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Dr. Rajiba Lochan Mohapatra, an Assistant Professor in the Department of Education at The University of Burdwan, has been serving the institution for the past ten years. Prior to this, he dedicated six years to Ramakrishna Mission Shikshanamandira, contributing significantly to the academic and pedagogical landscape. With an impressive research portfolio, Dr. Mohapatra has successfully guided four Ph.D. scholars to completion. His scholarly contributions extend to authoring seven books on Education, along with publishing approximately fifteen research articles in esteemed national and international journals. His academic endeavors reflect a deep commitment to advancing educational research and pedagogy.



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## Revisiting the Past Knowledge tradition of Bharat: A critique

Dr. R. L. Mohapatra  
Dr. A. Das  
Dr. S. Das



# Revisiting the Past Knowledge tradition of Bharat: A critique

Edited by

Dr. Rajiba Lochan Mohapatra • Dr. Arpan Das • Dr. Somnath Das



**Revisiting the Past Knowledge Tradition of Bharat:**  
**A Critique**  
**(Volume-1)**



International Academic Publishing House (IAPH)







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A Critique  
(Volume-1)**

**Editors:**

**Dr. Rajiba lochan Mahapatra, Dr. Arpan Das and Dr. Somnath Das**

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## Foreword

It is an honour for me to write a foreword for this book titled “**Revisiting the Past Knowledge Tradition of Bharat: A Critique (volume-1)**” edited by Dr. Rajiba Lochan Mohapatra, Dr. Arpan Das and Dr. Somnath Das.

The book covers learning resources cutting across eight organised disciplines such as physics, chemistry, philosophy, geography, history, economics, literature and education which reveals that knowledge is holistic and it has no boundaries. This corroborates the idea of multi-disciplinary and inter disciplinary nature of knowledge envisaged in NEP 2020. Indian philosophy acknowledges one and only one reality, Advaita Vedanta. Therefore, the knowledge of reality cannot be fragmented. Time has come to remove the silos between science and social sciences. There has to be a reconciliation between the material and social nature of man. Forms may be many but the informing spirit in every branch of knowledge is one. The forthcoming book demonstrates the oneness of knowledge. It promises to restore the indigenous knowledge and value system which guided our life and living over centuries. The medieval and colonial period of Indian history has reduced our glorious past to unimportance, resulting in cultural alienation of Indians. Our students, even at the tertiary level, hardly know that India is the classic land of culture and religion where philosophical thinking had its origin in the form of the Veda and the Upanishad long before Thales, the pioneer of philosophical thinking in the West. Indian Dharma is so inclusive that all religions can be accommodated within its fold. We are the people to say वसुधैव कुटुम्बकम्..... सर्वे भवन्तु सुखिनः . We have the potential to lead the world community towards peace and progress. There are thirteen chapters in the book with distinct seminal ideas. Various chapters in the book can enlighten and elevate the readers to the next higher intellectual level. The first chapter of the book talks about the preservation of regional literature, acknowledging the multilingual nature of this diverse land. The second chapter highlights the need to safeguard biodiversity and ensure the rule of law. The third chapter brings Chanakya back to life by focusing on the relevance of the Arthashastra in contemporary India. The fourth chapter seeks to analyse the Vedas so as to pave the way for the holistic development of man. The fifth chapter seeks to rediscover the wisdom of ancient Hindu jurisprudence. The sixth chapter intends to inspire us to accumulate spiritual wealth instead of personal gains and accomplishments. The seventh chapter, which is related to economic thoughts, takes care of Samyak Ajibika as envisaged in the philosophy of Lord Buddha. The eighth chapter throws light on cosmology according to Vedic contemplation. The ninth chapter is relevant for teachers and teacher educators and intends to call upon them to integrate Indian Knowledge System into the modern curriculum and spiritualise the process of education. The tenth chapter calls upon scientists to build a bridge between chemical knowledge and practices of ancient days and contemporary life, which poses a menace to the very existence of the human species. The eleventh chapter seeks to draw an analogy between Brahmana in the Upanishadic tradition and aether in Physics. The twelfth chapter is an attempt to address epistemological issues arising out of Indian philosophy and present a framework to deliver full proof knowledge of reality. The thirteenth chapter analyses Teacher Education in colonial India, directed towards class education, so as to revisit the contemporary teacher education practices and make it India-centric, directed towards mass education of substantial quality.

The book contains a comprehensive package to cater to the intellectual curiosity of those who are in pursuit of knowledge and wisdom from an Indian perspective.

I congratulate the authors and editors of the book to bring up such a finished work which would be of immense help for the implementation NEP 2020 in the country.

My best wishes and warm regards to all those experts who are associated with this great work. Let the process continue to generate intellectual and spiritual thinking. Looking forward to see the second volume of the work.

(G C Nanda)

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## Acknowledgement

An edited volume on ‘Revisiting the Past Knowledge Tradition of Bharat: A Critique’ is coming to the light. This book has thirteen chapters. Each chapter is contributed by eminent scholars of the respective field. The topics covered are diverse. These are—Literature, Biodiversity, Arthasastra of Chanakya, Vedas, Hindu Jurisprudence, Spirituality, Economics, Cosmology, NEP-2020, Chemistry, Physics, Epistemology and Teacher Education.

In this context, we owe our gratitude to all our authors for their intellectual contribution. Their research, information and presentation will definitely add value to our book.

This book will open the mind of readers about the ancient Indian knowledge system and foster their curiosity to know more about ancient Indian knowledge and its application. We are thankful to the potential readers of this book for showing their interest and finding time to read it.

We express our utmost respect to Dr. Gauranga Charan Nanda, Retired Professor of Education, Ravenshaw University, Cuttack, for going through the matter and writing its ‘foreword’. We express our pranam for his generosity.

Nothing in this world is possible without the blessings of God. It is his blessing that is fructified in the form of this literary Endeavour. We bow before the almighty for his bountiful blessings.

Rajiba Lochan Mohapatra, Ph.D.

Arpan Das, Ph.D.

Somnath Das, Ph.D.







**Dedicated to Swami Tattwasarananda Maharaj-  
Ramakrishna Mission, Belur Math**

**A beacon of wisdom, compassion and unwavering spiritual  
strength.**

**Your life of selfless service, profound insight and quiet  
resilience continues to illuminate the path for seekers of  
truth. This work is a humble offering at the feet of your  
towering presence, in gratitude for the timeless inspiration  
you have shown in hearts across generations.**

**May your light guide us ever inward, towards the self.**





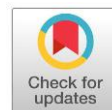


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## Preserving Regional Literature: By the People of the People

Meera Vasani

### Abstract:

Local customs, traditions and stories serve as the foundation for regional literatures derived from the natural world's heritage. The natural environment and human society of the area have an impact on regional literature, which is acknowledged and owned by those who collect it for posterity. In other words, regionalism is required for the work of art to derive its substance from the region, which can further be affected by natural factors such as climate, topography, flora, and fauna, as well as the unique modes of human society. The nineteenth and twentieth centuries of Indian literature, which spanned 1801-2000, included regional literary elements, especially those that were rooted in the country's history. This collective nationalist enterprise legitimized itself by claiming to possess native, authentic, and traditional sources of Indian identity and culture. Common Indian folktales and mythology were the foundation of Indian literature, which also developed a sensitive attitude toward nature and explained the connections between human and non-human cultures. This paper delves deep into the probable theories relating to the methods developed by tribal communities to preserve their culture and heritage. Without debating the appropriate documentation and other methods, this paper is another method to keep a few of their illustrious practices memorable.

**Keywords:** Regional literature, preservation, tribal practices, Indian folktales

### Introduction:

#### The Explication of Regional Literature in India:

From the epic part of human existence that has been spent in the neighbourhood of the natural world has given rise to myriad of dislocated pieces of heritage. Such a piece's traverse into the form of creative information or a piece of art from its place of origin to the new lands and get to be recognised and owned as regional literatures. Its traversing history discloses its representation from a particular geological location up to its further associations with the objects, values, meanings and cultures of the passing land. Just like a beautiful piece of pearl that travels from the seashores to the curator of an expensive exhibition, further preserved in the treasure box of the collectors, and finally reaches the form of a souvenir to its near and dear ones. Similarly, the regional literature originates from the "vestiges of the local colour and local feeling that reaches through the historical exhibits leaving the inescapable mark of local derivation" (Brown). These local derivations are found in the form of plethora of oral traditions, customs, stories, myths, songs, music, dance and naturally living day-today methods that are ecologically rich and

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that which releases the redolence of regionalism and human condition both at the same time. While, “a closer definition of regionalism would require the work of art not only to be nominally located in the region but also to derive actual substance from that location. According to George R. Stewart (1948), this regional substance will be derived from the following two sources:

1. The substance that comes from the natural background such as the climate, topography, flora, fauna, etc.- that affects the human life in the region and
2. The substance that comes from the particular modes of human society that happen to have been established in the region and that have made it distinctive (Stewart).

Thus, a union of variegated genres like naturalism, regionalism, historical, and cultural is found to be grounded in the literary criticism of the regional literature.

Having said that, the Indian literature of the nineteenth and twentieth centuries, spanning between 1801 and 2000, at the time when the Indian state was getting prepared for its independence, had shown the various interests of regional literary elements, especially the ones that go back to the roots. Thus, as “a collective nationalist enterprise the Indian literature was able to legitimize itself easily by claiming to possess the native, authentic and traditional sources of Indian identity and culture respectively; wherein, the literature searched for uncontaminated precolonial or non- European “high” literary past. It was predominantly seen in the Indian context that it rooted out common Indian “folk” culture that consisted of marvellous folktales and mythology (Dharwadker). Such stories unfolded the inter-link between human and non-human cultures remarkably by explaining the basic principle of human coexistence and struggle with nature in an indigenously creative way.

It further, fictionalized the truth experienced in everyday life to develop a sensitive attitude towards nature. Of which, the early references can be found in dramas like Hayavadana and Naga-Mandala performed during the 1960s-70's, in which the story was framed to explain the connections from divine to animal in a natural setup by adopting the means of traditional forms and techniques combined with modern psychological realism. This chain of literary creativity and regional experiments was further “comprehended in the form of short stories of Indian and Pakistani writers in Urdu- from Surendra Prakash, Zamiruddin Ahmad, Balraj Manra, Naiyer Masud and also in other Indian languages from Bengali, Gujrati, and Marathi to Tamil and Malayalam, in which the writers combined the devices of historical, cultural, social and psychological realism to produce representations of regional realities” (Dharwadker). Here, the regional novel dealt with the physical features of the region, people, locality, life, customs, habits, traditions, superstitions etc., in which the novelist brought to light the uncommon features of common people of the region. Many times, the story was resided in a geographical place or was embraced only in a mental place, but it is important to note here that the regional literature was created and peopled in such a way so as to represent any other place. Therefore, canvassing it as a microcosm of the country and the world at large.

Thus, the importance of regionalism can be understood from the following three contexts suggested by Prof. Vinay Dharwadker in his essay, “Some Contexts of Modern Indian Poetry” published in Chicago Review in 1992 that explains the contexts particularly important for an understanding of regional texts as especially in Indian languages such as:

the history of various locals, regional and national literary movements,

the web of Indian and foreign influences which provides the intertextual basis of poetic writing and the social backgrounds of the poets, writers and the audience and

including the author's involvement in some recent social movements on the subcontinent.

The study on the above frame of references is still found to be unsettled in the history of the regional literature of indigenous communities residing in the far interior neighbourhoods of the green and brown forest environs in India. One of the reasons for its literature to be in the discomposed state till today out of the many historical and social wrongdoings done towards the indigenous people and their culture is their form of literature being in the oral compositions. Unfortunately, these oral compositions consisting mainly of uttered traditions, songs, rituals, mantras, stories and performances mostly remained script less for a very long period of time in the Indian history and were scarcely available in the so-called universal language and hence stayed unappreciated to generate a universal appeal. Consequently, the indigenous regional literature getting contracted into the category of the second-rate works (Mahto).

This issue of underrating the regional novels was raised in the 1970s itself by Henry Auster, questioning directly, "Why has the genre and its various forms been so neglected in the disciplinary and critical study?" (Mahto). Even tracing back, the different elements of regional literature like "the folk literature, folk music, folk drama, folk dance, folk art, folk belief etc. were the terms borrowed by the Indian theorists from the western theorists to study the elements of regional literature and culture in India. But, very soon it was realized that not all the western terminology may suit our Indian culture." (Patel). E.g., "the festivals of the Bhils of North Gujarat respond to the cycle of the season, dotted by different festivals corresponding to the change in season; the songs, bhajans and narratives recited on these occasions are called upon with distinct names such Arelo, Bhajan Varta, Vatavana na Geet (songs of welcome, pleading the deity to grace their dwelling), Hag na Geet (songs sung by a large group of people on different occasions) etc., which do not have their counterparts in the western traditions and ergo should be known by the same names in order to retain their distinctness)" (Patel).

However, when we start exploring more in detail about regional works and that also of the tribal people and authors, we tend to come across the majority of it emerging from Eastern and North- Eastern belt of India, while the regional literature and indigenous knowledge systems of tribes of western and central India are found missing.

### **The State of Indigenous Literature and its Expression:**

#### **The Relationship of Tribals with Literature:**

During ancient times, the tribal people used to prepare the arable land for farming. A new kind of change was observed in their body and mind when they started this work each season. Naturally, by spending long hours into the ploughing soil and inhaling the moist scent released from the earth, carrying out the art of sowing seeds manually and catching the sight of dancing crops around them, all of these generated a kind of rhythm in their body inspiring into words that got fabricated into songs and echoed in the farms of the tribes. They then, in their free time, gathered from surrounding villages and would go to catch fish in the big rivers by crossing farms, hills, and ponds. The whole scene looked like a marriage procession. This act of going together on hunting fish is called Doyare by the adivasis. When the big river rises and the water in the river dashes between the two sides of the bank, a bunch of fish hurtles in this gushing water and gets into the hands of the people who have arrived for hunting. The group cherishes this moment, and as and when the fish are pulled into the basket, a chorus of new songs is lauded. The whole day is spent in this high-spirited activity and such joyful events occur many times throughout the year.

The festivities of the Gods and Goddesses are also celebrated with the same zeal. People in groups called Devara go to the worship place of the community Goddess Yaha Mogi. They reach the holy place after walking for four to five days. While on the journey, the whole night is spent singing, dancing, acting, and reciting stories. All these



things together walk hand in hand with the merry life of the tribes. Not only in the days of celebrations but also on occasions such as death, the songs, dance, plays, and stories are recited. The tribes believe that for them, it is equal to going through both the happy and tragic moments of life, as they believe there is not much difference between them and the nature in which they live.

Like nature, which goes through seasons of bloom and fall throughout the year, striking a balance. In a similar way, the Adivasis enjoy the joyous moments of life and believe in letting go of the tragedies of life, equally. Thus, abiding by this kind of high synergy and philosophy towards living life, the Adivasis believe that it helps them to stay happy and satisfied without craving material wealth and sustaining in the lap of nature by always singing and dancing. The Adivasis, by living in forests and hills for centuries, had established a separate social, cultural, religious, and political system that formed the principles of 'self' identity, which in turn gave rise to the oral literature of the tribes. This form of literature was a part of everyday tribal life and hence, an inspiration to evolve and accept the natural circumstances.

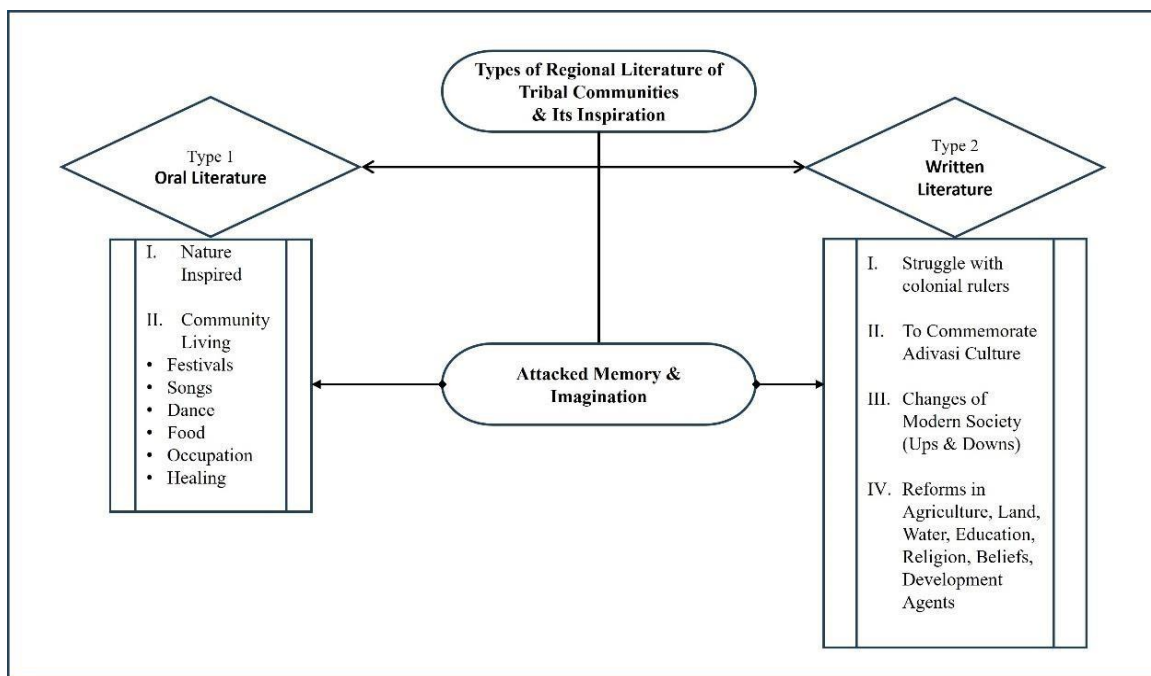
The tribals made sure that the so-called society goes on developing and runs through their principles, but do no harm to them or their culture and nature, and thus operate a valued lifestyle. Their ancestors, through the support of their indigenous wisdom, imagination, and instincts, had tried to keep nature at the centre of all their socio-cultural institutions. The thought for nature then remained always at the core of all the activities the tribal generations carried out then. Since life was in harmony with nature, the mind did not develop pure and impure thoughts in the acts. It was the most pious time in the history of tribes when tribal society was untouched by the so-called modern parameters of life, such as happy-depressed, truth-false, rich-poor, upper class-lower class, men-women, righteousness-sinfulness and other life practices.

All these cultural impurities did not take shape in the social life of the tribes. Equality, group organization, co-operation and spirit of co-existence remained in all these tribal social structures and consciousness. Ideas such as "Nature has created a high human spirit, not to collect, to accept the maternal form of the earth, to worship the ancestors, not to differentiate between castes and genders, the living world and nature" remained the basis of their social system.

The only life that was lived and breathed was that of the inherent independence felt in nature and the warmth of being connected with its own community. Things such as their relationship with the sky, earth, wind, water, river, forest, trees, animal world, and with the visible and invisible natural elements in the world created by their ancestors, the philosophy of life, behavior and global outlook supported the tribal literature. Thus, it can be derived from the above examples that vast nature and collective life experiences are the first source of inspiration for tribal literature and beauty. These day-to-day experiences, consisting of community life and a strong connection with nature at the time of work, pastimes, festivals, pilgrimage, and even tragic events, were first translated into folksongs and folk stories, following folk dance and dramas as a mode of expression in the tribal life. Hence, it is believed that an oral form of expression became the first type of tribal literature and remains the oldest type of ancient literary form.

However, when we hypothesize about 'Adivasi literature' and research more about it, we come across two forms of it. One of these is in oral form, which gets passed on from one generation to another, and the second one is in modern written literature on tribes. It is essential that we keep both the forms of oral and written literature in our minds whenever we contemplate Adivasi literature. Many times, it is observed that Adivasi literature is imagined in only one form, resulting in an incomplete analysis of it. When only the oral form of literature is considered, the ups and downs of Adivasi's life discussed in modern written literature are missed. The traditional oral form indicates the new colors of modern life in some measure but fails to portray the fulfilled memoir of tribes that have undergone

a huge transitional phase in contemporary tribal life. Whereas, many times it also happens the other way round that we get so overwhelmed with the issues of modern written tribal literature that we remain ignorant about their old traditions and way of living. Therefore, this research study examines both the (a) oral and (b) written forms of tribal literature and tries to incorporate the collection and analysis of it in this study.



