitable techniques, and this concept is related to the concept of Societal orientations. Another approach can be to identify paradoxes within a given culture, and this can be used to prioritize change.

XV. NEO-CENTRIST APPROACH

This approach takes into account long-term requirements of human society as a whole and attempts to reconcile not just left-of-centre views and right-of-centre views, but also the strengths and weaknesses of individual societies and evaluates them from our principles of aeternitism and omnimodism. This emanates from the philosophy of neo-centrism as was propounded by us in our earlier papers. This may appear to be far-fetched or unimplementable at the present juncture, but can be considered in the long-term. This is related to the principle of cultural maladaptivity; for example most modern societies follow models of economic development that are not sustainable by any measure and reckoning. However some are better off and some are worse, either driven by innate cultural propensities or by policy. An example of the latter may be the USA. This approach may be used in conjunction with other approaches. In many cases, this may not impact the Anthropological Historian directly. However, some aspects, like religion can still be studied from a long-term approach or its universal defining characteristics and principles to formulate remediation strategies.

XVI. GOWEST APPROACHES

All concepts and approaches proposed by us under the general framework of Twenty-first century Historiography will be applicable to Anthropological Historiography too. The GOWEST approach (Goals, Opportunities, Extraneous factors, Threats, Strengths and Weaknesses approach) proposed by us in an earlier paper is the Historiographical equivalent of the SWOT analysis (Strengths, Weaknesses, Opportunities,

Threats analysis) which is widely used in corporate and other studies and would be chiefly based on DPPF (or Dialogue between Past, Present and Future) techniques. Thus, historical analysis would play a very important role here, as it would help us identify universal principles.

As discussed by us in a previous paper, from the point of view of DPPF (or Dialogue between Past, Present and Future), goals here would refer to the goals or targets that have been identified for a society by the government, other institutions and organizations, other scholars etc, or based on any widely known or publicized areas of improvement. These could be short-term goals, or long-term goals. This can be used to generate a list of areas of improvement which will eventually culminate in a plan to augment the positive forces, and reduce the negative forces. The already existing positive forces in the society which can be used for the achievement of stated objectives will also be identified. This approach will also identify the negative forces that are prevalent in the society. The next step would be to identify opportunities that exist or the opportunities the society is missing out on i.e. Opportunity losses. These can either be long-term or short-term Opportunity losses. Existing positive forces through which opportunities can be attained will also be identified. Likewise, negative forces that will need to be overcome will also be identified. Extraneous factors could be factors like global warming, shortages of non-renewable resources etc. which the society may not have full control, but can at least be partly addressed. This can then be used to generate a list of areas of improvement which will result in a plan to augment the positive forces, and reduce the negative forces. Strengths of a society can be identified based on a Deep Historical analysis (DHA) performed by the historian or based on an analysis of recent data. These can be used in the process of goal-setting, which can be used to identify more positive forces and mitigate the negative forces. Weaknesses of a society can also be identified by a historian based on a Deep Historical Analysis (DHA) or analysis of recent data. These can be used to identify areas of improvement and set more goals which will increase the positive forces and reduce the negative forces. Case studies and lessons learnt from other cultures and contexts must also be used here. The premise of the approach is that while the goals, opportunities, strengths, weaknesses, positive and negative forces can change from time to time and from context to context, the underlying causes and factors do not change in most cases.

XVII. SEVEN SOCIETAL ORIENTATIONS

In an earlier paper, we had also proposed the Seven Cultural Orientations as described below. These can be assessed through the use of appropriate tools and techniques commonly used in social research such as questionnaires, interviews and case studies. We also propose the remedial action for each, purely from the point of Anthropological Historiography. Remediation strategies must also be linked to, and satisfy all

⁴⁷ William F. Ogburn 1922 “Social change with respect to culture and original nature”

the objectives of Core and Anthropological Twenty-first century Historiography.