**Figure 1. Types of Tribal Literature.**

### **A. Oral Literature - An Earliest Form of Tribal Literature:**

Literature among tribal people still remains in oral form to date, as ‘folklore’, because of its essential quality in keeping evolving all the time. In the tribal society, the songs sung during the gone by festivals in the past season become old and forgotten within one to two years. And in that case, in this tribal tradition of celebrating festivals, a new composition of songs, depending on the type of occasion, is formed in the mind of the creator. Following this, through the voice of the singer and the curator, the newly formed composition is presented in the form of folklore/dialect and folk music in the midst of the festive atmosphere between the community members. This newly presented composition is then converted into the powerful rhythm of the folk dance making the festival enliven with new songs and dance. A rhythmic organism which forms together during such occasions are called as ‘Gita’ by the Adivasi people and ‘Lokgeet’ (folksong) by the other cultures in the society.

And therefore, the folk literature (consisting of folklore, song, music, drama, etc.) which is primarily in oral form can be called the basis of any type of literature. Folk literature is one of the branches of folk knowledge that has a very deep connection with the overall folk culture. However, written personal literature is also distantly related to oral folklore because the life of any person begins with family and society. Therefore, even without realizing it, people's vision of life takes an artistic form in their creation. Such is the case with many poetic personalities. Sometimes the personal passions that inspire people are so passionate that these passions result in artistic forms such as personification of art. Thus, the important reason why the creator of the folk and the individual creator come to the same level of creation in many cases is that both cultures are part of the folk culture. Hence, the way of life of the society has an influence on its creation. In line with this, the views of famous Western thinkers 'Renewalek'



and 'Austin Warren' are worth knowing. He writes in his study and thought-provoking book called *Theory of Literature* (1955) that “Oral literature should be considered as an important subject for every scholar who wants to understand literary processes and the origin and development of literary forms. The study of oral folklore is an inherent part of literary analysis, as it cannot be separated from written works of literature” (Purvapara 2009). Even a folklorist like Archer Taylor in his article 'The Folk Knowledge and The Student of Folklore and Literature' and a book edited by Alan Dundes titled *The Study of Folklore*, 1965, provides the following three very significant remarks about the importance of folklore in any literary analysis:

- (1) folklore is integral to literature in many cultures
- (2) literature contains elements borrowed from folklore, and
- (3) writers have always taken inspiration from the folklore.

To understand this in a more expounded way let us draw an analogy between the poetic creation from the well-versed ancient poet Kalidasa and the songs created and sung by the *Gothiyan* (the creators and the singers in the tribal communities).

E.g., like Urvashi, who made a mistake while presenting a performance of ‘Vikramovarshiyam’ (a Kalidasa play) in the court of Indra as she was dreaming about King Pururvana and received a curse from Bharat Muni to fall on earth. In the same way a ‘*Gothiyan*’ who deeply falls in love of ‘*Gothiya*’ forgets the rhythm of ‘*sango*’ dance as follows:

આયા માર, કાબાંરીયો પાટ પડરયો  
આયા માર સાગોવાળો એલો  
પલૂડી ગઈ રે,  
આયા માર આયા માર,  
આયા વાકળા ઓછ રે,  
આયા માર સાગોવાળો એલો  
પલૂડી ગઈ રે,  
આયા માર

**Meaning:** The *Gothiyan* deeply remembers and falls into the loving memories cherished with *Gothiya*. This results into forgetting the rhythm of the ‘*sango*’ dance practiced since childhood. Hence, making her surprised that what kind of Maya is this that made her forget this childhood art.

Thus, in this way the songs being the shared property of the *Gothiya* and *Gothiyan*, we find the simple, sweet and the ornamented lyrics and rhythm that draw a beautiful picture of love making. Thus, touching the hearts of the listeners.

Song is almost every time there in their simple expressions of life. Even the words become perpetual through these songs. Here, the expressed feelings such as affection before and during meeting the lover, their separation, and the utterance of deep love are not merely to be enjoyed during the Rasashatra but are the emotions of real life.

These songs of the tribals are so creative and are related to real-life sentiments that they can be even helpful to the Aryans in their great literary creations, such as Kavyashastra, Soundarya shastra, Rasashastra.

Hence the great theorist like Abhinav Gupta says, "Whatever is in '*Lok*' is perfected in '*Sastra*', it is regulated. Whatever is in '*Shashtra*' or '*Sisht*' sometimes comes from the self-spontaneity of the folk." For Indian thought considers '*folk*' as natural and instinctive compared to the '*Sishtajana*' and considers its literature as the source and basis for the creation of '*Sishta*' literature.

Hence, just like the epics Ramayana and Mahabharata, which were also sung in folk tradition in ancient times and later appeared in written form. In a similar way, if the tribal literature had been put into written form on time, then it would not have fallen into a dormant state. This issue, however, was realized by many scholars and people interested in tribal literature in India. They strongly believed that, "Just as it became possible to create an 'Epic' from the 'Ballad' of English literature, if the folk songs, folk stories, folk plays, legends etc. sung in tribals are given a written form from oral, then surely a rich literature can be created from them."

## **B. The Onset of Adivasi Modern Literature- The Writing Age:**

Adivasis in India were found to be speaking a dozen secret languages that helped them to form their ideas of time, space, and non-being culture around them. Over time, as Adivasis were oppressed by foreign forces, their languages were also oppressed. Out of these, some of the languages were found already dead, and some were noted as fast disappearing. This disappearance of the mother tongue made the Adivasis even weaker in expressing themselves amongst the people speaking official languages. In 1969, the Central Institute of Indian Languages was set up as a nodal agency to work on documentation, description and development of minor languages. As a result of this, various materials on Adivasi language and literature were produced through its partner agencies spread in different parts of India. One of the major contributors to this process of empowering the smaller mother tongues came from the Bhasha Research and Publication Centre, founded by Ganesh Devy in 1996 in Vadodara, Gujarat. Bhasha Centre, through its hosts of writers and researchers under the leadership of Devy, started a full-fledged campaign in various tribal belts of India that opened up the dialogue on tribal literary history, literary criticism, valuable traditions of tribal literature, culture, and their identity. Hence, the new trend of writers and field investigators began on their journey of preserving and conserving the tribal culture.

They realized that the change that had come in the community from outside in the past four or five decades and after independence had affected the whole life behaviour of the tribes. Major changes such as displacement of Adivasis due to building of dams on the rivers, the upcoming heavy mining and mineral industries, the introduction of BT seeds and pesticides in farming, the heavy waste dumped in the land, the outburst of diseases affecting humans and animals, inadequate food production, birth malnourishment and wild forest fighting were all those hazardous things that paralyzed tribal culture.

Not only that, the writers and field investigators also noticed that Adivasis also suffered greatly from the non-inclusive behaviour done towards them by the non-Adivasi community of Indian society. Their life, their language, literature, and even their martyrs who sacrificed their lives in the history of Independent India were never given a respectable space in Indian history. It was at that crucial time that an inner voice in Adivasis called out for an urgent demand to express and pen down their hardships and struggles to society. Thus, this expression emerged under the name of tribal modern literature. This literature is inspired by the overall struggles of the world over the loss of forest, land and water, which are connected with the lives of tribal people. The betterment of humanity and



independent natural life are the foundations of creative ideas of all types of institutions, organizations, and workers working in modern tribal literature today.

Now, in the last two decades, the tribal languages have gained momentum not only in oral form but also through their written script. This has led to providing a creative level to tribal literature. Individuals and organizations doing social, cultural and ethnic studies in tribal areas are also working in their own ways to contribute and bring out more and more written forms. Whatever the scholars of literature know about the tribal regions and their wealth of imaginative knowledge existing for a long time is now transcribed into written format. This written format emerging in two sects of writings may further be explained with its differences through various parameters like perception, presentation, source of inspirations etc. Both Native and Non-native writers have their differences, which get reflected in their writings, like: the presentations in native will be in their respective dialect, maybe oral and amateur, whereas non-native writers will have a well-framed storyline, demanding change, human rights, etc. The source of inspiration for the native writers is the natural portrayal of day-to-day life in the forest and village, and songs and poems in detail, and elongated narration of marriage, rituals, fairs, etc., whereas the non-native writers' songs and poems are inspired by history, struggle, and injustice. Such differences in writing and angle are apparently visible to the readers.

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## Geographical Indications and Indian Traditional Knowledge System (Bharatiya Paramparik Gyan): Safeguarding Biodiversity and Legal Frameworks

Tanumay Panda

### Abstract:

Multinational corporations frequently exploit remote areas' herbal and mineral resources, relying on traditional knowledge systems while providing minimal compensation to local communities. This practice significantly loses indigenous and rural communities' rich understanding of the natural world, deeply rooted in their cultural heritage. Traditional knowledge systems (TKS) are often marginalized in favour of Western scientific approaches, which, when applied indiscriminately, can lead to unsustainable resource use and biodiversity loss. The lack of recognition and integration of TKS raises critical ethical concerns regarding the violation of indigenous and human rights. Despite these challenges, a growing global interest in incorporating TKS into participatory development approaches has emerged. National institutions and international organizations, such as WIPO and UNESCO, have tried to protect and promote TKS through legal frameworks and conventions like the Convention on Biological Diversity (CBD). However, the absence of a universally accepted framework leaves TKS vulnerable to exploitation and biopiracy. High-profile cases such as turmeric, neem, and Hoodia highlight the challenges associated with biopiracy, where patents are granted for traditional knowledge that is already in the public domain. Legal interventions and strong intellectual property frameworks are crucial to ensuring that indigenous communities receive fair benefits from the commercialization of their knowledge. The case of J.C. Bose, who missed recognition for his invention due to the absence of patents, underscores the need for strategic protection of traditional technologies. Addressing these concerns requires collaborative international efforts, inclusive policymaking, and robust legal measures. Protecting traditional knowledge ensures the preservation of cultural heritage, equitable benefit-sharing, and the sustainability of biodiversity in a globalized world.

**Keywords:** Traditional Knowledge System (TKS), Indigenous Rights, Biopiracy, Intellectual Property Rights (IPR), Convention on Biological Diversity (CBD), Equitable Benefit-Sharing, Herbal and Mineral Resources, Participatory Development, Patent Controversies, Cultural Heritage Preservation

### Introduction:

Traditional practices and beliefs are often marginalized and deemed inferior compared to the universal knowledge derived from Western scientific traditions. Although Western science has its strengths, applying its principles indiscriminately, without considering traditional knowledge systems, has often resulted in unsustainable resource use and biodiversity loss. Scientific management regimes imposed without local community involvement have sparked debates on whether the neglect of traditional knowledge constitutes a violation of human, civil, and indigenous rights. Multinational corporations today exploit the herbal and mineral resources of remote areas, relying

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on traditional knowledge systems. They offer minimal compensation to local communities while reaping substantial profits. This practice has led to a significant loss of indigenous and rural communities and their profound understanding of the natural world, deeply rooted in their connection to the land.

Recognizing these challenges, there is a growing global interest in integrating traditional knowledge systems (TKS) into participatory development approaches. Efforts to document TKS networks within indigenous and rural communities are underway, and national institutions are now valuing TKS as a vital national resource. Development initiatives increasingly address issues identified by communities themselves, building on and reinforcing their knowledge systems and organizations.

In recent years, the international community has started recognizing and protecting TKS. WIPO and UNESCO introduced a model law on folklore in 1981, and the FAO included the concept of Farmers' Rights in its International Undertaking on Plant Genetic Resources in 1989. The 1992 Convention on Biological Diversity (CBD) emphasized the importance of promoting and preserving traditional knowledge. Despite these efforts, a universally accepted framework for protecting and promoting traditional knowledge has yet to emerge.

The CBD established principles for accessing genetic resources and associated knowledge, and for sharing the benefits arising from such access. The relationship between the intellectual property system and the CBD's access and benefit-sharing principles is examined in relation to both traditional and modern knowledge. Investigating traditional knowledge can be contentious as it involves local beliefs and practices that may be sacred or privately held by specific groups.

Several high-profile cases have brought the issue of traditional knowledge to the forefront of intellectual property debates, often involving "biopiracy." Cases such as turmeric, neem, and ayahuasca highlight the problems that arise when patents are granted for traditional knowledge already in the public domain. Invalid patents were issued in these instances because examiners were unaware of the existing traditional knowledge. In the case of the Hoodia plant, the issue revolved around whether the San people, who maintained the traditional knowledge underpinning the invention, deserved a fair share of the commercialization benefits.

Biopiracy, though lacking a universally accepted definition, is described by the ETC Group as the appropriation of knowledge and genetic resources from farming and indigenous communities by entities seeking exclusive monopoly control through patents or plant breeders' rights. In the global economy, patents are crucial for protecting intellectual property rights. However, countries like India lag behind others, such as the USA and the UK, in this regard.

A notable incident involves Francesco Paresce Marconi, a renowned astrophysicist and the grandson of Guglielmo Marconi, who visited Kolkata to celebrate the 150th birth anniversary of J.C. Bose. Marconi Jr. acknowledged that Bose was the actual inventor of the radio, but he missed out on the recognition because he did not patent his work. This incident underscores the importance of patenting traditional technologies to ensure that individuals or communities providing the knowledge or resources receive fair benefits from commercialization, in line with CBD principles.



## Controversial Patent Cases Involving Traditional Knowledge and Genetic Resources:

### Background:

The exploitation of traditional knowledge systems by multinational corporations has led to various controversial patent cases involving traditional knowledge and genetic resources. These cases highlight the conflicts between local knowledge holders and commercial entities seeking patents.

### Major Controversial Cases:

#### (A) Turmeric (*Curcuma longa*):

**-Description:** A plant of the ginger family used as a spice, medicine, and dye.

**-Patent Details:** In 1995, two Indian nationals at the University of Mississippi Medical Centre were granted US Patent No. 5,401,504 for using turmeric in wound healing.

**-Opposition:** The Indian Council of Scientific and Industrial Research (CSIR) argued that turmeric has been used for thousands of years for healing wounds. Documentary evidence included an ancient Sanskrit text and a 1953 paper in the Journal of the Indian Medical Association.

**-Outcome:** The US Patent and Trademark Office (USPTO) revoked the patent, upholding the objections by CSIR.

विकिरति किरणमिव पावकः सर्वेषां विकारकं चूर्णम्।

इदम् अरुणं द्रव्यम् तु मारिचं सर्वरोगनाशनं च॥

(Translation: The powder that spreads like fire and changes everything is turmeric. This reddish substance removes all diseases.)

#### (B) Neem (*Azadirachta indica*):

**-Description:** A tree native to India, known for its medicinal, pesticidal, and fertilizer properties.

**-Patent Details:** In 1994, the EPO granted European Patent No. 0436257 to W.R. Grace and USDA for a method of controlling fungi with neem oil.

**-Opposition:** International NGOs and Indian farmer representatives filed a legal opposition, citing centuries-old use of neem in Indian agriculture.

**-Outcome:** The EPO revoked the patent in 2000, determining that the claimed invention was not novel.

अर्जुननिम्बतुलसीकदलीसहितं च जलम्।

नेमिनिधिमयूखविध्वंसि यथा मलम्॥

(Translation: Water mixed with Arjuna, Neem, Tulsi, and Banana eliminates impurities as the sun's rays dispel darkness.)

### (C) Ayahuasca (*Banisteriopsis caapi*)

**-Description:** A ceremonial drink made from the bark of *Banisteriopsis caapi*, used by Amazonian shamans for healing and spiritual purposes.

**-Patent Details:** In 1986, American Loren Miller obtained US Plant Patent 5,751 for a variety named "Da Vine."

**-Opposition:** The Coordinating Body of Indigenous Organizations of the Amazon Basin (COICA), represented by CIEL, argued that Da Vine was not new or distinct and that the patent violated moral aspects due to the sacred nature of the plant.

**-Outcome:** The USPTO initially rejected the patent but later upheld it after further arguments by the patentee.

औषधे चिन्तयेत् विष्णुं भोजने च जनार्दनम्।

शयने पद्मनाभं च विवाहे च प्रजापतिम्॥

*(Translation: While using medicine, think of Vishnu; while eating, think of Janardana. While lying down, think of Padmanabha; during marriage, think of Prajapati.)*

#### Impact and Response

**-Biopiracy:** The appropriation of traditional knowledge and genetic resources by commercial entities, often referred to as "biopiracy."

**-Legislation and Protection:** Efforts by developing countries and international organizations to protect traditional knowledge. The creation of an Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge, and Folklore by WIPO.

**-Community Rights:** The need for prior informed consent and benefit-sharing with the original knowledge holders, as per the Convention on Biodiversity (CBD).

#### Case Study: Hoodia

**-Description:** A plant used by the San people for its appetite-suppressing properties.

**-Patent Details:** In 1995, CSIR patented Hoodia's active element (P57) and licensed it to Phytopharm, which later partnered with Pfizer.

**-Conflict:** The San people threatened legal action against CSIR for biopiracy, claiming their traditional knowledge was used without consent.

**-Resolution:** An agreement was reached in 2002, granting the San a share of future royalties.

क्षुतं हन्ति हिदयं सश्वासं रक्षति पाण्डुताम्।

वृद्धिं कृच्छ्रमथो भ्रातुः कारणं वातशान्तये॥

*(Translation: It suppresses hunger, protects the heart, mitigates fatigue, cures anemia, and is effective against respiratory issues and for balancing Vata dosha.)*

The integration of traditional knowledge systems into modern intellectual property regimes remains complex and contentious. While there are efforts to protect and recognize the contributions of indigenous communities, achieving a universally accepted framework continues to be a challenge. Addressing issues such as biopiracy and ensuring fair compensation and benefit-sharing are crucial for preserving and promoting traditional knowledge. The inclusion of traditional knowledge holders in the decision-making process is essential for sustainable development and the conservation of biodiversity.

### Managing the Debate on Traditional Knowledge:

#### Overview:

The protection of Traditional knowledge (TK) involves several international bodies such as WIPO, CBD, UNCTAD, and WTO. These debates emphasize understanding the issue rather than developing international norms. Realistic protection systems for TK require deep understanding and practical experience at the national and regional levels.

#### Key Points:

**-Collaborative Approach:** Various agencies must work together to avoid duplication and include diverse perspectives. A single organization, such as WIPO, may not be sufficient to handle all aspects of traditional knowledge.

**-Multiplicities of Measures:** Protection, preservation, and promotion of TK require multiple measures, many outside the intellectual property (IP) realm.

**-Diverse Fora:** Considering the issue in different fora while ensuring coherent approaches and avoiding duplication is beneficial at this early stage.

#### Utilizing the Existing IP System:

##### Examples of Protection:

**-Certification Trademarks:** Aboriginal and Torres Strait Islander artists in Australia use a national certification trademark to promote their art and cultural products and deter false claims of Aboriginal origin.

**-Copyright:** In Canada, copyright protects tradition-based creations such as masks, totem poles, and sound recordings of Aboriginal artists.

**-Industrial Designs:** In Kazakhstan, industrial designs protect the external appearance of articles like headdresses and carpets.

**-Geographical Indications:** Venezuela and Vietnam use geographical indications to protect traditional products like liquors, sauces, and teas.

#### IP Tools:

**-Trademarks:** Suitable for protecting traditional knowledge due to their indefinite extension and potential for collective ownership.

**-Geographical Indications:** Used to protect traditional products if characteristics can be attributed to a geographical origin.



**Limitations:** IP rights requiring novelty or with limited protection periods are less suitable for TK.

Challenges and Considerations:

**-Cost and Access:** High costs of obtaining and enforcing rights make the IP system unattractive for local communities in developing countries.

**-Significance:** The role of existing IP systems in protecting TK is uncertain due to varying impacts and effectiveness.

विद्या विनयसंयुक्ता राज्ञां सेवाम् करोति च।

क्षत्रियः पालयति लोकान् साम्राज्ये स्थायते च सः॥

*(Translation: Knowledge combined with humility serves rulers; the warrior protects the people and sustains the empire.)*

Managing the debate on traditional knowledge requires collaboration among international bodies, diverse approaches, and utilizing existing IP systems where applicable. Protecting traditional knowledge involves multiple measures, emphasizing the need for inclusive and practical solutions at various levels. Addressing high costs and ensuring effective protection remain critical challenges.

### Managing the Debate on Traditional Knowledge:

#### Overview:

A variety of international bodies, including WIPO, CBD, UNCTAD, and WTO, are actively discussing the protection of Traditional knowledge (TK). These discussions emphasize understanding the issue in-depth rather than developing international norms at this stage. Developing a realistic international system of protection for TK necessitates deeper understanding and practical experience at national or regional levels.

#### Collaborative Approach:

**-Cooperation Among Agencies:** It is crucial for agencies to work together to avoid duplication and ensure diverse views are included. A single organization, like WIPO, might not be sufficient to handle all aspects of TK.

**-Multiplicity of Measures:** Protecting, preserving, and promoting TK will require multiple measures, many of which may fall outside the intellectual property (IP) realm.

**-Diverse Fora:** Considering TK in different fora can ensure coherent approaches and avoid duplication.

#### Making Use of the Existing IP System:

##### Examples of Protection:

**-Certification Trademarks:** Aboriginal and Torres Strait Islander artists in Australia use a national certification trademark to promote their art and deter false claims of Aboriginal origin.

**-Copyright:** In Canada, copyright protects tradition-based creations such as masks, totem poles, and sound recordings of Aboriginal artists.

**-Industrial Designs:** In Kazakhstan, industrial designs protect the external appearance of articles like headdresses and carpets.

**-Geographical Indications:** Venezuela and Vietnam use geographical indications to protect traditional products like liquors, sauces and teas.

#### **IP Tools:**

**-Trademarks:** Trademarks are suitable for protecting TK due to their indefinite extension and potential for collective ownership.

**-Geographical Indications:** Geographical indications protect traditional products if characteristics can be attributed to a geographical origin.

**-Limitations:** IP rights requiring novelty or with limited protection periods are less suitable for TK.

#### **Challenges and Considerations:**

**-Cost and Access:** The high costs of obtaining and enforcing rights make the IP system unattractive for local communities in developing countries.

**-Significance:** The role of existing IP systems in protecting TK is uncertain due to varying impacts and effectiveness.

Managing the debate on traditional knowledge requires collaboration among international bodies, diverse approaches, and utilizing existing IP systems where applicable. Protecting traditional knowledge involves multiple measures, emphasizing the need for inclusive and practical solutions at various levels. Addressing high costs and ensuring effective protection remain critical challenges.

#### **Sui Generis Protection of Traditional Knowledge:**

Many countries have concluded that existing intellectual property (IP) systems alone are insufficient to protect Traditional knowledge (TK). Consequently, some nations have enacted or are developing sui generis systems of protection.

#### **National Examples:**

##### **Philippines:**

**-Legislation:** Indigenous communities are granted rights over their traditional knowledge, including control over access to ancestral lands, biological and genetic resources, and related indigenous knowledge.

**-Prior Informed Consent (PIC):** Access by other parties is based on the PIC of the community in accordance with customary laws.

**-Benefit Sharing:** Equitable sharing of benefits from genetic resources or associated knowledge.

**-Free Exchange:** The legislation maintains the free exchange of biodiversity among local communities.

**-Participation:** Indigenous communities are ensured participation at all decision-making levels.

### **Guatemala:**

**-Legislation Objectives:** Recognizes, protects, and promotes the rights of communities and indigenous people related to biological resources and traditional knowledge.

**-Cultural Preservation:** Aims to preserve and promote national culture, including medicinal knowledge and music, placing these expressions under state protection without remuneration.

### **Bangladesh and African Union (AU):**

**-Customary Laws:** Considering sui generis legislation that provides community-based rights over biological resources and traditional knowledge, with increased recognition of cultural and customary practices.

### **Recognition of Customary Laws:**

The Australian Federal Court has considered customary aboriginal laws in copyright infringement cases. While not fully recognizing ownership rights under Aboriginal law, the court acknowledged the cultural harm suffered by artists.

### **International Considerations:**

**-Evolution of National Systems:** It remains uncertain whether national sui generis systems will develop sufficient common characteristics to establish an international system.

**-Pressure for International System:** There is ongoing pressure for an international sui generis system, articulated by the G15 Group of developing countries.

### **Challenges and Opportunities:**

**-Local Needs:** A single, all-encompassing sui generis system may be too specific and inflexible to accommodate local needs.

**-Local Innovators:** Bringing together local innovators and entrepreneurs may be more relevant than focusing solely on IP rights.

**-Economic Returns:** Exploitation of TK can raise its profile and encourage community involvement if tangible economic returns are generated. However, not all TK holders seek monetary compensation; many prioritize the preservation and respect of their knowledge and customary laws.

Sui generis systems offer a promising approach to protecting traditional knowledge, recognizing the unique cultural and customary contexts in which it evolved. While challenges remain, especially concerning the development of an international framework, these systems provide a foundation for equitable benefit-sharing and the preservation of TK. The involvement of local communities and the respect for customary laws are crucial for the success of these initiatives.

### **Misappropriation of Traditional Knowledge:**

#### **Nature of Traditional Knowledge:**

Traditional knowledge (TK) is often transmitted orally rather than in written form, posing unique challenges when unauthorized parties seek intellectual property rights (IPRs) over it.



### **Challenges in Patent Examination:**

**-Oral Transmission:** Lack of written records makes it difficult for patent examiners in other countries to access documentation challenging the novelty or inventiveness of applications based on TK.

**-Opposition Procedures:** Aggrieved parties can challenge patents during the granting process or after grant, where national laws permit. For example, the Indian Government successfully overturned patents on basmati rice and turmeric in the US through such procedures.

**-Administrative Procedures:** Presence of patent opposition or re-examination procedures has facilitated overturning unwarranted patents, although such processes are costly and difficult for developing countries to monitor globally.

### **Digital Libraries and Documentation:**

**-Patent Applications:** Patent applications claiming TK already in the public domain should not be granted. However, TK is often undocumented or not easily accessible to patent examiners.

**-Traditional Knowledge Digital Libraries:** WIPO and developing countries like India and China are developing digital libraries to document TK in the public domain, following international classification standards.

**-Internet Resources:** WIPO is examining the availability of TK-related information on the Internet, although much of it is not in a form searchable or usable by patent examiners.

**-Preservation and Promotion:** Documentation of TK can prevent unwarranted patents and contribute to the preservation, promotion, and potential exploitation of TK, provided it does not prejudice possible IPRs in the material documented.

### **Concerns and Consent:**

**-National Innovation Foundation (India):** Addresses issues of documenting TK with prior informed consent of knowledge holders.

**-WIPO Discussions:** Varied perspectives among developing countries on data types to be included in databases, with some advocating for publicly available codified information only, while others support including uncoded TK.

### **Role of Digital Libraries:**

**-Patent Office Integration:** Digital libraries of TK should be incorporated into the minimum search documentation lists of patent offices to ensure consideration during patent processing.

**-Knowledge Holder Involvement:** TK holders should decide on the inclusion of their knowledge in databases and benefit from any commercial exploitation.

Misappropriation of TK poses significant challenges, especially due to its oral transmission. Efforts to document TK in digital libraries are crucial for preventing unwarranted patents and promoting the preservation and responsible exploitation of TK. The involvement of TK holders, respect for their rights, and consent are essential for these efforts to be successful.

## **Traditional Knowledge Digital Library (TKDL):**

### **Background:**

In 1999, following India's successful challenge of the turmeric and basmati patents granted by the USPTO, the Indian National Institute of Science Communication (NISCOM) and the Department of Indian System of Medicine and Homoeopathy (ISM&H) collaborated to establish the Traditional Knowledge Digital Library (TKDL).

### **Objectives and Scope:**

The TKDL project initially focuses on Ayurveda, documenting knowledge available in the public domain (existing Ayurveda literature) in a digitized format. The database aims to include information from approximately 35,000 slokas (verses and prose) and formulations, totaling around 140,000 Ayurveda pages. The data will be accessible in multiple languages, including English, Spanish, German, French, Japanese, and Hindi.

**सर्वेभ्यः कार्यकालेभ्यः श्रेष्ठं चिकित्सायाः पदम्।**

**आयुर्वेदो हि धर्माणामग्रणीः स्याच्चिकित्सकः॥**

*(Translation: Ayurveda is the foremost among all practices and should be prioritized for treatment; it leads in the realm of knowledge and practice.)*

### **Traditional Knowledge Resource Classification (TKRC):**

TKRC is an innovative classification system designed to systematically arrange, disseminate, and retrieve information in the TKDL. It is based on the International Patent Classification (IPC) system, with expanded definitions to provide greater detail. For example, the IPC group AK61K35/78 related to medicinal plants is expanded into about 5,000 sub-groups.

### **Integration and Usage:**

The TKDL aims to legitimize existing traditional knowledge and facilitate the easy retrieval of traditional knowledge-related information by patent examiners. This is expected to prevent the granting of patents on subject matter that are already in the public domain, as seen in the turmeric and neem cases.

**असाध्यम् साधयति आयुर्वेदः।**

**न च अन्यत् अस्ति तस्मिन्कश्चित् असाध्यम्॥**

*(Translation: Ayurveda accomplishes the impossible; nothing is insurmountable within it.)*

### **International Collaboration and Findings:**

WIPO is working on integrating TKDL into existing search tools used by patent offices. A specialized Task Force, including representatives from China, India, USPTO, and EPO, is examining this integration. Initial findings from WIPO indicate a substantial and growing amount of TK-related information available on the Internet, although much of it is not in a searchable or usable form for patent examiners.

The TKDL project represents a significant effort to document and preserve traditional knowledge, ensuring its accessibility and preventing misappropriation. By integrating TKDL into international search tools, it will

contribute to the protection and promotion of traditional knowledge, benefitting both the knowledge holders and the wider community.

**आयुर्वेदस्य वृत्तं नित्यम् वर्धताम् समाहितम्।**

**जीवितं च हि तेन जन्तोः स्वस्थं सुखकरं भवेत्॥**

*(Translation: May the practice of Ayurveda always flourish; it brings a healthy and happy life to all beings.)*

#### **Traditional Medicine:**

##### **Documentation and Collaboration:**

Traditional medicine has the potential to be well-documented. In the Lao People's Democratic Republic, the Government established the Traditional Medicines Resource Centre (TRMC) to collaborate with local healers in documenting traditional medicines. This initiative aims to promote the sharing of practices within Laos. The TRMC also collaborates with the International Cooperative Biodiversity Group (ICBG) to discover prospective medicinal products. Any benefits, profits, or royalties realized from plants and knowledge recovered during the collaboration are shared with all involved communities.

**आयुर्वेदो धर्माणामग्रणीः।**

**रोगनाशनं चिकित्सा सर्वथाऽस्य हि सन्निधिः॥**

*(Translation: Ayurveda leads all practices; treatment with it always eradicates diseases.)*

#### **Intellectual Property Rights (IPRs) and Public Health:**

**-Role of IPRs:** IPRs can play a role in exploiting products based on traditional medicine, but the primary objective should be improving human health rather than generating income.

**-Equitable Access:** It is crucial to ensure that benefit-sharing from commercialization does not restrict access to essential medicines, especially for the poor.

**-WHO Strategy:** The WHO Traditional Medicine Strategy for 2002-05 emphasizes public health objectives. Lessons learned from such initiatives should be shared, and technical assistance provided to other countries managing documentation efforts.

#### **Documentation Challenges:**

**-Undocumented Knowledge:** Much traditional knowledge remains undocumented. Absolute novelty, where any disclosure, including use anywhere in the world, destroys the novelty of an invention, is a necessary safeguard to prevent patents on public domain traditional knowledge.

**-Prior Art:** Countries that only consider domestic use as prior art should give equal treatment to knowledge users in other countries. The unwritten nature of much traditional knowledge should be considered in further developing the international patent system.

#### **Moral Grounds and Community Offence:**



**-IPRs and Offence:** Granting IPRs such as patents over traditional knowledge can offend some communities. Most countries have provisions to prevent granting IPRs on moral grounds, but their application concerning small indigenous communities can be challenging.

**-Example from New Zealand:** The scope of moral grounds for rejecting trademark applications is being redefined to prevent the registration of trademarks likely to offend significant community sections, including the Maori.

सर्वत्र धर्म समायुक्तं।

न हि तद्विपरीतं युक्तम्॥

*(Translation: Everywhere, actions should be associated with righteousness; deviation from it is not appropriate.)*

Traditional medicine documentation and collaboration initiatives, like those in Laos, demonstrate the potential for preserving and promoting traditional knowledge. While IPRs can support the commercialization of traditional medicine, the primary goal should be public health improvement and equitable access. Recognizing the challenges of undocumented knowledge and respecting moral grounds and community sentiments are essential steps in safeguarding traditional knowledge. By sharing lessons and providing technical assistance, countries can effectively manage and protect their traditional medicinal heritage.

### **Globalisation and Traditional Knowledge:**

#### **Debate and Concerns:**

**-Globalisation and Free Trade:** The WTO's advocacy of globalisation, free trade, and the patent regime has sparked debates concerning traditional knowledge (TK). Issues include loss of traditional culture, marginalisation of indigenous people, and loss of their rights over resources and knowledge due to corporate monopolies and IPR protection on life forms and associated knowledge.

**-Resistance to IPR:** While IPR is encouraged for products based on biological resources, there is significant resistance to granting IPR for the biological resources and traditional knowledge used in research. The prevailing opinion is that traditional resources or knowledge are common property.

Issues with Western IPR System:

**-Monopoly Rights:** IPR implies monopoly rights, which conflict with the collective creation and ownership emphasized in indigenous cultures.

**-Benefit Sharing:** The concept of benefit sharing has been introduced to recognize the contributions of traditional communities, although property rights are usually denied.

Convention on Biological Diversity (CBD):

**-Main Charter:** CBD is the primary international charter on the conservation and sustainable use of biological diversity. It promotes the preservation of traditional lifestyles and livelihoods.

**-Equitable Sharing:** CBD suggests fair and equitable sharing of benefits derived from biotic resources and associated traditional knowledge.

**-Implementation Issues:** Both CBD and India's Biodiversity Act remain silent on implementing benefit-sharing aspects.

**विद्यां ददाति विनयं विनयाद् याति पात्रताम्।**

**पात्रत्वाद् धनमाप्नोति धनात् धर्मं ततः सुखम्॥**

*(Translation: Education brings humility; humility brings worthiness. Worthiness brings wealth; wealth brings righteousness, and ultimately happiness.)*

Controversial Patent Cases:

**-Turmeric Case:** The patent on "use of turmeric in wound healing" is an example of how patents are being sought over various aspects of biological resources.

**-Pharmaceutical Research:** Indigenous knowledge contributes significantly to identifying materials for drug development, including their uses, preparation, and dosage.

**-Patent Law and Traditional Knowledge:** Modern science and patent law often do not recognize this as valuable innovation, assuming access to resources and information is free.

Examples of Patents on Biological Resources:

**-Phyllanthus:** Used traditionally for jaundice.

**-Composition of Jamun, Bitter Gourd, Gur-Mar, and Eggplant:** For diabetes treatment.

**-Neem Products:** Various products derived from the neem tree.

**-Basmati Varieties:** Characteristics of growing in temperate climates without sunlight.

**-Methi Composition:** As a tonic for reducing blood glucose levels.

**-Kala Jeera Compositions:** For increasing immune functions and treating diabetes, hepatitis, and asthma.

Issues with Patents on Traditional Knowledge:

**-Assessment of Innovation:** The difficulty in assessing human innovation in final products from biological diversity.

**-Prior Art and Novelty:** Patents cannot be granted on something obvious, known, or anticipated by prior use, or a natural product. Different countries have varying criteria for assessing human innovation.

**-Economic and Legal Challenges:** High costs and legal complexities in challenging patents globally.

International Efforts and Recommendations:

**-Patent Laws and Benefit Sharing:** Patent laws in most countries do not require sharing benefits with those who identified or preserved biological materials.

**-TRIPS Agreement:** Does not mandate benefit sharing.

**-Developing Countries' Recommendations:** Emphasize recognizing the rights of traditional knowledge holders to share benefits. Patent applications should disclose the source of the biological resource and knowledge to facilitate benefit sharing.

The globalization and patent regime have raised significant debates about traditional knowledge and its protection. While IPRs play a role in exploiting products based on biological resources, challenges remain in ensuring equitable benefit sharing and recognizing the contributions of traditional communities. Efforts to document traditional knowledge, scrutinize patent applications, and establish internationally accepted solutions to prevent biopiracy are crucial for protecting and promoting traditional knowledge.

### **Geographical Indications:**

#### **Relevance and Application:**

Geographical indications (GIs) play a crucial role in protecting traditional knowledge (TK) and have wide applications, making them one of the most important categories of intellectual property for many countries. This importance is reflected in the TRIPS Agreement.

#### **Geographical Indications and TRIPS:**

**-Negotiation Challenges:** The negotiation of the GI section of the TRIPS Agreement was complex due to divisions between the US and EU, and among developed and developing countries. The final agreement mandates further work, recognizing unresolved areas.

**-Protection Standards:** The TRIPS Agreement provides a basic standard of protection for GIs, with a higher standard specifically for wines and spirits. This higher standard resulted from negotiation compromises and has led to demands for additional protection from several countries, including India, Pakistan, Kenya, Mauritius, and Sri Lanka.

#### **Multilateral Register of Geographical Indications:**

**-Mandate:** TRIPS requires negotiations in the TRIPS Council to establish a multilateral register for GIs on wines. The Doha Ministerial Conference extended this to include spirits.

**-Proposals:** Three different proposals for the register have been presented:

>**EU Proposal:** A register affecting all WTO Members, requiring them to protect registered GIs.

>**Hungarian Proposal:** A register where other WTO Members need not protect a successfully challenged GI.

>**US, Canada, Chile, Japan Proposal:** A voluntary system binding only on participants, encouraging non-participating members to use the register for examining trademark applications.

#### **Implementation and Challenges:**

**-Obligations Under TRIPS:** Many WTO Members, including developing countries, have specific legislation covering GIs. It is unclear whether this legislation stems from TRIPS or bilateral commitments.

**-Administrative Burden:** Implementing new legislation for GIs should not be a significant burden for countries without current protection. TRIPS does not require a formal national registration system for GIs, placing the burden of enforcement on GI holders, not the government.



**-Compliance and Costs:** Ensuring compliance with quality standards and promoting and enforcing GIs abroad may involve significant costs.

Geographical indications are essential for protecting traditional knowledge and ensuring fair competition in global trade. While the TRIPS Agreement provides a framework for GI protection, ongoing negotiations and proposals aim to establish a more comprehensive and effective system. Addressing administrative and compliance challenges and considering the interests of both developed and developing countries are crucial for achieving balanced and equitable GI protection.

### **Additional Points:**

**-Economic Assessment:** Reliable economic assessments are needed to evaluate the merits of additional GI protection.

**-National Legislation:** Some countries have indicated they will provide additional GI protection for other products under their national laws.

**-Trade Benefits and Burdens:** Extending GI protection involves balancing potential trade benefits against financial and administrative burdens, especially for developing countries.

### **Geographical Indications: The Basmati Case:**

#### **Background:**

The "Battle for Basmati" began in 1997 when US Rice breeding firm RiceTec Inc. was awarded a patent (US5663484) on plants and seeds, seeking monopoly over various rice lines, including some with characteristics similar to Basmati rice. In countries like India and Pakistan, the term "Basmati" is reserved exclusively for long-grain aromatic rice grown in these regions. RiceTec also applied for the trademark 'Texmati' in the UK, claiming that "Basmati" was a generic term, but this was successfully opposed.

#### **Key Events and Responses:**

**-UK and Saudi Arabia:** Both the UK and Saudi Arabia, the largest importer of Basmati rice, have established regulations and codes of practice for labeling Basmati rice to protect its distinctiveness, which is believed to originate from the northern regions of India and Pakistan due to specific environmental and genetic factors.