XVIII. PAST-ORIENTATION VERSUS FUTURE-ORIENTATION

Past-orientation and Future-orientation is the relative emphasis placed by a given society or culture on its past or on its future. Future-orientation is directly associated with characteristics such as planning and foresight in individuals and indirectly with other characteristics such as individualism and individual achievement. An over-emphasis on the past may be unhealthy and lead to a reliance on the cultural baggage of the past and may impede cultural progress, both material and non-material. Per the Vertical-horizontal model proposed by us, better integration within and across cultures leads to the multiplication of horizontal factors, thereby weakening vertical factors in the long-term. We must also bear in mind the fact that Western societies have also been typically future-oriented since the age of Enlightenment, and this has led to a quantum increase in scientific output. Thus, globalization and modernization gradually make more conservative societies future-oriented as well, but countries like India are still laggards in this respect. If India and other conservative societies learn from the lessons and the mistakes of other societies, they could well be on the threshold of momentous change.

- *Remediation from the point of view of Anthropological Historiography*

The origin of the past, particularly myths and religion are scientifically explained to students in such a way that this becomes an antidote to past-orientation or an excessive obsession with the past that is found in some cultures and counters religious dogma and fanaticism as well. The histories of other cultures and societies are also explained to students, particularly future-oriented ones that can prove to be a role model to the culture in question. This can be based on a similarity of attributes with the culture being studied or based on its successful transformation to a forward-looking, future-oriented culture, and an energetic one.

- *Inward-looking cultures versus outward cultures*

Some cultures are undoubtedly more outward-looking than others, and many have traditionally or characteristically been so. This may also be referred to as the internal or external orientation of society. The presence or absence of Cultural Elitism, key political and cultural connections with other societies as well as the level of physical, educational and social infrastructure and the general level of intellectualism and intellectual output play a role in achieving and external orientation. A remediation of inward-looking societies may be brought about by means of suitable changes in the education system through suitably-designed pedagogical techniques or an improvement in social or physical infrastructure. A change

in a society's orientation will increase its cultural receptivity and bring in attendant benefits such as an increase in living standards in the long-term.

A Xenophobic culture is one that harbors a fear or suspicion of other cultures. In some contexts, Xenophobia may manifest itself in other forms such as cultural arrogance or a desire to maintain cultural or racial purity. Xenophobia has been typically attributed to several reasons, one of them being ethnocentrism, though there may be other causes such as autarky, cultural isolation or sheer ignorance of other cultures and societies. Xenophobia is strongly co-related with inward orientation, and often with past-centrism. On the other hand, Xenocentrism or an undue obsession with other cultures may be observed in some cases, though this need not always be seen in a positive light.

- *Remediation from the point of view of Anthropological Historiography*

The histories of other cultures and societies along with their more commendable aspects are scientifically explained in such a way that this becomes an antidote to inward-orientation. The historical causes that led to the culture becoming outward-looking must also be explained to students. The inter-linkages and inter-dependencies between the culture in question and other cultures must also be clearly brought out, such that xenophobic tendencies are inhibited or nipped in the bud. In such cases, there must be a greater focus on international histories.

- *Rigid versus flexible cultures*

Cultures may also be ranked on a scale of their rigidity or flexibility. Flexible cultures are often those which carry less cultural baggage, and are therefore conducive to change. Cultures which are flexible in some respects, may be rigid in some others and it may therefore be necessary to perform an analysis at the level of a cultural element. We had also discussed the concept of cultural enablers, and these would have a bearing on the flexibility of a culture.

- *Remediation from the point of view of Anthropological Historiography*

The origin of the past, particularly myths and religion are scientifically explained in such a way that this becomes an antidote to cultural rigidity. The stories of revolutionary thinkers and innovators may also be explained to students. The history of social and cultural change along with their underlying causes may also be explained to students.

- *Individualistic versus collective cultures*

Some cultures like the USA and most countries in Europe may be more individualistic, while some others like the former USSR emphasized collectivism of thought and statism and

placed almost on value or emphasis of individual liberties. Most others can be placed in a continuum between these two extremes, and there would be merits and demerits associated with both types of cultures.

- *Remediation from the point of view of Anthropological Historiography*

While the merits and demerits of both may be debatable, case studies of different types of cultures and the bearing of their respective pasts on the present may be brought out very clearly. The impact of a culture's past on its present along with underlying causes of change may be explained to students.

- *Material and non-material orientation*

Some cultures like the USA have been relatively more materialistically-inclined, while some other developed countries like Japan have been much less so. Most others can be placed in a continuum between a material orientation and various non-material orientations such as religious or spiritual orientation, and the merits and demerits of different types of societal orientation are debatable.

- *Remediation from the point of view of Anthropological Historiography*

While the merits and demerits of both may be debatable, case studies of different types of cultures and their past histories may be brought out very clearly. The impact of material progress and technological development on a nation's well-being and individual psyche may be explained to students.

- *Contentment versus innovation*

Some cultures are not change-friendly, while some embrace change very easily. This would be reflective of a culture's quest for creativity and innovation, and would be dependent on many factors such as a suitably-designed education system. This metric may also be affected by a culture's past or future orientation, and in some respects, all the seven orientations are closely inter-related and inter-dependant.

- *Remediation from the point of view of Anthropological Historiography*

While the merits and demerits of both orientations may be debatable, case studies of different types of cultures and their past histories may be brought out very clearly. The underlying causes of innovation and change along with their beneficial aspects on society may be brought out.

- *Rational-orientation versus Non Rational-orientation*

In a rational society, less emphasis is placed on religion, ideologies and dogmas etc and a great value and emphasis is placed on rational approaches and logical inquiry. Per our model and assessment, most non-rational societies are likely to

evolve into rational societies in due course due to inevitable cultural integration and emancipation, and the Cultural Anthropologist has a crucial role to play in bringing about such a change.

- *Remediation from the point of view of Anthropological Historiography*

The origin of the past, particularly myths and religion are scientifically explained in such a way that this becomes an antidote to superstition, blind faith and irrational thought. The myths and legends of other cultures and societies and their origin are also explained to students. Rational and forward-looking societies are upheld as models and their notable qualities explained. This is in diametric opposition to the Marxist penchant for brushing religion or myths under the carpet.

XIX. INTEGRATION WITH OTHER SCIENCES

- *Primatology and evolution, Pre-history and Proto-history*

Homo Sapiens Sapiens is a primate, and is a close cousin of monkeys and apes. The term 'primate' which means first or the highest among all was first coined by Carl von Linnaeus, a Swedish botanist. The term primate encapsulates all human and non-human primates, lemurs, tree shrews, lorises, tarsiers, monkeys and apes. Primates evolved during the early tertiary period, 65 million years ago and greatly diversified during the Miocene epoch which began around 25 million years ago. The hominids, are a family of primates that includes different species such as the Chimpanzee, the Orangutan, Gorilla, the Macaque; and Homo, which includes modern humans and its extinct relatives and ancestors, such as the Neanderthal man and Homo erectus.

Life is of course of a much older origin. The earliest life forms may have evolved during the Archean period between four billion to two and a half billion years ago. The earliest life forms are believed to be primitive bacteria Archeobacteria or prokaryotic bacteria which may have been well over three billion years old. These eventually evolved into well over 4000 forms of Bacteria. It is as yet unclear whether they originated on land or in the oceans, but they are today ubiquitous and pervasive. Algae, which had the ability to photosynthesize, first appeared during the Paleoproterozoic period some 3 to 2.5 billion years ago. These were all unicellular forms, and many contained RNA rather than DNA. The causes of the origin of life are extremely unclear. However, most modern researchers such as Al Oparin, JBS Haldane, and Sydney F Fox believe in Abiotic or physiochemical evolution, and that life was created in deep-sea hydrothermal vents. There were believed to have been several steps in the process, including free atoms during the

Hadean period, the birth of inorganic molecules, simple organic molecules, complex organic molecules, colloides, coacervates or microspheres, protobionts, progenotes, and then simple life forms with PNA or Peptic Nucleic acid turning into RNA again turning into DNA for Genetic material. There have been no successful attempts to create life out of nothing using artificial methods despite some experiments by Stanley Miller and Harold Urey. However, the theory of evolution as first proposed by Lamarck, and then hugely reformatted by Charles Darwin in subsequent years to include ‘descent with modification’ and ‘natural selection’, is an undisputable fact, and has withstood the test of time. However, modifications are suggested from time to time, examples being Stephen Jay Gould’s Punctuated Equilibrium as opposed to the earlier gradualism.