**-US Developments:** In 1998, the US Rice Federation argued that "Basmati" was a generic term. In response, US and Indian civil society organizations filed a petition to prevent US-grown rice from being labeled as Basmati, but the US Department of Agriculture and the US Federal Trade Commission rejected the petition in 2001, deeming "Basmati" a generic term.

#### **Challenges and Protection:**

**-Global Use:** Countries like Australia, Egypt, Thailand, and France also grow Basmati-type rice and may follow the US in officially deeming "Basmati" a generic term.

**-Geographical Indication Registration:** India and Pakistan can protect "Basmati" by registering it as a Geographical Indication (GI). However, they must address why they did not act against the gradual adoption of its generic status over the last 20 years.

**-Lisbon Agreement Weaknesses:** The Lisbon Agreement's lack of provisions for GIs that have become generic makes it unattractive to both developed and developing countries.

#### **Multilateral Register and WTO Discussions:**

**-Cost Considerations:** Discussions in the WTO on a multilateral register for GIs, as proposed by the EU, propose analyzing the costs of introducing such a register. This analysis is crucial for developing countries to take informed positions on GI debates.

**-Developing Countries' Support:** Although some developing countries have pressed for such work in the WTO, the necessary support for analysis was not forthcoming from the same countries during discussions in WIPO.

The Basmati case highlights the complexities and challenges in protecting traditional knowledge and geographical indications. While efforts to register Basmati as a GI continue, addressing the historical inaction and ensuring comprehensive protection within international frameworks remain crucial. Developing countries need thorough analysis and support to navigate the ongoing debates on geographical indications effectively.

#### **Biodiversity Registers:**

##### **Overview:**

In India, NGOs and institutions are working to document the knowledge, skills, and techniques of local communities related to biological resources through the Community (or People's) Biodiversity Register. This initiative aims to deter biopiracy and instill pride among local communities over their knowledge.

##### **Process and Benefits:**

**-Documentation:** The registers document community and individual knowledge of the occurrence, propagation practices, sustainable harvests, conservation, and economic uses of biodiversity resources.

**-Consent and Access:** All information in the register can be used or distributed only with the knowledge and consent of the local community. Communities can refuse access or set conditions for access and charge fees for using the register and collecting biological resources. Funds distribution decisions are made through village community meetings.

**-Pride and Protection:** The registers help safeguard and reaffirm pride in traditional knowledge while establishing claims over knowledge and uses of biodiversity resources. This can lead to equitable benefit sharing.

##### **Concerns and Challenges:**

**-Public Domain Fear:** There is a fear that placing knowledge, previously regarded as "secret" by communities, in the public domain may invite corporate and research interests to freely use it.

**-Legal Mechanisms:** Legal mechanisms of control over the register are essential to ensure that the knowledge is protected and that communities receive a fair share of benefits. These mechanisms are not yet fully established.

Biodiversity Registers are a promising approach to documenting and protecting traditional knowledge related to biological resources. They help communities safeguard their knowledge, instill pride, and potentially achieve equitable benefit sharing. However, addressing concerns about public domain exposure and establishing robust legal mechanisms are crucial for their success.

## **-Globalisation and Traditional Knowledge:**

### **Overview:**

The advent of globalisation, free trade, and the patent regime, as advocated by the World Trade Organization (WTO), has sparked significant debate on issues related to traditional knowledge (TK). Concerns include the loss of traditional culture, marginalisation of indigenous people, and the erosion of their rights over resources and knowledge due to corporate monopolies and intellectual property rights (IPRs) protection on life forms and associated knowledge.

### **Issues with the IPR System:**

**-Monopoly Rights:** The Western IPR system, which implies monopoly rights for individual inventions, conflicts with the collective creation and ownership emphasized in indigenous cultures.

**-Benefit Sharing:** Although encouraged for products developed from biological resources, there is significant resistance to granting IPRs for the biological resources and traditional knowledge used in research. Benefit sharing has been introduced to recognize the contributions of traditional communities, but property rights are usually denied.

### **Convention on Biological Diversity (CBD):**

**-Main Charter:** The CBD is the primary international charter on conserving and sustainably using biological diversity. It promotes the preservation of traditional lifestyles and livelihoods.

**-Equitable Sharing:** The CBD suggests fair and equitable sharing of benefits derived from biotic resources and associated traditional knowledge, with access based on mutually agreed terms and prior informed consent (PIC).

**-Implementation Issues:** Both the CBD and India's Biodiversity Act are silent on how to implement benefit-sharing aspects effectively.

### **Controversial Patent Cases:**

**-Turmeric Case:** In 1995, US Patent No. 5,401,504 was granted for the "use of turmeric in wound healing." The Indian Council of Scientific and Industrial Research (CSIR) successfully challenged and revoked the patent by proving the prior use of turmeric in traditional medicine.

**-Neem Products:** Neem, traditionally used in India for its medicinal properties, faced a similar challenge when W.R. Grace and USDA were granted a European patent for a neem-based fungicide. The patent was revoked after evidence of traditional use was presented.

**-Basmati Case:** RiceTec Inc. was awarded a patent on plants and seeds with characteristics similar to Basmati rice. India and Pakistan are working to protect "Basmati" as a Geographical Indication (GI).

### **Geographical Indications (GIs):**

#### **Relevance and Application:**

GIs are crucial for protecting TK and have wide applications, making them one of the most important categories of intellectual property. They are reflected in the TRIPS Agreement.

### **Geographical Indications and TRIPS:**

**-Negotiation Challenges:** The GI section of the TRIPS Agreement faced complex negotiations due to divisions between the US and EU, as well as between developed and developing countries. The final agreement mandates further work.

**-Protection Standards:** The TRIPS Agreement provides a basic standard of protection for GIs, with a higher standard for wines and spirits due to negotiation compromises. This has led to demands for additional protection from countries like India, Pakistan, Kenya, Mauritius, and Sri Lanka.

### **Multilateral Register of Geographical Indications:**

**>Mandate:** TRIPS requires negotiations for a multilateral register for GIs on wines, extended to include spirits by the Doha Ministerial Conference.

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### **Biodiversity Registers:**

#### **Overview:**

In India, NGOs and institutions are documenting local communities' knowledge, skills, and techniques related to biological resources through Community (or People's) Biodiversity Registers to deter biopiracy and instill pride.

#### **Process and Benefits:**

**-Documentation:** Registers document knowledge of occurrence, propagation practices, sustainable harvests, conservation, and economic uses of biodiversity resources.

**-Consent and Access:** Information is used or distributed only with community consent. Communities can charge fees for access and biological resource collection.

**-Pride and Protection:** Registers help establish claims over knowledge and uses of biodiversity resources, leading to equitable benefit sharing.

#### **Concerns and Challenges:**

**-Public Domain Fear:** Knowledge may enter the public domain, inviting corporate and research interests.

**-Legal Mechanisms:** Robust legal mechanisms are needed to ensure knowledge protection and fair benefit sharing.

Globalisation and the patent regime present significant challenges and opportunities for protecting traditional knowledge. Efforts to document TK, establish robust legal frameworks, and ensure equitable benefit sharing are



crucial. Geographical indications, biodiversity registers, and international collaborations play essential roles in safeguarding the rich heritage of traditional knowledge.

### Conclusion:

This paper highlights the pressing need to protect Indian Traditional Knowledge Systems (ITKS) from exploitation, especially in the context of globalization, intellectual property regimes, and biopiracy. Key cases—like turmeric, neem, and basmati—illustrate how traditional knowledge, often orally transmitted and communally owned, is vulnerable to misappropriation when not properly documented or protected. The establishment of legal tools such as the Traditional Knowledge Digital Library (TKDL), sui generis laws and the application of Geographical Indications (GI) emerge as pivotal mechanisms to safeguard indigenous rights and ensure equitable benefit-sharing.

The most important insights from the paper include:

- >The ethical and legal concerns of biopiracy and the lack of fair compensation.
- >The limitations of the Western IPR system in recognizing collective, customary knowledge.
- >The necessity of inclusive, community-based approaches to preservation.
- >The importance of documenting oral traditions through digital libraries and biodiversity registers.
- >The relevance of global charters like the CBD and institutions like WIPO in framing protective policies.

### Scope for Further Research:

Future studies may explore the socio-economic impacts of benefit-sharing models on indigenous communities, comparative analyses of national sui generis systems, and the role of education and awareness in empowering local knowledge holders. Additionally, research could focus on developing AI-supported tools for the classification, documentation, and legal validation of traditional knowledge to ensure its rightful protection in a rapidly evolving intellectual property landscape.

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## Chanakya's *Arthashastra*: Its Cultural and Political Relevance for the Present Time

Dr. Kalyani Samantray

### Abstract:

The *Arthashastra* is a seminal treatise by Chanakya, an ancient Indian scholar and advisor to Emperor Chandragupta Maurya. The discourse in this book is multidimensional that covers the complex culture of the time, Chanakya's political theories, administrative and economic strategies with moral and ethical underpinnings. This article explores two aspects of the *Arthashastra*, the cultural and the political. The study demonstrates how Chanakya's insights continue to hold relevance in modern times.

**Keywords:** *Arthashastra*, culture in ancient India, Chanakya's statecraft and diplomacy, sustainable governance

### Introduction:

The *Arthashastra*, attributed to Chanakya, is one of the earliest known texts on political theory and economics. Written in the 4th century BCE, it is a compendium of advice for kings and statesmen on sustainable governance, diplomacy, and war. This section will introduce Chanakya, his role in the Mauryan Empire, and the broader historical context of the *Arthashastra*.

### Background of Chanakya:

Chanakya, also known as Kautilya or Vishnugupta, was an Indian philosopher, teacher, economist, and royal advisor, who played a pivotal role in the establishment of the Mauryan Empire in the 4th century BCE. Legends depict him as a learned Brahmin from Takshashila, an ancient centre of learning in India. His expertise spanned various disciplines, including philosophy, human psychology, governance and economics.

Discontent with the corrupt administration and inefficiency of the Nanda dynasty, Chanakya sought to overthrow the regime. Upon finding Chandragupta, a young but determined individual of noble descent, Chanakya decided to train him in statecraft, warfare, and diplomacy, ultimately helping Chandragupta ascend the throne. Together, they established the Mauryan Empire, which became one of the largest and successful empires in ancient Indian history, stretching across the Indian subcontinent.

Chanakya's influence extends till modern times through his treatise, the *Arthashastra*, in which he outlined a systematic approach to sustainable governance and political strategies. His work predates Machiavelli by

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nearly two millennia and contains insights that go beyond mere political strategy, covering economics, law, and ethical governance. His writings have since been revered as foundational texts in Indian political philosophy, with his principles and ideas continuing to influence thinkers and leaders throughout history.

### Historical context of the Mauryan Empire in ancient India:

The Mauryan Empire emerged in a period marked by political fragmentation and social stratification in ancient India. Prior to the rise of the Mauryas, the Indian subcontinent was divided into various Janapadas (small kingdoms) and Mahajanapadas (large kingdoms), which often vied for power and resources. The Nanda Dynasty, which ruled the powerful Magadha kingdom, had centralized their authority over a significant land-spread but their rule was also marked by corruption and public discontent, creating a favourable environment for change. Additionally, Alexander the Great's invasion in the northwest exposed the region to new ideas in warfare and governance, albeit Alexander's influence remained limited due to his retreat following the Battle of Jhelum, fought with King Puru.

Against this backdrop, the Mauryan Empire unified large parts of the subcontinent under a consolidated authority, a turning point in Indian history. Established by Chandragupta Maurya with Chanakya's guidance, the Mauryan Empire brought about an era of administrative innovation and cultural consolidation. The empire introduced standardized laws, an organized military, and efficient taxation and economic systems, setting a precedent for future Indian empires.

The *Arthashastra* is both a reflection and a blueprint of the Mauryan approach to governance, addressing the complexities of ruling a vast and diverse territory.

### Significance of the *Arthashastra* in ancient India and its rediscovery in the 20<sup>th</sup> century:

The *Arthashastra* is unique in the ancient Indian knowledge system for its focus on secular governance and practical politics. While many contemporary Indian texts focus on spiritual and moral guidance, the *Arthashastra* offered a grounded, realistic approach to the management of a state, setting it apart from traditional dharma texts based on religious laws, like the *Manusmriti*. The *Arthashastra* emphasized *artha* or material success as a crucial pillar of life, alongside *dharma*, which was one's moral duty, *kama* or desire, and *moksha*, that is spiritual liberation. This focus on *artha* (Trautmann 2016), material achievements, marked the *Arthashastra* as a pioneering work with detailed guidance on statecraft, economics, military tactics, and diplomacy. The text also showcases Chanakya's foresight in developing a comprehensive legal and administrative framework, elaborating the principles for taxation, trade regulations, espionage, and the organization of the civil service.

For centuries, the *Arthashastra* was thought to be lost, and its existence was largely known only through references in other ancient Indian texts. However, Rudrapatna Shamasastri, a Sanskrit scholar and librarian in Mysore, discovered a palm-leaf manuscript of the *Arthashastra*. His translation and publication of the text (Shamasastri 1915) sparked immense scholarly interest in this treasure of ancient Indian wisdom, reshaping our understanding of Indian history and philosophy.

The rediscovery of the *Arthashastra* in the 20th century (Shamasastri 1915, & reprint 1951) was momentous not only for India but for global political thoughts. Its insights keep resonating with contemporary scholars and leaders, with many recognizing Chanakya's ideas as remarkably advanced for his time. The *Arthashastra* offers a rare indigenous perspective on governance and statecraft, one that contrasts yet parallels Western political theories. This resurgence of interest has positioned the *Arthashastra* as a key text on politics, economic management, and governance, cementing Chanakya's legacy as one of the great global thinkers, and highlighting his profound understanding of human nature and statecraft.

## An Overview of the Mauryan Empire:

The Mauryan Empire, founded by Chandragupta Maurya with the guidance of Chanakya, represented one of the earliest examples of centralized governance in ancient India. Prior to the Mauryan period, India was divided into a complex network of independent kingdoms, each with its own administrative system, rulers, and localized customs. The Nanda Dynasty, which preceded the Mauryas, ruled over a substantial portion of northern India and had established a degree of centralized control, but it lacked the administrative sophistication and organization required to manage such a large, diverse empire effectively.

Under the Mauryan rule, a sophisticated and hierarchical political structure (Altekar 2015; *Arthashastra*) was developed to ensure stability, efficiency, and order across a vast domain. The Mauryan empire was divided into provinces managed by a *kumara*, the viceroy, who represented the central authority and reported directly to the emperor. These provinces were further divided into districts, towns and villages, with local officials overseeing day-to-day governance in a hierarchy. Such an inter-connected multi-layered structure allowed governance to reach even the most remote areas, ensuring that imperial policies were uniformly implemented across the empire.

The *Arthashastra* was written to, first, create and, then, to support this intricate administrative framework, offering detailed guidance on everything from military organization and taxation to the judiciary and espionage. It underscored the need of an efficient bureaucracy, systematic tax collection, and effective law enforcement to sustain such a vast empire. Chanakya's recommendations in the *Arthashastra* provided a roadmap for managing diverse populations, maximizing resources, and consolidating the emperor's power, ensuring that governance could be as effective as possible across different regions and communities.

## Cultural Context of the *Arthashastra*:

The *Arthashastra* was written in an era when the Indian subcontinent was experiencing a unique convergence of political consolidation, cultural growth, and economic expansion. Chanakya's treatise reflects the Mauryan Empire's needs, the time's socio-economic conditions, and the challenges of governing a vast, multi-ethnic, and multi-lingual empire (Sinha 1976). The following points explore the cultural backdrop in which the *Arthashastra* emerged.

## Socio-cultural and economic conditions in the 4th-century BCE India:

The 4th century BCE was a period of significant cultural and economic activity in India, marked by the interaction of diverse linguistic, religious, and ethnic groups. The Mauryan Empire, covering much of the Indian subcontinent, included people from different regions and backgrounds, such as the Ganges Valley, the Deccan Plateau, and areas influenced by the Persian and Greek cultures due to Alexander the Great's incursions into north-western India. Such multiplicities brought with them diverse cultural practices, religious beliefs, and social structures, creating a complex socio-cultural environment that needed careful governance.

Hinduism, Buddhism, and Jainism were the predominant religious traditions in the Mauryan Empire, and each had its own influence on social norms, ethical values, and governance practices. Buddhism, in particular, found patronage under Emperor Ashoka, Chandragupta's grandson, who embraced its teachings and promoted non-violence and welfare-oriented policies. However, during Chanakya's time, Hinduism and the related concept of *Dharma*, duty and moral order, were significant in shaping social conduct and ethical governance.

The economy of the Mauryan Empire was primarily agrarian, but it was also marked by thriving trade networks, both within the empire and with neighbouring regions. Agriculture was the backbone of the economy, supported by organized irrigation systems and state control over key resources, including mines and forests. Trade routes extended to Central Asia and beyond, allowing the Mauryan Empire to engage in commerce with Persia, Greece,

and other regions, thus facilitating the exchange of goods, ideas, and technologies. Artisans, merchants, and traders formed an important part of the economic structure, providing goods and services to both local and foreign markets.

The *Arthashastra* addressed these socio-cultural and economic complexities by advocating policies that balanced state control with economic freedom, allowing trade and agriculture to flourish while ensuring that resources were efficiently managed. Chanakya understood that sustaining a large empire required an adaptive and pragmatic approach to governance that respected local traditions and customs but also maintained a unified political and economic system.

### **Role of the *Arthashastra* as a guide to sustaining a vast and diverse empire:**

As a manual for rulers, the *Arthashastra* was designed to be a practical and flexible guide for managing a large, culturally diverse empire. Chanakya's insights focused not only on strengthening the king's authority but also on understanding the needs of the people and adapting to the cultural and regional diversity within the empire.

The *Arthashastra* presents several principles that align with modern sustainability practices, even though the term "sustainability" was not explicitly used in the text. Its insights foster ethical management of resources for stability and welfare.

### **Sustainability principles in the *Arthashastra*:**

The following are the key principles.

**Resource management:** Chanakya emphasizes the sustainable use of natural resources, advocating for careful harvesting and replenishment of water, forests, and minerals. This includes constructing and maintaining water bodies and irrigation to prevent droughts, reflecting early water conservation practices.

**Environmental protection:** The text outlines conservation measures such as forest reserves where hunting and tree-cutting were regulated, paralleling modern conservation practices. Penalties for environmental damage, like harming wildlife or polluting waters, ensured accountability of the communities and the individuals towards environmental protection.

**Economic sustainability:** Fiscal prudence was a core tenet of the *Arthashastra*. It warned against excessive taxation, promoting a balanced economic growth and self-sufficiency of all the regions of the empire in essential goods like food and textiles. This approach mirrors today's emphasis on localized production and resource preservation according to the agricultural and manufacturing conditions specific to different regions.

**Social equity and welfare:** Emphasizing the welfare of all social classes, Chanakya stresses the king's responsibility to support sectors like agriculture, mining and artisan work, which contributed to societal stability. Policies encouraging fair pricing and essential resources for farmers and other producers echo today's focus on reducing poverty and ensuring social equity.

**Enduring vision for ethical governance:** Chanakya advocates for a ruler who prioritizes the state's long-term stability, aligning with sustainable governance. The rulers and their administrators were not beyond the purview of the legal system of the country. His emphasis on ethical and accountable leadership resonates with the modern sustainability model of balancing planet, people, and profit.

**Disaster Preparedness:** The *Arthashastra* advises on disaster preparedness, recommending proactive planning against environmental disruptions, and subsequent storage of reserves for times of crisis. This preparedness reinforces sustainable development goals focused on resilience and risk management.

Together, these principles highlight the enduring wisdom of the *Arthashastra* in addressing sustainability, showing how ancient governance models anticipated the concepts essential to modern sustainable practices.

### Socio-cultural stability:

Chanakya addressed issues that were crucial for the Mauryan Empire's internal stability, such as maintaining a loyal and effective bureaucracy, balancing power among regional leaders, and developing strategies to prevent uprisings and revolts.

One of the *Arthashastra*'s main contributions was its emphasis on maintaining *order* through, first, persuasion and, when necessary, coercion. Chanakya recognized that a successful ruler needed to be both a benevolent caretaker and a shrewd strategist. He advocated for a paternalistic approach to governance, where the king was seen as a protector and provider for his subjects. However, he also emphasized the importance of intelligence networks, surveillance, and preemption of discontent in the bureaucracy, among soldiers, traders, and common people in general to maintain order. This dual approach of persuasion and coercion allowed flexibility in governance (Olivieri, 2016), adapting the power system to the cultural and political demands of each region within the empire.