Multi-cellular, and then relatively more complex life forms with eukaryotic cells are believed to have originated in the Neoproterozoic period some 800 million years ago including eukaryotic bacteria which are similar to the Bacteria present today. The birth of multi-cellular life forms was followed by an explosion of life forms during the Cambrian period, some 500 million years ago.

It is believed that the diversity and complexity of multi-cellular forms greatly increased in the paleoproterozoic and the mesoproterozoic periods, and well before the Cambrian explosion of life forms. Multi-cellular organisms also began to develop spines during this era, but the earliest examples of fully-formed spines date to around 500 million years ago during the start of the Cambrian explosion. Examples of organisms that lived in this era were Acritarchs. Such organisms gradually evolved into more complex forms such as the Ediacarans. The Cambrian explosion, or the emergence of many new types of animal life during the Cambrian era some 500 million years ago, is one of the most baffling puzzles in science and is poorly understood. The first large trees came into being 500 million years ago, and the Earth was covered with forests some 400 million years ago. The end of the Paleozoic era was marked by the Permian-Triassic Extinction event which occurred some 250 million years ago.

Dinosaurs were the dominant vertebrate animals which lived from about 230 to about 65 million years ago. The earliest Dinosaurs appeared at the start of the Triassic period or earlier. They increased in size, complexity, diversity in numbers throughout the Triassic, Jurassic and Cretaceous periods, but the Cretaceous period appears to have marked their zenith. After this, there was a mass extinction of dinosaurs probably due to the collision of a major asteroid nearly fifteen kilometers in diameter with Earth which threw up large quantities of dust and destroyed other plants and animals as well. However, some mammal and birds appear to have survived this extinction, and evolved into mammals. In the early Triassic Age, all continents were joined together, but subsequently, they broke up. Mammals evolved from Synodonts or mammal-like dinosaurs which lived about 220

million years ago. This completes the entire cycle of evolution: fish to amphibians, amphibians to reptiles, and then reptiles to mammals. The extinction of Dinosaurs heralded the Cenozoic era and more particularly the Paleogene epoch, or the age of the mammals. Many Dinosaurs likewise were cosmopolitan, and their fossils have been found throughout the globe. For example, fossils of Stegosaurus have been found in North America, East Asia and South Asia. Similarly, fossils of Pachycephalosauria have been found in North America and East Asia. These are from the Late Cretaceous period i.e. less than 100 million years ago. Fossils of the type Ceratopsia are similarly found in North America and Asia while Iguanodontia have been found all over the world. Fossils of Sauropodomorpha, another group of Dinosaurs have been found in North America, South America, Europe, Asia and Africa. Similar observations can be made for Theropoda (which are again of many different sub-types and sizes) and other Dinosaur types, and it would be far-fetched to attribute this to migrations.

The history of the evolution of life forms on earth does not even form a part of Anthropology. They are a part of natural sciences, but Anthropological Historiography must refer to Physical and General Anthropology and Physical and General Anthropology must in turn integrate with natural sciences. This will constitute a wheel within a wheel, and must be properly integrated and judiciously and carefully be applied and implemented to form a part of the ‘Sociology of Science’, which can be a productive and a highly ameliorating force, indeed. The relevant sub-fields may be segmented and taught in the relevant courses, while at the same time, bringing out the integrating factors. Today, Pre-history, Proto-history and Pre-human history are not taught in most schools, colleges and universities around the world, or not taught at the necessary level of detail or with the requisite degree of care, and most certainly not taught in a manner that will form a bulwark against tradition or religious axioms. This is one reason, we suppose, myriad interpretations and points of view persist on most aspects of pre-history. Some researchers have seen Anthropology as a branch of History; but we believe this must be the other way around because history covers a very limited time-frame and a very limited facet of human endeavour. Detailed historical narratives need not form a part of Anthropology, but the Anthropological Historiography, the way we have proposed it, most certainly needs to integrate with all the sciences described here in a logical and a coherent way.

- *Applied Anthropology*

Anthropology may be classified into Academic Anthropology and Applied Anthropology. Applied Anthropology is the application of Anthropological theory and concepts to the solution of real world problems. This concept was first put forward by Daniel G. Brinton in 1895, and is widely used today by governmental and non-governmental agencies. The relationship between Anthropological Historiography and

Applied Anthropology is at best oblique. However, there will be an interface between real-world problems and solutions proposed as a part of Anthropological Historiography. For example, field studies may indicate a particular characteristic associated with a culture which requires a specific type of remediation, and an Anthropological Historiographer may make use of specific types of ethnographic studies in his work, and Ethnographic studies carried out by other Anthropologists may form the basis of this work. This will ensure that an Anthropological Historiographer proposes solutions to real-world problems.

- *Cross-cultural studies and other studies*

Cross-cultural studies have been typically undertaken to study different cultures and cultural values and examine the impact of cultures on their adherents. Cross-cultural studies also comprise of cross-cultural comparisons. The Anthropological Historiographer can carry out Cross-cultural studies to assess the presence of notable traits in an alien culture, and those worth emulating. The effects of these on effecting cultural change can also be documented. These can then be used in a historical analysis or narrative to emphasize aspects of a culture that need remediation. This can be put to effect most judiciously, to demonstrate how the presence of such traits has proved to be beneficial to the culture in question. This can also be used to show how negative traits i.e. over-tolerance for suppression or lack of awareness have stymied progress and deferred uprisings. A cross-cultural frame of reference will always prove to be useful to an Anthropological Historian in achieving his goals of producing narratives that seek to bring about socio cultural change. Many cross-cultural studies have already been carried out; a pioneer of cross-cultural studies was Margaret Mead whose work 'Coming of age in Samoa' was a trend-setter in cultural studies. This means that the utility of an Anthropological Historiographer will continue long after cultural remediation has been carried out. Cross-cultural studies will always throw up fresh vistas for study.

- *Archaeological Anthropology*

The theoretical framework of Archaeology was developed by Gordon Childe, Grahame Clark and Stuart Piggott in the early Twentieth century. Lewis R. Binford and David Clarke were the architects of New Archaeology. This approach emphasized the role of cultural inter-connections and interrelationships between culture and environments. Of late, different schools of thought such as symbolic archaeology, and structuralist archaeology have developed. Ethoarchaeology also seeks to integrate findings from archaeology with findings from a study of hunter-gatherer societies. The historian must provide key inputs to the archaeologist, as tradition has played an important role in Archaeological discoveries and this is something Marxist Historians have never done. The result will naturally be scientific and well-balanced historical narratives and an exponential increase in knowledge.

- *Social and Cultural Anthropology*

Anthropology, especially Social Anthropology, is closely inter-related to history. August Comte, Herbert Spencer, Emile Durkheim and, Max Weber and James Frazer used historical data greatly in their works. Franz Boas founded the school of Historical Particularism as a counter-weight to Unilinear schools of evolution, and stressed the importance of Anthropological data in historical studies. Likewise, A L Kroeber, laid stress on historical studies in evaluating pre-literate cultures. E E Evans Pritchard also attempted to demonstrate the commonality of objectives between Historiography and Anthropology. From our perspective, Anthropological Historiography will play a major role in cultural advancement and the elimination of undesirable traits in a culture.^{48 49}

- *Linguistic Anthropology*

This history of language may be taught to students to help fight theories such as the Divine origin theory of language, and to put the evolution of language in its proper perspective. Only an Anthropological Historiographer will be able to document the history of languages and use it as a protection against pseudo-scientific and quasi-scientific constructs, some of which as being propagated in the garb of science. We had documented and chronicled India's linguistic history in a previous paper, and needless to say, these were based on the foundations of a scientific approach to history.^{50 51 52}

Latest theories on the origin of language may also be taught to students such as the one proposed in our paper. Linguistic pre-history including the latest theories such as the one proposed in our paper may be taught to students along with the latest developments in the field of Biology such as the discovery of the FOXP2 gene and the discovery of language processing centres in the brain such as Broca's area and the Wernicke's area.⁵³

⁴⁸ 'History and Science in Anthropology'(1935) A.L Kroeber, American Anthropologist New Series, Vol. 37, No. 4, Part 1 (Oct. - Dec., 1935), pp. 539-569

⁴⁹ 'Anthropologist looks at History' A.L Kroeber Pacific Historical Review Vol. 26, No. 3 (Aug., 1957), pp. 281-287