The *Arthashastra* acknowledged the existing social order and duties within the *varna*, or class, and *ashrama*, the stages of life and structures of ancient Indian society. Chanakya's policies reflect the cultural values of the time, emphasizing respect for each social class's role and contributions to society. Although the text is pragmatic in its approach, it emphasizes that societal harmony and order are achieved when individuals fulfill their social roles and responsibilities, underscoring the importance of duty or *svadharma* in sustaining the socio-cultural framework.

Moreover, the *Arthashastra* promoted economic policies that catered to both the agricultural and commercial sectors, reflecting the empire's economic diversity. Chanakya recognized that a prosperous economy was the backbone of a stable state, and, therefore, recommended policies that supported agriculture, regulated trade, and protected state resources. His focus on efficient taxation, resource management, and public welfare underscored the need for the state to act in the interest of the people while also consolidating its authority.

A deep focus on impartial justice in the *Arthashastra* reflects the cultural importance of *Nyaya*, justice, in ancient Indian thought, where a just society was seen as the hallmark of an enlightened and ethical civilization. Chanakya's emphasis on fairness was both a political strategy and a cultural imperative, aiming to foster social stability and trust.

According to him, the primary role of the state is to ensure public welfare, which reflects a cultural belief in the interdependence between the ruler and the ruled. The *Arthashastra* advocates for the protection and support of the population, especially vulnerable groups like the poor, the women, and the elderly.

The importance placed on welfare, including the development of infrastructure, healthcare, and economic opportunities, showcases the culturally embedded principle that a ruler's duty extends beyond mere governance; it includes ensuring the well-being and prosperity of the people.

Although the *Arthashastra* does not delve deeply into specific religious practices, it emphasizes religious tolerance and the importance of respecting different beliefs. Chanakya advised rulers to avoid interference in the religious practices of the people, showing a pragmatic recognition of the value of cultural diversity and religious freedom (McClish 2009). This stance reflects a broader cultural respect for pluralism, which was an integral aspect of ancient Indian society, and it highlights the importance of religious harmony in promoting a stable, unified state.

In sum, the *Arthashastra* served as a comprehensive guide that addressed the socio-cultural, and economic demands of a vast empire.

### Political Philosophy in the *Arthashastra*:

The *Arthashastra* is widely regarded as one of the earliest and most comprehensive treatises on political philosophy and statecraft. Chanakya provides a pragmatic and often ruthless framework for governing a state, managing internal affairs, and conducting foreign relations. His approach blends *realpolitik* with ethical guidelines for rulers, focusing on the ultimate aim of securing a stable, prosperous, and powerful state. The political philosophy



in the *Arthashastra* addresses core ideas like the *Mandala Theory*, *Matsya Nyaya*, the duties and qualities of a king, and principles of diplomacy.

### **Mandala Theory: Chanakya's Diplomatic Framework:**

One of the *Arthashastra*'s most significant contributions to political philosophy is the *Mandala Theory*, or the 'circle of states'. The theory offers a diplomatic framework to classify neighbouring states based on their proximity and relationships with the central kingdom. In the *Mandala* model, a country is at the centre of the mandala. The concept of its 'friend' and 'enemy' is determined by geographic and political dynamics of other countries rather than through permanent alliances or moral coalition with them.

Chanakya considered every neighbouring state a natural rival, while the states beyond them can be potential allies against this immediate threat. In practical terms, the Mandala Theory divides states into categories such as:

**Ari (enemy):** The immediate neighbouring states, seen as rivals due to their proximity and potential for border conflicts.

**Mitra (friend):** A state that is one step removed from the immediate neighbour and therefore, may be considered an ally.

**Maadhyama (mediator):** A powerful state situated nearby that can act as an intermediary or mediator in conflicts.

**Udasina (neutral):** A distant or disinterested state with no direct stake in the central state's affairs.

The *Mandala Theory* allows the ruler to navigate a complex geopolitical landscape by forming alliances, making peace, or even preparing for war depending on the strategic interests of the state. Chanakya advised rulers to carefully assess each neighbouring kingdom's strength, resources, and ambitions. This approach is neither rigid nor idealistic, but encourages rulers to change alliances or tactics when necessary to protect the kingdom's interests.

### **Matsya Nyaya: The law of the fish:**

The concept of *Matsya Nyaya*, or the 'law of the fish', represents a fundamental principle in Chanakya's understanding of power dynamics. The term essentially conveys the idea that in the absence of a strong governing authority, whoever becomes powerful will naturally dominate the weak. In other words, 'the big fish eats the small fish', illustrating the harsh realities of competition and survival.

*Matsya Nyaya* is both a warning and a justification for a powerful ruler with leadership, centralized authority, and moral responsibility. The ideal king is one who possesses wisdom, courage, self-discipline, and a strong sense of justice. As a guardian of the people, he is responsible for ensuring their welfare, security, and prosperity (Driekmeier 1962). The king is expected to lead by example, demonstrating personal integrity and a commitment to ethical governance, which is his moral responsibility. He must ensure a robust military, and vigilant law enforcement policies. Such a ruler is essential to prevent disorder and exploitation within the state, and to protect the state from foreign threats. This concept, as a warning, encourages rulers to avoid idealistic notions of permanent peace or inherent goodwill among states; instead, the rulers must recognize that power and survival are the primary motivators in politics.

While Chanakya recognized the importance of ethics, he also acknowledged that some situations may require the ruler to make difficult decisions that might conflict with moral norms (Kangle 1972). In such cases, the king must prioritize the state's stability and survival, even if it leads to compromising on personal ideals.

### Conclusion:

The *Arthashastra* reveals a complex vision of governance that weaves together economic, cultural and political dimensions to create a blueprint for a stable, prosperous society. Chanakya's emphasis on ethical leadership, social responsibility, and strategic pragmatism reflects a responsible approach to ruling, one that values both the strength and the moral integrity of a state. By linking political authority with cultural values, Chanakya highlights the importance of ethical statecraft, making the *Arthashastra* not only a guide for rulers of his time but also a timeless work with enduring lessons on governance, diplomacy, and societal welfare. Each aspect of the *Arthashastra* discussed above bears significance for the well-being of a country and its people, even when those may be applied in the present socio-cultural and political contexts.

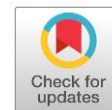
Chanakya's work remains an exceptional testament to ancient Indian statecraft, offering insights into how a large and diverse political entity could be effectively governed through a combination of practical wisdom, strategic foresight, and respect for cultural diversity. These principles and values still remain extremely relevant in modern times.

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## Holistic Development in Vedas: An Analysis

Rajib Santra

### Abstract:

This investigation aims to identify the all-around development of students as reflected in the Vedas. This research argues that the progress of modern education systems. The Vedic framework provides timeless solutions for addressing the current challenges in contemporary education, including the lack of value-based education and the decline of holistic well-being in students. A qualitative approach and content analysis method are used for data analysis in this study. The Vedas reflected the harmonious integration of body, mind and spirit. Vedic education emphasized the pursuit of Vidya (knowledge) and Jnana (wisdom), the importance of mental discipline, physical well-being, and the nurturing of ethical and moral values such as Dharma (righteous living) and Ahimsa (non-violence). The study also highlights the significance of environmental consciousness, illustrating how the Vedas fostered a deep respect for nature and sustainability. By revisiting these ancient teachings, this study underscores the relevance of the Vedic approach to modern educational practices, offering a pathway for the holistic development of learners and a return to values of harmony, peace, and balance in society.

**Keywords:** Indian Knowledge System, Vedas, Holistic Development

### Introduction:

The ancient traditional knowledge system of India is distinct and comprises numerous learning foundations that are applicable to all eras and at any time (Vijaya & Kalluraya, 2023). Knowledge is systematically passed down from one generation to the next in the Indian knowledge system (Mandavkar, 2023; Surabhi, 2024; Khan & Sharma, 2024; Kumari, 2024; Qasim, 2024). The vast repository of ideas from India's illustrious past and customs is the Indian Knowledge System (Sharma & Maheswari, 2024). "Indian Knowledge System comprises three words: Indian, Knowledge, and System. Indian means Bharatvarsha, which is divided by mountain ranges situated between the oceans, which not only signifies the great land of India but also the morals and the ethics that guide every citizen of it. Knowledge is the epistemological beliefs, observation, experience, praxis and experimentation emanating from the wisdom and insights of our ancestors and System is an assemblage and classification to access the corpus of knowledge systems that have evolved over millennia. Starting from ancient Vedas, Puranas, Vedangas, Dharm-Shastra, Nyaya and Mimamsa to the wide range of discipline, all are rooted within the Indian

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Knowledge System” (Sharma & Rai, 2024, pp. 659). India has long been acknowledged on a worldwide scale as a wealthy and culturally diverse country with a long history of intellectual accomplishments and knowledge systems (Patukale, 2023).

The educational system was built around the Vedas, it is the first sacred books of Hinduism. Students were instructed in a variety of subjects, including mathematics, astronomy, philosophy, and Sanskrit literature, to defend dharma (duty and righteousness) and pursue knowledge (Dey, 2024). The Vedas include a vast body of knowledge on topics ranging from spirituality and philosophy to medicine, astronomy, mathematics, and politics. They offer perspectives on Indian culture, emphasizing the value of harmony, balance, and solidarity in society (Timane & Wandhe, 2024). “The Vedic literature serves as a guiding light, providing insights into the profound understanding and wisdom of ancient Indian sages. It offers profound philosophical teaching, ethical principles, and practical knowledge that have shaped the Indian way of life for millennia. The hymns, rituals and philosophical concepts found in the Vedas have influenced diverse fields, including literature, arts, music, architecture and governance” (Patukale, 2023 p. 3). The Vedas are a roadmap of holistic development for learners through the Rigveda, Samaveda, Yajurveda, and Atharvaveda. It emphasized not only the intellectual aspect but also all-around development. Holistic development not only helps to develop the child’s physical embodiment but also enhances spiritual prosperity and spiritual development. It focuses on the development of the whole person (It addresses not only the academic dimension but also social, emotional, physical, mental, spiritual, and ethical dimensions (Dey, 2024). It aims at the harmonious development of body, mind, and soul (Sharma & Rai, 2024). “The Vedas have been in the foundation of the greatest texts ever written to guide human beings to live purposeful. Righteous, progressive and blissful” (Pokhrel, 2022).

### **Rationale of the study:**

The present education system excels at imparting academic knowledge but it often falls short in preparing students for the real world. India is indubitably excelling in scientific innovation, novel technology and economic sectors but still lagging behind true education for quintessential living which lies in our glorious and rich culture. Value education is not offered in the educational institutions. There is a total absence of moral values, ethical training in the young generation which is also referred to as GenerationZ (GenZ) (Sharma & Rai, 2024). “Globally, this has resulted in the decline of the physical, mental, and spiritual health of individuals, discrimination and everyday crimes in the society, endless wars between the nations, and destruction of Mother Earth. Vedas have been misinterpreted by self-proclaimed foreign Vedic scholars to subjugate Hindus and defame Hinduism” (Pokhrel, 2022 p. 2).

### **Objectives of the study:**

1. To identify the holistic development of students as reflected in the Vedas

### **Research questions:**

1. What do the Vedas say about the holistic development of students?

### **Method:**

This study is purely qualitative in its approach. Data are gathered from numbers of articles, journal, books etc. Content analysis method is used for this data analysis.

## Discussion:

“Man is the only living creature who can control or change his life. Knowledge is the only weapon that follows the owner everywhere. knowledge has to be challenged and improved constantly” – Vedas

The ancient educational system of India was known as the Gurukul System, which allowed students to live with their teacher or Guru and promoted holistic learning that included not just academic knowledge but also character development, morality and values. It places a vigorous emphasis on the integration of mental, spiritual, and physical elements, which promotes the growth of harmonious and balanced pupils. teachings of guru are initially oral and emphasize hands-on learning. The primary disciplines taught at Gurukul were Vedas, astronomy, philosophy, yoga, ethics, religion, and physical education, while Sanskrit was used as the mode of delivered. However, at the time, there was no set of curriculum or syllabus, and there was no mandatory formal examination. The curricular and co-curricular components of education did not conflict as they do in the contemporary educational system. During that era the ultimate goals of education were man-making, character development, and spiritual enlightenment among the students. Sense of organs are to controlled by the training from the guru. Self-belief, self-awareness, empathy, emotional regulation, and other interpersonal skills are the attributes to be mastered. The approach to learning was holistic and multidisciplinary encouraging broad-based and interconnected knowledge. The education of ancient India was spiritually and culturally enriched. The foundation of the ancient education system was religion and the ultimate aim of the same was to seek —moksha or Sa Vidya Ya Vimuktaye (Sharma & Rai, 2024).

## Vedas' reflection on holistic approach:

### Intellectual Development:

Intellectual development in the Vedas encourages the pursuit of Vidya (knowledge) and Jnana (wisdom). The Vedic tradition focuses on deep contemplation, the study of sacred texts, and the cultivation of the intellect to understand the nature of reality and the self. Knowledge is seen as a path to liberation and a means to overcome Avidya (ignorance). The Rigveda emphasize the pursuit of truth and wisdom through the study of sacred knowledge. Intellectual development involves both rational understanding and intuitive insight. "Let us realize the truth. Let us achieve knowledge, that we may live in harmony with the divine." (Rigveda, 10.191.2). The Upanishads, such as the Isha Upanishad emphasize the importance of gaining knowledge that transcends worldly attachments and leads to the realization of the self (Atman) and the universe (Brahman). "From the unreal, lead me to the real; from darkness, lead me to light; from death, lead me to immortality." (Isha Upanishad, 11).

### Physiological Development:

In Vedic thought, the physical body is viewed as a temple of the spirit. The Vedas, particularly the Atharvaveda, advocate for practices that promote physical health and vitality, such as proper nutrition, exercise, and hygiene. The practice of yoga and meditation also plays a key role in the development of a strong and healthy body, as physical health is seen as an essential foundation for spiritual and mental development. The concept of Ayurveda (the science of life) is deeply rooted in the Vedic tradition, where the balance of the body's elements (earth, water, fire, air, and ether) is essential for maintaining good



health. "The body is the vehicle, the mind is the rider, and the intellect is the driver." (Atharvaveda, 7.41.3). The practice of Yoga and the promotion of healthy living, including dietary prescriptions, are central to physical development. The Vedas consider the body as a vessel for spiritual development and emphasize purity and cleanliness. "May we be blessed with good health and vitality, so that we may serve the divine." (Atharvaveda, 12.1.1).

### **Mental Development:**

Mental development in the Vedas is closely associated with mindfulness, meditation, and discipline of the mind. The Vedic tradition emphasizes training the mind to be calm, focused, and reflective. Practices like meditation (dhyana) and concentration (dharana) are taught as means to control the fluctuations of the mind and cultivate mental clarity. The Katha Upanishad discusses the importance of controlling the senses and the mind to attain higher wisdom: "The wise man, by controlling his senses, experiences the unshakable peace." "When the mind is completely calm and undistracted, the self-shines through clearly." (Katha Upanishad, 2.1.5).

### **Character Development :**

Character development in the Vedas is about cultivating virtues such as honesty, humility, non-violence, and compassion. It also involves the practice of Dharma which refers to righteous living and adherence to moral principles. Character development is linked to self-discipline and ethical conduct. The teachings of dharma in texts such as the Manusmriti and Mahabharata provide guidelines for righteous behaviour, emphasizing honesty, respect for elders, and self-control. "He who practices dharma is never defiled by sin, for dharma is the protector of the soul." (Manusmriti, 6.92).

### **Personality development:**

Personality development in the Vedic tradition involves refining one's character, emotions, intellect, and social behaviour. It is the process of becoming a well-rounded person who is capable of leading a fulfilling and harmonious life while contributing to society. Personality development is often tied to the concepts of Sattva (purity), Rajas (activity) and Tamas (inertia) where the balance of these qualities influences one's disposition and character. "Purity is the path to wisdom; through knowledge, one transcends the imperfections of the material world." (Bhagavad Gita, 14.11).

### **Emotional development:**

The Vedic teachings also address emotional balance especially through the cultivation of virtues like compassion (karuna), love (prema), patience (kshama) and equanimity (upeksa). Emotional development in the Vedic tradition is seen as the capacity to control desires, attachments and negative emotions such as anger, jealousy, and fear, through practices like meditation and ethical living. In the Bhagavad Gita (a text that forms part of the Vedic literature), Lord Krishna advises Arjuna to overcome emotions like despair and attachment to perform duties selflessly. The concept of detachment (Vairagya) is key to emotional balance. "You have the right to perform your duties, but you are not entitled to the fruits of your actions." (Bhagavad Gita, 2.47). The Bhagavad Gita also highlights the importance of emotional control through the practice of Karma Yoga (selfless action) and devotion (Bhakti). "A person who is free from anger, who remains steady in joy and sorrow, is said to be a yogi." (Bhagavad Gita, 5.20).

### **Spiritual Development:**

Spiritual development is the ultimate aim of Vedic philosophy. It involves the realization of one's true self (Atman) and its oneness with the universal consciousness (Brahman). This is achieved through practices like meditation, chanting, prayer, self-inquiry, and devotion. This spiritual awakening is seen as the culmination of all other forms of development. The Mandukya Upanishad elaborates on the nature of the self (Atman) and its unity with Brahman pointing to the path of spiritual realization through knowledge (jnana), devotion (bhakti), and self-discipline (yoga). "I am Atman, eternal and free; I am beyond birth and death." (Mandukya Upanishad, 1.2).

### **Ethical Development:**

Ethical development is rooted in the principle of ahimsa (non-violence), satya (truthfulness), compassion, humility and integrity. The Vedas provide a moral framework for living a virtuous life, emphasizing the importance of following the path of righteousness (Dharma), which includes virtues such as honesty, respect for others, and the pursuit of truth, and ensures that one's actions are aligned with universal moral principles. The Vedic texts also prescribe duties based on one's role in society (varna) and stage of life (ashrama). The Rigveda includes hymns that emphasize moral principles such as truthfulness and righteousness in both personal and communal life. The Atharvaveda emphasizes the importance of truth and righteousness in all dealings: "May truth, the protector of the soul, preserve us; may truth bring us wealth and prosperity." "Truth alone triumphs, not falsehood." (Chandogya Upanishad, 3.1.6).

### **Social Development:**

The Vedic tradition emphasizes the importance of dharma (righteous living) in social contexts. Each individual has a role to play within society and fulfilling one's duties (according to one's varna or caste and stage of life Ashramas: Brahmacharya, Grihastha, Vanaprastha, and Sannyasa) is essential for the overall harmony of the social order. Social development is interlinked with the practice of compassion, kindness, and social responsibility. The Rigveda describes the importance of societal cooperation and the fulfilment of societal duties (such as honouring elders, promoting peace, and maintaining order). "Let us walk together, let us speak together, let our minds be in harmony, let our hearts be one." (Rigveda, 10.191.2). The Manusmriti offers a code of social behaviour including duties towards family, community and society, emphasizing harmony, respect, and cooperation. "The world is upheld by the practice of dharma, by the performance of one's duties, and by respect for others." (Manusmriti, 8.15).

### **Environment Awareness:**

The Vedas show a deep respect for nature recognizing the interconnectedness of all life. Environmental awareness is integral to Vedic teachings with an emphasis on living in harmony with nature. The Vedic people practiced sustainability by offering prayers to natural elements such as the Earth (Prithvi), Water (Apah), Fire (Agni), the wind (vayu) and Sun (Surya). The Atharvaveda includes prayers for the protection of the Earth and the harmonious interaction between humans and nature. The concept of Sattva also suggests that humans should act in ways that preserve the natural balance. "May the Earth be blessed with prosperity, and may all beings live in peace" (Atharvaveda, 12.1.1).