⁵⁰ "Observations on language spread in multi-lingual societies: Lessons learnt from a study of Ancient and Modern India" that was published in "Elk Asia Pacific Journal of Social Sciences" Sujay Rao Mandavilli 2015

⁵¹ Syncretism and Acculturations in Ancient India: A New Nine Phase Acculturation Model explaining the process of transfer of power from the Harappans to the Indo-Aryans Part One Sujay Rao Mandavilli ICFAI Journal of History and Culture January 2009

⁵² Syncretism and Acculturations in Ancient India: A New Nine Phase Acculturation Model explaining the process of transfer of power from the Harappans to the Indo-Aryans Part Two Sujay Rao Mandavilli ICFAI Journal of History and Culture January 2010

⁵³ On the origin and spread of languages: Propositioning Twenty-first century axioms on the evolution and spread of languages with concomitant views on

- *Psychology and Behavioral studies*

Cognitive development occurs from a very young age. Thus, the foundations for the growth of the body, brain, sensory capacities, motor skills and health are laid at a very young age. These in turn lay the foundations for emotional growth. Social attitudes in turn shaped by the cultural mores of society and we have discussed this at great length in our papers. We had also proposed the Vertical-Horizontal factors model. Per this approach, the objective would be to augment the horizontal forces such that the vertical forces are weakened and nullified. Thus, any remediation approaches have to take into account both physical or biological factors and social or cultural factors. This will not only determine the approach to be taken and the course contents, but will also decide at what age such efforts will need to be introduced for maximum efficacy and impact. A critical period is a specific time when a given event, or its absence has a specific impact on human social development or development of thoughtworlds and worldviews. These periods are not universal; they may vary from culture to culture and individual to individual. Some other researchers prefer the term 'sensitive periods'. According to a study by Paul B. Baltes, Lindenberger and Straudinger, development is multi-dimensional and multi-directional; it takes place at biological, physiological and social levels. They also showed that the relative influences of biology and culture shifted over the human life span, and that culture played a major role in determining the pace of social change. They also suggested that the development process could also be modified through external stimuli. They also spoke about 'allocation of resources', something that corresponds to our idea of mind-orientation and mind space. The core underlying philosophy behind both is that resources such as time, money and materials are fixed, and that individuals seek to utilize them judiciously keeping in mind their abilities and societal or cultural constraints. Remediation efforts likewise need to be multi-dimensional and will need to include several factors such as mass mobilization or creation of the requisite opportunities.

There are several perspectives on human behaviour: Examples of these are Psychoanalytic approach (which focuses on a study of unconscious emotions and drives), learning approach (which focuses on a latent desire of individuals to learn), cognitive forces with comprise of analysis of inputs and attendant thought processes, and the contextual approach (which studies the role of historical, social and cultural factors in influencing development). The Anthropological Historiographer can also use these to determine the appropriate approach to be employed in a given context.

Another vibrant field of study is Social Psychology. Social psychologists mainly analyze the factors that shape the thoughts and behaviour of individuals in different cultures and

societies. The way a human thinks and evaluates the world is therefore greatly determined by his cultures values and mores, and these factors must be borne in mind by the Anthropological historiography when he formulates his techniques.⁵⁴

Educational Psychology is also a rapidly emerging field. In 1890, William James of Harvard University lectured to teachers about the role of psychology in education, and these were published in 1899. James' student, G. Stanley Hall also attempted to understand children's attitudes to learning. In 1903, the first text in Educational Psychology was published by E.L Thorndike. Educational Psychology today is a vital field with its own framework of theories, techniques and methods. According to Jean Piaget, there are four qualitatively different stages in cognitive development which can be used for a study of acquisition of both linguistic and non-linguistic skills. These are the Sensorimotor stage (involving the senses and motor activity), the Pre-operational stage (At this stage the child develops some Semiotic ability and logical thinking), the Concrete-operational stage (At this stage, the child develops more advanced mental and cognitive abilities), the formal stage (which involves full-fledged cognitive abilities). Piaget's approach was also studied and applied in India. However, one drawback of this approach was that it ignores the role played by culture and tradition in fostering learning.

Another approach towards learning is the socio-cultural or the socio-historical approach. This emphasizes the role of development in cooperative dialogues between children and more cooperative members of society. This school was led by Vygotsky and others, and according to this school, every function in a child's cultural development appears twice: first at a cultural or a social level, and then at an individual level. This approach states that what, how and when a child will learn is determined primarily by the socio-cultural environment, and as such suits the underlying principles of our approach very well. A similar approach is the bio-ecological model. This model was developed by Bronfenbrenner, and again emphasized the social and cultural contexts which promote development. This approach, describes a microsystem, a mesosystem, an exosystem all of which reside within a macrosystem, and again tallies very well with our approach and point of view.

Most research has also shown that there are wide individual and cultural differences in cognitive styles, learning styles, thinking styles and decision-making styles. According to work by Li-fang Zhang and Robert Sternberg (2005), learning styles can be organized on three traditions: Cognitive-centered styles (to assess techniques used by people to process information), Personality-centered styles (this approach relates learning styles to personality traits), and Activity-centered styles (This

language dynamics Sujay Rao Mandavilli ELK Asia Pacific Journal of Social Science Volume 3, Number 1 (2016)

⁵⁴ Fundamentals of Social Psychology Robert A. Baron, Nyla R. Branscombe, Donn Byrne, Gopa Bhardwaj, Dorling Kindersley India (Pvt) Ltd 2012

approach uses a combination of cognitive styles and personality traits). Some students also adopt a surface-processing approach only and are not interested in understanding the subject in depth (for grades, appreciation, or marks only) and some others take on a deep-processing approach. Several researchers like Delpit (1995), Gloria Ladson-Billings (1994, 1995), Moll, Amanti, Neff and Gonzales (1992) and Siddle Walker (2001) have also worked on culture specific pedagogical techniques. Ronald Tharp (1989) has also studied the role of cultural values and social structure in shaping learning patterns and proclivities. Even though the subject of Anthropological Historiography may be in its infancy, all these will need to be borne by an Anthropological Historiographer as he adopts a culture-specific approach, and decides how to create mini-eureka points and eureka-points keeping in mind students' cultural predispositions and individual variations. Several other factors must also indeed be borne in mind: examples of these are cultural pride, his relative social position, his desire for success in life, and the fact that most students do not view history or knowledge of history as a major subject or as an ingredient for success in life.^{55 56 57 58 59}

The Author is also interested in knowing how the Seven Societal orientations proposed by us in an earlier paper dictate not only the pace of socio cultural change but also determine the quantum, breadth and quality of scientific output. A future-oriented society which is unfettered by the chains of its past, marches boldly ahead, giving its creative instincts a free rein and allowing its creative juices to flow. There apparently is a dearth of meaningful studies in this regard. Compare and contrast the USA and India: The former is an intellectual and a scientific superpower and the latter is just a midget. How will a change in societal orientations impact scientific output? Time alone will bear testimony to this, and only long-term case studies can throw light on this. Of course, we must isolate factors such as economic development, social development, the educational system and relative linguistic ability while making any assessment. We are however, barely scratching the surface at this juncture; the process of strategizing approaches to cultural remediation has barely or only just begun.

- *Religious studies and study of religion*

Scientific constructs on the origin of religion are very important as they can help fight superstition and blind faith. As we can see, scientific narratives on the history of religion

would be different from popular ones. For example, the term 'Hinduism' did not come into use until well after the tenth century. Most aspects of Indian religious tradition evolved as a result of an interface between the Indus Valley Civilization and Aryan Culture. This is quite naturally different from any religious narrative which involves creationism and the Ten Avatars of Vishnu, for example.⁶⁰ Any change in popular perception alone would lead to a scientific awakening of sorts, if properly conceptualized and applied. Suitable techniques may include narratives of how and why religiously-inspired narratives were formulated. For example, the emergence of Buddhism in 600 BC led to a rivalry between the Vedic orthodoxy and Buddhism and led to a flurry of mythification. Most historians also date the Bhagavad Gita to this period, and it is considered to be a post-Mauryan text. In spite of the teaching of formal history for decades, popular perceptions have yet to change, and religious-driven paradigms continue to rule the roost. One may be mystified by the sad state of affairs. Teaching methods are largely to blame here, and Marxist historiography has obviously failed miserably and utterly to deliver the goods given that it has viewed culture and religion as an epiphenomenon. This obviously is a naïve and an ill-conceptualized assumption, and this approach alone has pre-empted all hopes of change.