## Conclusion:

The Vedas provide of profound knowledge and helps to learner's holistic development that encompasses the intellectual, physical, mental, emotional, spiritual, ethical & moral value social development and environmental awareness of a person. It also guides individuals towards living a balanced and harmonious life. The Vedas emphasis centred around the realization of one's true self (Atman) and its unity with the divine (Brahman) remains a timeless aspiration for all those seeking self-realization. Therefore, teachings of the Vedas provide a timeless and transformative framework for holistic development addressing every aspect of human life and promoting a balanced existence.

In contrast to the contemporary educational system which often focuses narrowly on academic knowledge but the Vedic vision offers a more integrated approach to education. It encourages the development of individuals who are not only knowledgeable but also compassionate, ethical and spiritually fulfilled. The revitalization of Vedic educational principles could offer a much-needed shift towards value-based education, equipping students to navigate the complexities of the modern world with wisdom, empathy, and purpose. As we move forward, the wisdom of the Vedas can serve as a guiding light, fostering a generation that is intellectually capable, ethically grounded, emotionally balanced and spiritually awakened thus ensuring a more harmonious and sustainable future.

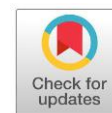
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## Rediscovering the Wisdom of Ancient Hindu Jurisprudence: Enduring Principles and Their Modern-Day Relevance on the Global Stage

Dr. Arpan Das

### Abstract:

The foundation of the ancient Hindu jurisprudence is rooted in the core of Hindu philosophy. Hindu law is developed based on the foundation of Philosophy. Today, Hindu law has become a gateway between the ancient ethics and its modern-day implications. Hindu philosophy is diverse in nature and pluralistic at the core of its cultural heritage. Hence, it accommodated a large number of belief systems, ethical patterns, and cultural co-existence that have become a necessity for modern-day living and lifestyles in this world. This paper delves into the essentiality of Hindu wisdom and articulates the necessity of the Hindu judicial system for a very complex modern society.

**Keywords:** Ancient Hindu Jurisprudence, Global Legal Systems, Natural Law, Globalization of Legal Systems, Universal Principles of Justice, Legal Pluralism, Sustainability and Law, Revival of Traditional Legal Practices, Human Rights in Hindu Law

### Introduction:

The concept of society is an abstract form of existence. It is a process of interchanging relationships between humans that develops through the ages based on the people's likeliness and interaction. Society is the oldest form of inter-community existence, which is a process of association. In every human society, social structure is mostly governed by the system of social order. Social order is narrowly described as a system of power dynamics between the different levels that exist within the society in a similar or different form. In India, the concept of society is completely different from that in the West. Similarly, the society of ancient India is also different from the society of the modern age. Historically, India juxtaposes the differences of various races, cultures, ethnicities, religions, etc. to a great extent, and it was a source of treasure for both the invaders and migrants. After Independence, Indian society has changed drastically. Human rights have become one of the major aspects under which various castes, creeds, and ethnicity have gained their rights and security. Under various reservation acts and schemes, many underprivileged and deprived sections of Indian society got the scope to develop their standards of livelihood. In the present-day situation, India has gone through various changes. Economic independence has become one of the major factors in this changing condition. So, the standard of living is also affected by economic growth and development. On the other side, in a social context, the division between caste systems has become less relevant; some new inter-caste societies have emerged with the change of the social order. The newly developed economic structure of the society gave birth to various economic and social classes. Economic and social prosperity became one of the dominant factors of newly developed societies. With the change of society, it also gave birth to some new

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complexities and complications in social order. The pattern of crime and criminality is also getting into a new sphere that it has never been before. So, the structure of justice and jurisprudence is also getting some new developments with the change of social order, social discourse and criminality. Religion and the power structure in the society are also involved in this scenario. From ancient times till the present day, the relationship between power and religion is very critical. Sometimes they complement each other, and sometimes they contradict. In this case, they both are interlinked historically, but the relationship is varied based on the social, religious, economic, and psychological conditions. In India, from ancient past to the present time, the concept of Jurisdiction has changed from time to time based on the varied nature of human civilizations, ruling dynasties, religious and ethical views of the state and society, etc. Society and social institutions are the most important parts of the state structure. So, when the structure of the state is changed, society and social institutions are also influenced. The annexed nature of Indian civilization made this change a bit more complex.

### What is the relationship between Crime and Punishment?

Crime and punishment is one of the oldest relationships between societal malfunctions and societal order that comes to us with various complications and interrelated conditions embedded in it historically. When people lived in savagery, there was no law to protect the weak. The law was an essential need to protect the innocent or the weak from the powerful. When people lived in barbaric conditions, the rule of the jungle was the only rule then, but after that, when people became settlers and tried to live in harmony and peace within the society, they felt the need to protect everyone from each other. This is how law became an essential part of ancient society, and from then on, those who disobey the law were convicted as criminal and given punishment based on the nature of their crime. When we discuss the word ‘punishment’, it describes something that is painful and unpleasant. Punishment is not the result of a natural consequence; rather, it describes something that is unlawful, immoral, and unacceptable to society. Punishment is one kind of sanction for those who violate the legal system. So, when somebody disobeys the social jurisdictions, he becomes a criminal, and to prohibit him from committing the same crime again or to make an example for others in the society, punishment becomes an essential tool to maintain and control the order.

### Crime and Sin:

In Christianity and Judaism, sin is considered an act against God. In Islam, sin is considered a violation of the will of God. It is described as *Gunah*. Sin and crime are not equal in Abrahamic religions. Both are different in their way of existence. Crime is a violation against the positive law of society. On the other hand, sin is a violation of the basic humankind like anger, jealousy, pettiness etc. One of the most debated books in history is the Bible. At the very beginning of the Bible ‘Genesis’, the origin of humankind was described through the story of *Cain*. Cain was the first-born child of *Adam* and *Eve*. He has a younger brother *Abel*. They both prayed to the god but God accepted *Abel*’s offerings. This made Kane angry and jealous, and he killed his own brother. The god banished him from his land and cursed his fertile land so that he could not return to his old practices and ordered him to live a life of a wanderer. Perhaps it was the first sin that is illustrated in the Old Testament.

In Christianity, sin and crime are not equal. Society differentiates these two based on some moral judgments. There is no specific logic for determining the difference between crime and sin. But, in most of the cases, it is assumed that if the unlawful activity is made against the will of the God then it would be referred as a sin and if the activity will go against the law of society then it would be accepted as a work of criminal activity. Initially, there is no atonement in Christianity. Death was the only cure, but with time, Christianity changed its track, and atonement became one such thing, curbing the moral structure of Christianity.

In Hinduism *Karma* is one of the most important factor that enable us to understand the very own nature of Hinduism. *Karma* is affected by *Gunas*. Hinduism is one of the oldest religions on earth still practicing by a large group of people. Hindu religion believes in reincarnation and it depends on two specific factor— *Papa* and *Punya*. *Punya* is earned by doing good thing and *papa* is actually the violations of the good deed.

It means, everything in this world is fulfilled by *Guna* (Quality) and *Karma* (good deed). It is humans who think they are the doer of everything. In Hindu philosophy *Gunas* are of three types—

***Sattwa***— it manifests purity, knowledge and peace. A satvic person is forgiving and pure in heart. He is kind, compassionate and noble. He is free of fear and violence. *Sattwa* is the highest attribute of human being.

***Rajas***— *Rajas* is something that attracts the human kinds in earthly things. It makes humans passionate, worried, stressed and angry.

***Tamas***— *Tamas* is a state of detachment. It describes the negativity of a human mind. A *tamasik* man is detached, inactive and ignorant. He is full of guilt, doubt and shame. In Indian philosophy *Tamas* is considered the worse *guna* of human kinds.

These three *gunas* affect our thought process and way of life. It forms our habits, actions, and characters. It develops our nature, habits, and moral constructions. If a person is influenced by *Sattwa*, he would do good things in life; if he is attracted by *Rajas*, he would be passionate about doing earthly things and would be attracted to his mortal life; if he is full of *Tamas*, he would do negative things like killing, robbery, etc. This is how *gunas* influence the effects of *Karma*. Those whose *karmas* are associated with *Sattwa* get a good life and become religious and happy. The people who are attached to *Rajasik* *karma* get both pain, sorrow, and happiness in their life, and those who are associated with *Tamasik* *karma* get a life full of sorrow and sufferings. The very nature of *karma* determines the quality of *Punya*. On the other hand, if someone is deeply attracted by *tamasik* *karma* he becomes a *Papatma* (sinner).

In Hindu philosophy *Papa* is of three types—

***Physical sin:*** People who are associated with killings, robbery, polygamy they are doing this kind of sin using their body and force.

***Verbal sin:*** People who hurt others with their words, speak untruth and repressive words, and are intentionally argumentative are examples of this kind of sinners.

***Psychological or Moral sin:*** Those who wish to humiliate others, intentionally want to harass others, become jealous of someone's prosperity and want to rob others are this kind of sinner.

In Indian philosophy errors are not considered as sin. Errors are unintentional attempt of doing something wrong whereas sin is intentionally mastered. The concept of sin is mostly adjoined with the religious or moral principles. Sin is something which discovers the actual nature and quality of a human being. In social life, if someone is intended to do something wrong with his full of intention, he must be a *tamasik* person. On the other hand, error is not a complete *tamasik* thing— intentional occurrence of the same error in multiple times may be called as *tamasik* but it depends on the characteristics of that particular person and the nature of the error. With this comparison, crime is considered less malicious than sin. Crime is a violation of state law. For the continuation of the state governance system the governing authority imposes some laws. These laws are imposed to restrict people of doing the wrong thing which are not recognized by the state.

Punishment is a result of both crime and sin. In Indian context, punishment plays as a tool for justice. Punishment is given to control the innate behaviour of humans which are unacceptable to society. Society implements some moral and social duties to its people. Every member of the society is expected to follow this. In a broader sense, when the concept of state is developed, a social contract is made between the state and the people. The state has got the power to rule. Societal norms and regulations became an integral part of the state policy. Settlers are obligated to follow it, and if something exceptional happens within the territory, the state has the authority to decide it. This is how punishment is provided to the person who transgresses.

Over time, there is a shift in judicial procedure in the penal system, whereas various complexities are introduced in the process of judgment. Politics, public opinions, social reforms, public policy, and human rights create hindrances to articulate a proper judicial procedure. In general opinion, punishment is introduced to limit the increasing number of crimes, but philosophically, in Indian perspective, it enlarges the dimension in which an offender can get the opportunity of atonement. Therefore, the concept of *Dharma* is introduced as an approach in the system of the judiciary.

Indian ethics is an integral part of metaphysics, which defines the internal nature of social reality—a reality that is governed by a single principle, and it is the '*principle of social justice*'. Social justice is referred to in the Indian context as *Dharma*. In Hinduism the concept of *Dharma* is the most comprehensive and cohesive elaboration of Hindu morality. At the same time this concept is loosely interpreted too. In the Vedas, the doctrine of Dharma is a way of expression of achieving the ultimate reality, which is Satya (truth), and it distinguishes itself from the concept of *Adharma* (immoral doings). In *Mimamsa* the term *dharma* is understood as the performance of the Vedic rituals and sacrifices. *Vaisesika Sutra*, in its explanation, defined *dharma* as a connecting bridge between morality and sacrifices. There are some other interpretations that articulate the vast and exhaustive possibilities of this terminology. Vaman Shivaraman Apte defines the various possibilities of the term Dharma. According to him *Dharma* is duty, customs, laws, order, traditions, religious or moral values, behaviour or the conduct according to the Sastras, morality, ethics, purity, enactment, virtues, goodness, usefulness, temperament, character, devotion, devotion, religiosity (sharma, 53) etc. *Dharma* is not a static concept; it changes with the changing concept and context of the society. *Dharma* is the root or the foundation of Indian philosophy.

In *Chandogya Upanishad*, dharma is defined in three ways—*Yajna* (sacrifice), *Adhyana* (study) and *Dana* (dedication). Yajna is the source of someone's rational wills, it is related to the process of soul-searching. Adhyana is the process of studying scriptures through which one can understand the inner meaning of the *Dharmasastras*. Dana is related to the process of general welfare. Dharma is a Brahmanical phenomenon which is developed during the time of the early Rig-Vedic period, representing the moral quality of Aryan civilization, and became a method and practice of the entire Indian sub-continental ethics system, in terms of individual as well as social perspectives.

### Purusarthas:

In Vedas the term *Rita* was introduced to refer law or order but actually it means the law and order of the universe, that is involved in the right ordering of the sacrifice, and that is manifested in the moral law. By the concept of 'Rita', the term has given rise to two major concepts: the concept of *Dharma* and the concept of *Karma*. In Indian philosophy the term Dharma refers the meaning of duty. The word '*Dhar*' means to 'hold together'. Dharma is referred to in the Vedas as the ultimate truth or power or the duty par excellence. On the other hand, the concept of *Karma* refers to an unifying universal law that determines the degree of prize or punishment. Karma is attended with the knowledge of *Brahmagyana*. Manu talked about *Sadharana Dharma, or a universal duty for everyone to obey, and Varnashrama Dharma*, or the duty of a person according to his caste and stages of life.

The prime interest in Indian thought is *Purusartha*— the supreme value in life. Purusartha is of four kinds— Dharma, Artha, Karma, and Moksha. Dharma and karma are already described, but Artha and Moksha are not cited before. Artha is the process of attaining the meaning of worldly prosperity and wealth. All three lead a person to attain his ultimate goal in life, that is Moksha. The highest good according to Rigveda is known as Rita. If someone follows the norms described in the Rigveda, it is good for human existence, and if a person violates the norms, it is bad for humanity. In classical Hindu Ethics, the concept of dharma is the standard of judicial ethics.

In the early Vedic period, there was no reference that can be considered as a judicial system. Yes, there are some local organizations that take care of their day-to-day problems based on their nature of locality, culture, language, and religious practices, but, in a general sense, it is hard to describe anything about the construction of their judicial procedure. Our four Vedic scriptures reveal most of the Hindu laws to the ancient people. Various Smritis and Sastras further develop these laws. Dharma is the central idea of Hindu judiciary. Rules of law and rules of morality both were imposed and propounded. Fundamentally, ancient judiciary was formulated based on four specific pillars. These are:

- Sacred law (Dharma)
- Evidence (Vyavahara)
- History (Charitra) and
- Edicts of kings (Rajasasana)

*Dharma* is the main source of Hindu ethic system. It is understood by the desire of truthfulness. *Vyavahara* gives us the understanding about the history of a particular person, society, culture and ethnology. References are counted as a source of evidence through which the nature of *Charitra* is understood. Finally, *edicts of king* is estimated as law of the god. The *Rajadharma* or the *Rajasasana* is a combined structure of all. Collectively, all these four pillars are initiated the basic instrumental structure of modern Indian judiciary. According to ancient law books like Manusmriti or the Arthashastras, Dharma was profoundly interpreted as *Civil* and *Criminal law*, Vyavahara was interpreted as *procedural law* and the edicts of the kings was understood as *Constitutional law*. Gautama, Vasistha, Apastamba and Baudhayana described some fundamental aspects of the criminal law but it is structurally composed by Manu. The ancient law of penal system is not a law of crimes, it is understood as a law of wrongs and the main focus of this type of law is understood by providing justice in the form of compensation of money or land or property.

During the time of British raj, the term ‘Public Law’ incorporates both the Constitutional law and the Administrative law. The legal system during the British period was classified in four specific areas. These are:

- Constitutional law
- Criminal Law
- Civil Law and
- Procedure and evidence.

The basic principle under the Ancient Indian judiciary and the British judiciary was primarily similar. In ancient judiciary all the principles were administered in different levels of the society. King rules his people based on some code and conducts which are written in the *Dharmasastras*. *Amatyas*, or the ministers of the kings, carry forward the procedure of the judiciary at different levels. The King appoints judges to judge and promote justice at different levels of society to maintain the rule-based order. On the other hand, the judiciary was divided into different levels within the society. Under *Sangrahana* there were 10 villages, under *Karyatik* there were 200 villages, under *Dronamukha* there were 400 villages and under *Sthaniya* 800 villages were administered. *Janapadasandhishu*

was conceptualized as District court under which all these judicial institutions were administered and instructed. *Brihaspatismhita* clarifies and discloses about the hierarchy of the judicial order. It starts from the family court and ends at the king's court.

### Classification of Crimes:

There was no clear evidence about the classification of crimes, but according to Manu, all kinds of litigation come under 18 titles of laws. These are: 1. Non-payment of debts 2. Deposits and pledges 3. Sale without ownership 4. Partnership 5. Resumption of gifts 6. Non-payment of wages 7. Breach of contract 8. Cancellation of cell and purchase 9. Disputes between owners and herdsman 10. Boundary disputes 11. Assault 12. Abuse and defamation 13. Theft 14. Violence 15. Sexual violence against women including adultery and rape 16. Law regarding husband and wife 17. Partition of inheritance and 18. Gambling and betting.

Yajnavalkya didn't refer any kind of classifications of lawsuits but discussed the varied nature of the criminal offences. On the other hand, Narada's law book added more vividness in this classification and further divided it into one hundred thirty-two branches. *Brhaspati's Samhita* avoided the complexity as found in Manu and Narada. It divided all kinds of laws into two major categories— 1. laws related to wealth or property, and 2. Laws related to tort, injuries etc.

Apart from these 18 titles of law the legal proceedings are further divided in two major categories: 1. *Arthavivada* (Civil dispute) and 2. *Himsra Samudbhavavivada* (Criminal disputes). Criminal disputes are further divided into four major categories. These categories are: 1. *Danda Parusya* (assault and battery), 2. *Vak Parusya* (Defamation) 3. *Sahasa* (Murder and other physical offences) 3. *Strisangrahana* (Adultery).

### The Doctrine of Danda

In Hindu philosophy the term *Danda* refers to the act of prohibition by which criminal activity is responded. It is the 'rod of power' which is the source of state governance policy. According to Kautilya Danda is an important part of the state governance system. In his *saptanga* theory, a state is a collaboration of seven important and integral parts or *angas*. These *angas* are *Rajan* (king), *Amatya* (Ministers), *Puras* (Castles), *Janapadas* (Territory of population), *Kosha* (Cell), *Danda* (Punishment) and *Suhridas* (Friends). Danda is a tool of *purusarthas*. *Purusartha* is the ultimate goal of both individual and social life. Incapacitation and deterrence are two major purposes that are served by the act of danda.

Danda is a royal symbol of power which is articulated by the king to maintain the order of social function. According to Manu, only a truthful, honest and intelligent person can hold the rod of power. He must be a follower of Dharma, Artha, Karma and Moksha. He must be chosen by the god. In *Manusmṛiti* it is told that danda was first invented by Lord Brahma. After that, he made the king and provided him the supreme authority to guide his people on the basis of *Purusarthas*. The king is the protector of it. He has the supreme authority to impose danda to maintain the social order, the caste system, and social justice. But, if, it is utilized unethically it can destroy the entire order.

### Importance of Danda:

A king's duty is to protect the innocent and punish the wrong doer. Manu's law-book was emphasized on two major things. First of all, maintaining the law, a sense of 'reality' is essential. Secondly, forceful implication of power is necessary to maintain the social order. Man is occupied by his own interests. Sometimes, this self-interest crosses all its limits and disrupts the social code of conduct. At this very moment, law becomes indispensable and



in Manu's code of conduct, the essential part of Dharma is *Danda*. Danda is a way of justice through which Dharma is maintained and a wrong doer is subjected to punishment.

Hindu moral system was emerged from a macrocosmic belief system and associated with microcosmic individualistic social sub-system. Dharma is the ruling principle. The process of Hindu jurisprudence is transmitted from the sacred texts of *Sruti* and *Smriti*. The concept of Dharma is elaborated and explained in various ways and practices. Judiciary is one of the sources of the practice of Dharma. Etymologically, the term Dharma comes from the Sanskrit root word "*Dhr*" which means '*to uphold*' or '*to support*'. In this case, those things which are supportive or upholding in nature can be understood as Dharma (Ranganathan, p-6).

In ancient philosophy, Dharma was administered by the king and the king was protected by six other essential factors like Ministers (Amatyas), Castle (Puras), State (Rastra), Cell (Kosha), Friends (Suhrida) and Punishment (Danda). Danda as a royal symbol of the king or the royal power performs as a form of justice. It is an essential part of *Vyavahara* through which an offender is legally punished. According to Manu Danda is deterrent in nature. It deters someone of committing something unethical or illegal. Manu believed that danda can be a prominent tool to protect people from illicit people. It is an important tool of law. According to *Manusmriti* Lord Brahma invented danda before he gave birth to the king. It gives the authoritarian power to a king and empowers him with duty and order. But if it is administered unethically, it can destroy an entire state. An autocratic king is not capable of holding the rod of power. Manu believed that everyone is not capable of holding the rod of power. Only a philosopher king can be capable to hold it and utilize it with his perseverance and diligence. The king must be truthful to himself and his people; he must be honest-hearted, assiduous and intelligent thinker. He must be faithful to *dharma*, *karma*, *kama* and *moksha*.

Danda is a prominent divider of *Varnasrama* system— without the fear of danda, Manu believed that everyone violates the norms and standards of this system. So, he prescribes danda not only to reduce the crime and criminality but also, he positioned danda as a social divider (Bandyapadhyay, 2012, p-128-130).

In his *Chaturtha Adhikaranam "Kantaksodhanam"* (from chapter 6 to 13) he mentioned various types of danda. In his opinion, king is the 'Danda Chhatradhari' i.e., king is the protector (Chhatra) of the state and he has the royal power (danda) with him. Danda is an essential tool for maintaining a healthy state. Kautilya's remedy regarding crime is very important in this regard. In his *Kantakashodham*, *Chaturtha Adhikaranam*, *Dasaham Odhyay*, hymn no 4.10.1, he wrote that if a thief stole someone's garments in a holy place and he is found guilty, then he must be punished physically, like cutting his fingers or an offending limb. Repetition of the same crime will be treated more dreadfully than ever. In the same chapter, hymn no 8.10.2, Kautilya mentioned that if an offending person kills someone's pets like cats or dogs, they should be treated equally. In hymn no 4.10.4, it is discussed that if a person enters a fort without having any permission, steals something important, and then flees, he shall be punished physically by cutting his ligaments at the back of his legs. In hymn no 4.10.5, some brutal punishments were prescribed. If a thief steals someone's boat or animals, Kautilya wants him to be punished brutally, like cutting off one of his feet. If someone were found guilty of cheating in the play of dice, they would also be punished brutally. In this kind of scenario his offending hand would be cutting down.

Kautilya's prescription regarding punishment is brutal. Sometimes it becomes irrelevant. His ancient mind recognized retribution as a powerful weapon in comparison with other kinds of theories. On the other hand, Gautam referred punishment as a tool to deter people of committing something illicit. Vasistha Samhita gave power to the king but conditions are applied accordingly.

Manu talked about four forms of punishment. These are:

***Vak-danda (admonition):*** Vak-danda is a lighter form of punishment through which a wrongdoer is given a verbal warning, and if he continues to do the same wrong again, it would become pernicious to him. In most cases, a small penalty is charged.

***Dhikdanda (censure):*** Dhikdanda is a form of negative judgment imposed by an institution or by the king if someone has committed something illegal or immoral. Penalty is charged based on the nature and impact of the crime.

***Dhanadanda (Penalty or fine):*** Penalty or the financial punishment is one of the popular form of punishment among them.

***Badhadanda (Physical punishment):*** It is a form of punishment through which a wrong doer is punished physically. In this case, the form of punishment is administered based on the law of tort.

The law of punishment varies and differs from time to time. *Gautama* emphasized on the status of the wrong doer—if he belongs to a upper caste then the impact of the punishment should be reduced and if he belongs comparatively to a lower caste then the impact of the punishment would be heavy. The nature of the offence, the body strength of the offender should also be taken into consideration while judging. *Vasistha* suggested the judge that the place of occurrence is also a necessary factor and it should be taken into consideration while administering punishments. In *Narada's* opinion, if a perpetrator admits his crime then the level of punishment should be lesser and if he continues to conceal his crime and the jury is not convinced with his stand then the level of punishment should be higher.

### Reasons for punishment:

The Hindu theory of punishment is philosophically formulated to deter a person of committing a wrong thing. Ancient lawmakers were quite sure about the necessity of social stability. A stable society can make a peaceful and prosperous kingdom. To maintain the social harmony the weaker sections of the society are needed to be protected and the powerful sections are required to be controlled. To do so, the king has to administer the rod of punishment adequately while required irrespective of caste, class, gender and race. The idea of deterrence is fundamentally illustrated to adjourn the evil mind of committing crime and take them to the path of Dharma. In this regard, punishment is used as a tool of example and prevents others of doing the same crime. Ancient Hindu law was enforced in the society to make punishment as a form of preventive discipline. Otherwise, the societal harmony would be disrupted and the powerful will dominate the weaker section. According to Manu, the king's duty is to govern his people accordingly and if he fails miserably then the condition of *Matsyanaya* would become reality—bigger fish will swallow the smaller ones. Same will happen in the society. So, the deterrent theory of punishment is used as a tool to prevent people of doing wrongful things.

The deterrent theory of punishment is utilitarian in nature. It is a theory that is composed to reduce the rates of crime in the society. So, deterrent theory is always a future-oriented theory. Human nature is motivated by two specific kinds of principles—

The principle of pleasure and

The principle to overcome sorrow.

Crime is driven by these two types of principles. People who enjoy associating with crime are mostly driven by pleasure principle. They find themselves as free or unbound from the restrictions of societal norms and standards.

Some of them are driven to commit crime because of the incompleteness or the absence of needs from their life. The deterrent form of punishment restricts people of committing such thing for the benefit of the entire society. This theory initially aims to prohibit the criminal mentality at first by regulating restrictions and secondly, it covers a holistic view on social welfare. On the other hand, this form of punishment alone protects the wealth and life of the people if it is properly executed.

So, deterrent theory mainly prioritizes three major areas:

It distracts a sinner's mind from committing crime or sin and focuses on making him a good social being.

It impacts on the will of a sinner. So, an evil-minded person becomes aware of the consequences of punishment and he is forced to believe that the '*Principles of penal law*' shall not let him escape.

Society shall get rid of crime comparatively.

The deterrent philosophy believes to understand that punishment converts a criminal into a well versed and a well-behaved social being. But, according to human behaviour any kind of prediction does not guarantee its ultimate supremacy. Simultaneously, it is hard for a punished person to live in the same society with full dignity and in most of the cases they felt it difficult to interact with other people. Also, the conflict between social separation and social cohesion does not allow him to choose a particular side.

The deterrent theory is well understood based on the idea that only punishment can control the animality of human beings – Jerome Bentham and Cesare Beccaria perceived it as an instrument of social stability. They believed only the fear of punishment can deter oneself of doing such criminal offences. Manus believed that punishment drives the distinctions between castes and genders. Without the fear of punishment there will be an amalgamation in the society, there will be no restrictions of *Anulom* (upper caste man marries a lower caste woman) and *Pratilom* (upper caste woman marries a lower caste man) marriage. So, he took punishment as a weapon of caste purification. It is also deterrent in nature. In Manus understandings, the offender will be punished based on the nature and pattern of his criminality. The punishment should be tender at first; afterwards, it would become harsher. Finally, imposing a fine or corporal chastisement would be ultimately persuaded.

Human learns from example. In this connection, punishment can be understood as preventive in nature. It prevents an offender to conduct something that is inhuman and against the societal morals because there are so many examples in the society. So, punishment is instrumented as a social tool by which criminal offences may get reduced. In ancient society punishment was used as a social tool to articulate the social mechanism to deal with crime. Imprisonment, banishment, enchainment, mutilation etc. are some prominent examples of it. On the other hand, punishment is not only exemplary but also it has a greater utility. It provides a sense of security to the weaker section of the society and also it protects wealth and life of the people. It maintains justice and peaceful co-existence. Moreover, it gives a purpose to the inhabitant of a state to live with dignity and harmony. Social order and discipline are also a major outcome of it.

The concept of punishment is also retributive in nature. The form of retribution is the oldest form of punishment. It developed from the concept of vengeance in ancient time. Retribution, in primitive society where civil law was not uniformly understood by the people and revengeful activities were counted as a realm justice in the society, became most common in ancient jurisprudence of settling various personal disputes. Retribution, as a form of punishment, was certain, quick, reflective and reactionary. So, it gained popularity among the people of ancient time. The main concept of this kind of punishment is fulfilment of personal vengeance like Blood feuds or

reparations. According to retributive concept, punishment was counted as an act of honor through which a set of legal rules were profoundly administered. Retribution sees crime as a dispute to replicate the moral order in the society. Retributivists believes an offender must be punished accordingly irrespective of their caste, class and status. But, in ancient time in India, retribution was not as proper as it claims to be. The higher caste people, like Brahmins, Kshatriyas, suffered less if they did any wrong to a lower caste person. On the other hand, if a lower caste person committed a crime against a higher caste person, he would suffer brutally, and his suffering was not in accordance with his crime. Manu suggested that the king cut off the offending limb of a thief so that he could not commit the same thing again. The conflict of colour and culture initiated the difference in ancient jurisprudence. The Sudras were conquered by the Aryan people and the white-skinned Aryans were the conquerors. So, this discriminatory mindset reflected in the ancient law books too. The Brahmins were exempted from any kind of punishment. If the crime is exemplary, then a certain amount of fine is sufficient. Between Kshatriyas and Vaisyas, the difference was negligible, but the Sudras became the most fatal victims of this system. Dr. Priyanath Sen's observation in this regard is remarkable. He stated "... a person belonging to a lower caste abusing or assaulting a person belonging to a higher caste was subjected to a heavier punishment than a person belonging to a higher caste found guilty of a similar offence in relation to a person belonging to a lower caste. This may to some extent be accounted for on the ground that in cases where insult or injury was a constituent element of the offence, the punishment was to be severe when the delinquent belonged to lower caste in relation to the complainant, for the outrage proceeding from the former against the latter made the insult more keenly felt and consequently deserved to be put down with a heavier punishment (Das Gupta, Ram Prasad, p-42)".

Punishment is also reformist in nature. It tends to purify the offender by giving him an opportunity to survive in a moral way. It is regarded in Hindu ethics system as an instrument of purification. We are all well aware of the story of bandit Ratnakara, who further became one of the most pious sages, Rishi Balmiki, in ancient Indian society. So, there is a possibility in every human being. The innate nature of purification gives an opportunity to an offender to return to their previous life. Here, in this case, the form of punishment serves a greater understanding in bringing back the offender within his society by giving him a scope to change.

### **Modern Implications of Ancient Hindu Jurisprudence for Global good:**

Ancient Hindu jurisprudence is profoundly practiced in the present-day Modern Indian judiciary. Various sectors like environment, social harmony, global ethics, and justice can be framed based on their need and requirements of modern times for the global good. The Hindu jurisprudence, rooted in the ancient texts, is a dynamic, diverse, and humanistic legal system that emphasizes global well-being at both the individual level and the general level. There are some key areas where this Hindu Jurisprudence can be a matter of need:

#### **1. Dharma (Righteousness):**

**Ancient Concept:** In Hindu religion and cultural setting the concept of Dharma is one of the most important philosophical concepts profoundly explained in various ancient scripts. It is counted as an act of duty, law abiding attitude and code of righteous conduct that shapes a greater ability within an individual for the global good.

**Modern Relevance:** *Dharma*, in modern terminology is interpreted as the pursuit of justice, equity, equality and balance in society. Various global ethical frameworks, such as human rights, environmental justice, food security, economic equality and sustainable development align with the idea of *Dharma*. It promotes a sense of equality and justice all over mankind.

## 2. Ahimsa (Non-violence):

**Ancient Concept:** *Ahimsa* is another key term in Indian traditional thought imparted in Hindu jurisprudence. It delves with the meaning of non-violence or harmlessness or unification of minds. The teachings of Indian epics like *Ramayana* and *Mahabharata* are formulated in the concept of Ahimsa and further incorporated by Swami Vivekananda, Sage Arambinda and Mahatma Gandhi in reshaping the modern minds.

**Modern Relevance:** In present time global context, *Ahimsa* provides its theoretical preference over various concepts like movements against violence, war, ethnic cleansing, discrimination, Inequality etc. It can be conceptualised as a form of foundation in initiating global peace and brotherhood between every culture, religion and ethnic societies and it can be conceptualised as a nomenclature of non-violent resistance movements. It encourages compassion and love and bonding toward all living beings, thus shaping modern discourse on animal rights, environmentalism, and global peace.

## 3. Karma (Action and Consequence):

**Ancient Concept:** *Karma*, in ancient Indian terminology denotes the law of cause and effect. It also promotes good work, good force or good life etc. This concept suggests personal responsibility and accountability in both the spiritual and worldly realms.

**Modern Relevance:** In today's manipulative world, Karma resonates with contemporary ideas of accountability in governance, environmental sustainability, and social justice and human rights. It enforces the necessity of both short term and long-term consequences of actions, especially in the context of climate change, social inequality, and political corruption, ethnic cleansing and war.

## 4. Moksha (Liberation) and Global Unity:

**Ancient Concept:** Derived from its Sanskrit origin *Muc* (to free), the term *Moksha* means liberation from the cycle of death and birth (Encyclopaedia Britannica, 2025). It is also called *Vimoksha*, *Vimukti* and *Mukti* in It emphasizes the idea that all beings are interconnected at the deepest level.

**Modern Relevance:** This sense of interconnectedness can inform global efforts for peace, cooperation, and mutual understanding across nations and cultures. The realization of global unity, rooted in spiritual interconnectedness, can inspire solutions to conflicts and divisions, emphasizing shared human dignity.

## Satyagraha (Truth-force):

**Ancient Concept:** The term 'Satyagraha' is derived from its Sanskrit origin. "It is a compound word formed of 'Satya', meaning 'truth' and 'Agraha', meaning 'clinging, holding fast, adherence, insistence'. In other words, Satyagraha means clinging to truth, holding fast to truth, insistence on truth, or firm adherence to truth; come what may" (Inc, 2025). Rooted in its Hindu traditional philosophy, particularly in the *Upanishads*, *Satyagraha* deals with the power of truth and the non-violent struggle for freedom and justice. It pronounces the idea that truth and moral authority can bring about transformation. Mahatma Gandhi took it into the light during India's freedom movement days.

**Modern Relevance:** Today, *Satyagraha* continues to inspire global movements for justice and civil rights. **The Civil Rights Movement** Led by Martin Luther King Jr., was a challenge racial segregation and discrimination in the United States; Nelson **Anti-apartheid struggle** in South Africa was deeply influenced by Gandhi's philosophy



of Satyagraha. **The Suffragette Movement** in the United Kingdom was initially a violent one, expressed in a militant way, but, after that, with the leadership of **Emmeline Pankhurst** and **Alice Paul** it became a non-violent protest demanding women's voting rights. The leader of the Solidarity Movement during 1980, Lech Walesa, was deeply influenced by Gandhi's non-violence philosophy and incorporated it in his resistance. Last but not least, **Black Lives Matter** was also a non-violent movement expressed in a very composed way against the racial segregation and discrimination of black people in the United States. Even the recent happening of the killing of a lady doctor of R.G. Kar Medical College in Kolkata, West Bengal, India raised a huge protest all over the world. The protest was very composed and non-violent but its impact was huge in scale. Today, this approach has become more appealing and relevant for the masses.

### Integral Governance (Rajdharma):

**Ancient Concept:** In Sanskrit *Rajdharma* is defined as the duty of the king or the emperor. It is the code of conduct for rulers written in various Hindu texts and scriptures, specially, in the *Manusmriti* and the *Shanti Parva* of the *Mahabharata*. It vastly discusses duty of the monarch of protecting the property of the people, ensuring justice, fairness, and prosperity for all.

**Modern Relevance:** In various contexts like democracy, rule of law and good governance, *Rajdharma* is an interoperated form of ethical conduct and good governance of leaders and politicians at the same time. It prioritizes the well-being of all citizens regardless of their class, caste or ethnicity.

### Eco-Centric Law:

**Ancient Concept:** The Multifaceted nature of Dharma is also integrated with the functioning of the Universe. In Indian philosophical thought it is called Natural law—a law that governs all aspects of the universe and human life. This kind of laws is not positive or human made. Nature has created such a system of lives with complexity that any kind of aggravation could lead our entire existence in crisis. Hence, positive law is necessary to keep intact our natural laws (Sharma, 2019). Hindu jurisprudence includes principles of environmental stewardship found in ancient texts such as the *Rig Veda*, which suggests that nature and humans are interconnected, and both should be treated with respect.

**Modern Relevance:** The ecological consciousness has become one of the major sources of movements like *The Sierra Club movement* in United States (1892), *The Anti-Nuclear Movement* in all over the world (Mid-20th Century), *The Chipko Movement* in India (1973), *The Green Belt Movement* in Kenya (1977), *The Environmental Justice Movement* (1980s) in United States and globally *The Slow Food Movement* (1989), *Extinction Rebellion Movement* (2018), *Fridays for Future* (2018) and *The Earth Liberation Front* (1992) became our inspiration for environmental sustainability, climate change action, and the protection of biodiversity. The Hindu principle of *Vasudhaiva Kutumbakam* (the world is one family) can inspire policies that consider the environment as an integral part of global well-being.

### Social Justice and Caste System Critique:

**Ancient Concept:** The worldview of the caste system (Varna) is regarded as one of the major tools of discrimination, but in actuality, it spoke of the interdependence of all parts of the society. According to the *Rig Veda* it is articulated that all human beings are derived from the same cosmic essence and there is no such difference of their individual selves. The *Upanishads* suggests that all individuals have inherent equality in the spiritual being,

irrespective of their existential differences. All human souls (Atman) are united by the same universal soul (Brahman).

**Modern Relevance:** In modern approach it denotes the need for social justice, equality, harmony and the protection of human dignity for all. These ideas continue to influence the global discourse on human rights, anti-discrimination efforts, and policies aimed at reducing inequality.

### Conclusion:

The wisdom of Ancient Hindu jurisprudence is a product of an unchanging reality and realization of *Sat* (Being), *Chit* (Consciousness) and *Ananda* (Bliss). At the heart of Hindutwa, the formless, infinite and eternal Brahman is the ultimate reality presented in both immanent and transcendental way in each and every self. The spiritual practice of Bhakti yoga (the yoga of devotion), Karma yoga (the yoga of selfless action), Gyan Yoga (the yoga of knowledge) and Raja yoga (the royal path of yoga) can lead a person to achieve his ultimate goal in life. The ultimate understanding of dharma, Artha, kama and moksha can enable us to combat inequality, environmental degradation, and conflict, creating a more harmonious and compassionate world for future generations. By integrating these ancient principles into modern legal and social frameworks, we can foster global cooperation and contribute to the collective good.

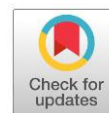
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## Spiritual Wealth: A Notion of Personal Development

Susmita Choudhary and Somnath Das

### Abstract:

This paper explores the concept of spiritual wealth as a foundational element of personal development, contrasting it with the transient nature of material wealth. Drawing on theories by Maslow, Frankl, Goleman, and contemporary thinkers such as Brené Brown, the study underscores how inner attributes—such as self-awareness, authenticity, creativity, and resilience—contribute to a more meaningful and fulfilling life. It examines how modern society's overemphasis on material success fosters dissatisfaction, and how spiritual wealth offers a counter-narrative rooted in intrinsic values and self-actualization. The paper also highlights the significance of self-reliance and authenticity as practical tools for personal empowerment, referencing real-life examples like Oprah Winfrey. Furthermore, it addresses the psychological toll of societal pressures, particularly in the age of social media, and offers spiritual wealth as a pathway to mental well-being, emotional balance, and authentic living. Finally, the study advocates for the integration of spiritual development within educational and societal frameworks to cultivate resilient, value-driven individuals and communities.

**Keywords:** Spiritual wealth, Personal development, Self-Reliance, Societal pressure, Mindfulness, Materialism vs. Spirituality, Transformative learning.

### Introduction:

Spiritual wealth is a profound concept that focuses on inner development and self-enrichment, distinguishing itself from the transitory nature of material possessions. While material wealth often drives external validation, spiritual wealth fosters qualities like self-awareness, creativity, and authenticity, leading to a deeper sense of purpose and fulfillment. These qualities form the foundation of a life aligned with personal values and intrinsic motivation (Maslow, 1943).