The importance of scientific historiography is falsely believed to important only in countering Hindu religious dogma given that this religion was not founded by any individual, but is synonymous with the sum total of the religious beliefs of various peoples of the sub-continent. Scientific methods of inquiry can also be employed to trace the causes of the emergence of religions such as Buddhism, Jainism and Christianity. The origins of Islam are likewise, very obscure, and attitudes towards this religion have been mixed in the USA and the UK, with many seeing it in negative light and as a threat to world peace. However, there have been many admirers of Mohammed in the West, and such people have included Edward Gibbon, Simon Ockley, Reverend Bosworth Smith, James A. Michener and others. On the other hand, there have been many critics of Islam. These have included Robert Spencer, Brigitte Gabriel, Pat Robertson, Christopher Hitchens, Sam Harris, and Richard Dawkins besides apostates such as Nonie Darwish, Ali Sina, Wafa Sultan, Ayaan Hirsi Ali and Taslima Nasrin. A thorough and an objective research on the origin of Islam are however lacking. Some have even projected Mohammed as a warlord, though this is disputed by others. However, it is virtually impossible to take sides in this debate at this point in time given the paucity of objective data.

⁵⁵ Educational Psychology SP Chaube and Akhilesh Chaube Lakshmi Narain Agarwal, Agra 1983

⁵⁶ Fundamentals of Educational Psychology Anita Woolfolk, Girishwar Mishra, Arbind Kumar Jha Eleventh edition Pearson 2015

⁵⁷ Social Psychology Eight edition Elliot Aronson, Timothy D. Wilson, Robin M. Akert Pearson, 2014

⁵⁸ Child Psychology Dr. Kumar Lakshmi Narain Agarwal, Agra, 2011

⁵⁹ Human development Diane E. Papalia, Sally Wendkos Olds, Ruth Duskin Feldman McGraw Hill Education (India) Private Limited, 2004

⁶⁰ A Dictionary of Asian Mythology By David Adams Leeming p. 19 "Avatar" Hinduism: An Alphabetical Guide By Roshen Dalal p. 112 "Dashavatara"

- *Other Sciences*

Integration with sciences such as Astronomy may be far-removed from the scope of an Anthropologist, but he may collaborate with educationalists and other specialists to ensure that a seamless framework is presented to the student that will form a bulwark against blind reliance on tradition. Modern theories of the origin of the universe and its size are naturally at odds with traditional theories of creation. Teaching of such fundamentals must be designed to inspire awe in students, and this is something that has not happened till date. Science teaching has largely failed to take into account the thought worlds and the mindset of the common man. Recently, a Hindu girl was burnt alive for attending church in Madhya Pradesh in India. ‘How and why did this happen?’ we may ask. This is only one of the numerous incidents that blight our landscape. Why doesn’t teaching of science demonstrate that religion is shallow and illusory? Why doesn’t teaching of science bring about a real change in society and induce social and cultural revolutions? Why doesn’t the teaching of science broaden human horizons? Science teaching will have succeeded when it makes a major impact on human society, and brings about revolutions in thinking. Historiography can play a major role here, but alas, this has not come to pass.

XX. CONCLUSION

Anthropological Historiography, if properly conceptualized and applied, can play a major role in social and cultural emancipation, and can help society break free from the cultural baggage and shackles of the past, and align it with the needs and requirements of the future by rendering dogmas and shibboleths irrelevant and redundant. It can also lead to a intellectual enlightenment and foster a scientific bent of mind. We strongly believe that other scholars and researchers should take this sub-discipline seriously, and give it the attention and focus that it warrants as the attendant benefits for society would be substantial. This will however not only require an enhanced degree of collaboration with scholars and researchers working in other sciences, but a change in mindset and approach as well. While this may take some time, we strongly believe that Anthropological Historiography will not only revolutionize Historiography, but will also impact allied sciences and pedagogical techniques in the coming decades, and needless to say, society will reap the rewards arising therefrom.