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### **Contrasting Material and Spiritual Wealth:**

Material wealth, while essential for meeting basic needs, is inherently fleeting and dependent on external circumstances. According to Maslow's hierarchy of needs, material success is rooted in lower-tier physiological and safety needs. In contrast, spiritual wealth correlates with the higher tiers, including self-actualization, where personal growth and authenticity become paramount (Maslow, 1943). Spiritual wealth challenges societal norms that equate success with material acquisitions, advocating for an inward journey to achieve enduring satisfaction and resilience (Frankl, 2006).

### **Inner Richness as a Source of Fulfillment:**

Inner richness—encompassing self-awareness, emotional intelligence, and purpose—acts as the core of spiritual wealth. Viktor Frankl's exploration in *Man's Search for Meaning* emphasizes that meaning, derived from one's internal world and values, serves as the primary driver of human fulfillment, even amidst life's adversities (Frankl, 2006). Spiritual wealth, therefore, not only equips individuals to withstand external challenges but also enables them to navigate life with clarity and purpose.

### **Addressing Materialism in Modern Society:**

Modern society's emphasis on outward success often leads to a pervasive sense of dissatisfaction. The cultural fixation on materialism, social status, and consumerism fosters a false sense of achievement while neglecting inner needs. Studies have shown that individuals driven primarily by extrinsic goals, such as wealth or fame, experience lower levels of psychological well-being compared to those focused on intrinsic goals like personal growth and meaningful relationships (Kasser, 2002). Spiritual wealth provides an antidote to these societal pressures by encouraging individuals to prioritize internal values and authentic living.

### **Qualities Embodied by Spiritual Wealth:**

**#Self-Awareness:** Spiritual wealth begins with self-awareness—the ability to reflect on one's thoughts, emotions, and actions. Daniel Goleman, in *Emotional Intelligence*, emphasizes that self-awareness enhances emotional regulation and decision-making, fostering a stable foundation for personal growth (Goleman, 1995).

**#Authenticity:** Living authentically aligns one's actions with their values and beliefs. Brené Brown's work highlights how authenticity fosters vulnerability, courage, and deep connections, all of which are essential for inner fulfillment (Brown, 2018).

**#Creativity:** Creativity, a hallmark of spiritual wealth, transcends traditional problem-solving, allowing individuals to approach life innovatively. Mihaly Csikszentmihalyi's concept of “flow” illustrates how engaging in creative processes contributes to happiness and a sense of achievement (Csikszentmihalyi, 1990).

**#Resilience:** Spiritual wealth instills resilience by anchoring individuals in their core values. Resilience, in turn, enables them to adapt to challenges without compromising their authenticity or purpose (Frankl, 2006).

### **Implications for Education and Society:**

Incorporating spiritual wealth into educational and societal frameworks can have transformative effects. Educational systems that promote mindfulness, introspection, and emotional intelligence foster environments where students can develop their inner potential. A study by Dweck (2006) demonstrated that cultivating a growth



mindset—emphasizing effort over fixed abilities—leads to greater motivation and academic success, both of which are essential components of spiritual wealth.

At the societal level, spiritual wealth encourages a shift from consumerism to community building, authenticity, and sustainability. It advocates for a collective emphasis on intrinsic values that benefit both individuals and communities, creating a more balanced and resilient society (Hanh, 2001).

## **The Foundation of Spiritual Wealth: Self-Reliance and Authenticity:**

### **Self-Reliance:**

Self-reliance serves as the cornerstone of spiritual wealth, emphasizing the importance of inner trust and autonomy in decision-making. Ralph Waldo Emerson, in his essay *Self-Reliance*, asserts that personal intuition and self-belief are essential for growth and independence. He challenges societal expectations, arguing that individuals must detach from external approval to foster self-confidence and align their lives with personal values (Emerson, 1841). This philosophy not only encourages self-discovery but also fosters resilience against conformity, enabling individuals to carve unique paths based on their inner convictions.

A profound example of self-reliance is Oprah Winfrey's life story. Rising from adversity, including poverty and childhood trauma, she built a global media empire by trusting her vision and staying true to her voice. Winfrey's journey exemplifies how self-trust and authenticity can lead to transformative success, particularly when coupled with resilience and a clear sense of purpose. Her ability to overcome societal barriers while maintaining her individuality highlights self-reliance as a tool for personal empowerment and fulfillment (Brown, 2018).

The relevance of self-reliance extends beyond personal achievement; it has societal implications as well. In a world increasingly shaped by social media and external validation, cultivating self-reliance offers a path to emotional stability and mental well-being. Research supports this notion, demonstrating that individuals who prioritize intrinsic values over external rewards report higher levels of happiness and life satisfaction (Seligman, 2011). Thus, self-reliance is not merely a philosophical ideal but a practical strategy for navigating modern challenges.

### **Authenticity:**

Authenticity, a concept intertwined with self-reliance, involves embracing one's genuine self, even in the face of societal pressure to conform. This principle requires individuals to live in alignment with their true identity, rejecting superficial norms that prioritize appearances over substance. Brené Brown, in her book *Daring Greatly*, highlights the transformative power of authenticity. She explains that embracing vulnerability and imperfection fosters deeper connections, enhances resilience, and promotes a more meaningful life (Brown, 2018). Brown's work underscores that authenticity is not about perfection but about accepting and expressing oneself without fear of judgment.

In practical terms, authenticity empowers individuals to resist societal pressures and live according to their values and aspirations. This is particularly relevant in today's culture, where external metrics of success, such as wealth and social status, often overshadow inner fulfillment. By choosing authenticity, individuals can transcend these societal expectations and find deeper satisfaction in their lives.

Authenticity plays a critical role in leadership and relationships. Leaders who embody authenticity inspire trust and loyalty, creating environments where others feel valued and empowered. For instance, Brown's research

indicates that authentic leaders foster a sense of psychological safety, enabling their teams to take risks, innovate, and collaborate effectively (Brown, 2018). Similarly, in personal relationships, authenticity encourages open communication and emotional intimacy, strengthening bonds and reducing conflict.

### **Analysis and Implications:**

The interplay between self-reliance and authenticity is pivotal in cultivating spiritual wealth. Both principles require individuals to turn inward, developing a strong sense of self that is independent of external influences. While self-reliance focuses on personal autonomy and confidence, authenticity emphasizes the honest expression of one's identity. Together, they form a foundation for personal growth, resilience, and meaningful connections.

Emerson's philosophy and contemporary research collectively highlight the enduring relevance of these concepts. In a rapidly changing world marked by technological advancements and cultural shifts, the ability to remain self-reliant and authentic provides a stabilizing force. By integrating these principles into education, workplace practices, and personal development initiatives, society can foster a culture that values individuality and emotional intelligence over conformity and superficial success.

Ultimately, self-reliance and authenticity are not merely ideals to aspire to but practical tools for navigating life's complexities. They empower individuals to overcome challenges, build meaningful relationships, and live in alignment with their true selves, contributing to a richer and more fulfilling existence.

### **The Conflict of Self: Societal Pressure vs. True Identity:**

The conflict between societal pressure and an individual's true identity is a significant aspect of personal development. Societal norms often impose expectations that individuals should define their success through material wealth, social status, and public recognition. These external measures of success, while prevalent in many cultures, can foster internal conflict as they might not align with an individual's core values and desires (Frankl, 2006). The pressure to conform to these societal expectations often leads to dissatisfaction, anxiety, and a sense of emptiness, as individuals may achieve outward success without experiencing true fulfillment.

### **Maslow's Hierarchy of Needs and Self-Actualization:**

Maslow's hierarchy of needs provides a useful framework for understanding the disconnect between societal pressures and true identity. Maslow (1943) suggests that once basic physiological and safety needs are met, individuals seek higher-level needs, culminating in self-actualization. This stage represents the fulfillment of personal potential, self-awareness, creativity, and authenticity. However, societal expectations often prioritize material success and external recognition, overshadowing the pursuit of self-actualization. Maslow's theory underscores that true satisfaction comes not from societal validation but from aligning one's life with intrinsic values and personal growth.

In this context, spiritual wealth becomes crucial as it emphasizes the inner journey rather than external accomplishments. Spiritual wealth fosters self-reflection and self-awareness, empowering individuals to distinguish between societal expectations and their authentic desires. This alignment with one's core identity leads to a sense

of fulfillment that transcends material success (Chopra, 2008). By nurturing inner values and authenticity, individuals can avoid the pitfalls of external validation and instead focus on personal growth.

### **Psychological and Social Impacts of Societal Pressure:**

Research by the American Psychological Association (2022) highlights the growing mental health crisis, especially among young adults, stemming from societal pressures. The constant comparison driven by social media, consumerism, and the pursuit of fame or wealth exacerbates stress, leading to anxiety, depression, and feelings of inadequacy. These pressures foster a superficial understanding of success, where individuals measure their worth by external achievements such as career status, possessions, or popularity.

The APA study suggests that cultivating spiritual wealth, through practices such as mindfulness, introspection, and developing self-awareness, can help mitigate these negative effects. When individuals focus on internal growth, they build resilience and a deeper understanding of their true self. This approach helps them resist the influence of societal expectations, allowing them to live authentically without constantly seeking external validation.

### **Spiritual Wealth as a Path to Authentic Living:**

Spiritual wealth offers an antidote to the conflict between societal pressure and true identity. It encourages individuals to prioritize personal growth, authenticity, and inner peace over external accomplishments. Frankl (2006) argues that meaning in life is derived from pursuing values that align with one's authentic self, rather than conforming to societal expectations. Spiritual wealth is cultivated through practices such as self-reflection, mindfulness, and meditation, which help individuals reconnect with their inner values and understand their true desires.

By fostering self-awareness, spiritual wealth enables individuals to distinguish between external pressures and their true calling. It offers a pathway to resilience, as individuals who cultivate spiritual wealth are better equipped to navigate life's challenges with clarity and purpose. Instead of defining success through societal standards, those who embrace spiritual wealth define success by their personal growth, their ability to live authentically, and their capacity for meaningful connection with others (Brown, 2018).

### **Practical Implications: A Shift Toward Authenticity:**

In practice, cultivating spiritual wealth involves consciously rejecting the societal norms that prioritize material success and status. For example, individuals might decide to pursue careers that align with their passions rather than choosing occupations based on financial gain or societal prestige. In education, encouraging students to explore their inner selves, practice self-reflection, and embrace their creativity can help foster a more authentic approach to success, where personal fulfillment is valued over external achievements (Dweck, 2006).

The shift from external validation to internal fulfillment is essential in addressing the societal pressures that cause stress and dissatisfaction. As individuals learn to value their internal growth and align their actions with their core values, they experience greater peace, purpose, and resilience. This shift not only benefits the individual but also contributes to a broader societal transformation, where success is no longer defined solely by material wealth but by personal integrity, creativity, and meaningful connection.

### **Creativity and the Ice-Cream Concert of Life: A Deeper Analysis:**

#### **Creativity as Self-Expression:**

Creativity, a core aspect of spiritual wealth, is deeply tied to personal expression and innovation. Mihaly Csikszentmihalyi's concept of "flow" captures this idea by describing a mental state where individuals are fully immersed in their work, experiencing a sense of fulfillment and enjoyment (Csikszentmihalyi, 1990). Flow is achieved when the challenges of a task match an individual's skill level, and the activity becomes intrinsically rewarding. This state fosters a sense of personal well-being, as it encourages individuals to transcend external pressures and focus on their inner abilities and potential. When individuals are in a state of flow, they experience a profound sense of joy, as their creative endeavors align with their deepest values and passions, contributing to their sense of spiritual wealth. The process of creation becomes more important than the product itself, embodying a deeper connection to self and purpose.

Steve Jobs serves as an exemplary figure of creativity rooted in personal vision and authenticity. His contributions to the tech world—especially through Apple—illustrate how creativity can change the world when it is guided by a clear sense of purpose. Jobs didn't simply create products; he created experiences that embodied both art and technology. By blending functionality with beauty, his innovations, such as the iPhone and iPod, became symbols of creativity and self-expression. His work represents the transformative power of creativity grounded in a deep connection to one's authentic vision. Jobs' approach to creativity was not solely about meeting external demands but rather about creating solutions that were personally meaningful and that had the potential to revolutionize industries (Seligman, 2011).

This understanding of creativity goes beyond the conventional notion of simply producing new things. It touches on the idea that creativity, when driven by inner values and a sense of authenticity, has the power to bring profound changes not only in the individual but also in society at large. This connection between creativity and spiritual wealth is essential, as it enables individuals to realize their full potential and live in alignment with their deepest beliefs.

### **The Ice-Cream Concert of Life:**

The metaphor of the "ice-cream concert" of life offers a unique and insightful perspective on how we experience moments of joy and fulfillment. An ice-cream cone, a fleeting yet indulgent treat, serves as a metaphor for life's transient moments that are often overlooked in the rush of daily responsibilities. Just as an ice-cream cone is savored slowly to fully appreciate its sweetness, life's moments—however brief—can offer profound joy if we approach them with mindfulness and gratitude. This metaphor invites individuals to reflect on the importance of savoring each moment, fully experiencing it without rushing toward future goals or dwelling on past regrets. By focusing on the present, individuals can experience life with greater appreciation and joy.

This aligns closely with Thich Nhat Hanh's teachings on mindfulness, where he emphasizes the importance of living fully in the present moment. According to Hanh, mindfulness is the practice of paying attention to the present experience without distraction or judgment. This awareness allows individuals to connect deeply with the richness of each moment, fostering a sense of peace and inner contentment (Hanh, 2001). In the context of spiritual wealth, mindfulness is a powerful tool that encourages individuals to cultivate appreciation for the small joys in life, transforming ordinary experiences into opportunities for personal growth and fulfillment.

By embracing mindfulness, individuals are able to transcend the stress of societal pressures and the anxieties of future expectations. Instead, they can experience life with greater depth and authenticity. The idea of the "ice-cream concert" suggests that life is not about constant striving for the future but about being present and appreciating

the richness of what is happening right now. The practice of mindfulness brings individuals into alignment with their inner selves, enhancing their capacity to enjoy life's simple pleasures.

Through this lens, both creativity and mindfulness serve as interconnected aspects of spiritual wealth. Creativity allows individuals to express themselves authentically, while mindfulness helps them fully appreciate the process and outcomes of their creative work. The combination of these elements leads to a more fulfilling and enriched life, where personal growth, self-expression, and appreciation for the present moment coexist harmoniously.

### **Spiritual Wealth in Education and Personal Development: A Detailed Analysis:**

Incorporating spiritual wealth into education is a holistic approach that nurtures students' emotional, mental, and social development alongside their academic progress. This paradigm moves beyond traditional academic achievement, recognizing the importance of inner growth, self-awareness, and emotional intelligence in shaping well-rounded individuals.

Research from the University of Pennsylvania emphasizes that integrating mindfulness and self-reflection practices in educational settings can have a transformative impact on students' emotional intelligence, resilience, and academic performance. These practices enable students to cultivate a deeper understanding of themselves and others, which in turn enhances their ability to manage stress, navigate challenges, and engage meaningfully with their learning. Mindfulness techniques, such as meditation or focused breathing exercises, help students develop a heightened sense of self-awareness and emotional regulation, key components of emotional intelligence (Dweck, 2006). This development of emotional intelligence—defined as the ability to recognize, understand, and manage one's emotions while empathizing with others—is integral to fostering both personal and academic success.

### **Self-Awareness and Authenticity in Education:**

The promotion of self-awareness and authenticity within educational environments allows students to form stronger, more resilient identities. As students cultivate these qualities, they are better equipped to handle societal pressures and succeed academically. Daniel Goleman, a prominent figure in the field of emotional intelligence, identifies self-regulation and empathy as crucial skills for success. Self-regulation, the ability to control emotions and behaviors, and empathy, the capacity to understand and share the feelings of others, are central to emotional intelligence (Goleman, 1995). When these skills are nurtured in students, they are more likely to thrive not only in academic settings but also in their personal relationships and future careers.

Self-awareness plays a key role in this process, allowing students to reflect on their emotions and actions. This reflective practice fosters greater empathy, as students learn to perceive and relate to the emotional experiences of others. By promoting an environment where students are encouraged to explore their inner worlds, educators facilitate the development of these foundational skills. This approach aligns with spiritual wealth's emphasis on inner growth, authenticity, and self-reliance. When students are taught to value their true selves rather than conforming to external standards, they are more likely to develop a strong sense of personal integrity and confidence.

### **Spiritual Wealth and Values-Based Learning:**

Integrating spiritual wealth into educational practices leads to a focus on values-based learning, where the emphasis shifts from external markers of success—such as grades and test scores—to deeper, more meaningful



outcomes. Students who are encouraged to develop their inner selves are better equipped to align their actions with their core values, which fosters a sense of purpose and fulfillment in their educational journey. This approach promotes ethical decision-making, creativity, and a commitment to lifelong learning.

Spiritual wealth within education encourages students to pursue personal fulfillment, not just academic accolades. By promoting creativity, authenticity, and self-reflection, educators help students develop a holistic sense of achievement that extends beyond academic success. This broader view of success acknowledges the importance of emotional and social growth in shaping well-rounded individuals who are prepared for the complexities of life. When students experience a sense of purpose and fulfillment in their education, they are more likely to approach their studies with enthusiasm and dedication.

### **The Role of Educators in Fostering Spiritual Wealth:**

Teachers play a pivotal role in fostering spiritual wealth within educational settings. By creating supportive and inclusive environments that emphasize emotional well-being, self-awareness, and authenticity, educators can guide students toward deeper personal growth. This requires educators to not only be knowledgeable in their subjects but also empathetic and emotionally intelligent individuals who model these qualities for their students.

Integrating spiritual wealth into education calls for a shift in educational practices and curricula. Schools and universities that prioritize holistic development will incorporate practices such as mindfulness training, reflective journaling, and values-based discussions. These practices foster a more engaged, thoughtful, and self-aware student body, ultimately leading to improved academic outcomes and a more balanced approach to personal growth (Seligman, 2011; Das et al., 2024).

### **Conclusion:**

#Spiritual wealth, as analyzed through its focus on inner richness and self-growth, offers a powerful framework for achieving personal and societal transformation. By prioritizing qualities like self-awareness, creativity, and authenticity, it challenges materialistic paradigms, fostering a meaningful life aligned with higher values. As modern society grapples with the consequences of excessive materialism, spiritual wealth provides a timeless and necessary counterbalance.

#The conflict between societal pressures and true identity is a central issue in personal development. Societal norms often promote superficial markers of success, leading to internal conflict and dissatisfaction. Spiritual wealth offers a pathway to overcoming these pressures by fostering self-awareness, introspection, and authenticity. By focusing on internal growth and values-based living, individuals can achieve a deeper sense of fulfillment, resilience, and purpose. This journey toward spiritual wealth challenges the societal emphasis on materialism and provides a more meaningful and authentic way to define success.

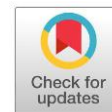
#Spiritual wealth enriches education by fostering emotional intelligence, resilience, and authenticity in students. The integration of mindfulness and self-reflection practices, along with a focus on self-awareness and values-based learning, supports the development of well-rounded individuals. This approach not only improves academic performance but also prepares students for success in their personal lives and future careers. Educators, by promoting spiritual wealth, create environments where students can thrive emotionally, socially, and intellectually, contributing to the development of a more compassionate, thoughtful, and resilient society.

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## Economic Thoughts in Ancient India – Some Fundamental Issues and their Relevance

Dr. Arnab Majumdar

### Abstract:

India has a rich intellectual legacy in the area of economics and finance. Right from the Vedic Age, issues pertaining to material aspects of life had considerable importance in the works of the great philosophers. A survey of the ancient Indian literature reveals in-depth discussion and analysis of economic issues. An attempt is being made here to look at some of the issues of significance and assess their relevance to modern thoughts in the area of economics and finance.

**Keywords:** Competition, Regulatory, Facilitative, Unethical Conduct, Just-Price.

### Introduction:

India is the home to one of the most ancient civilizations of the world, originating more than two millennia before the commencement of the Christian era. The Sarasvati-Sindhu civilization, which flourished across the regions of Gujarat, Sindh, and Punjab, had a vibrant and uninterrupted flow of social, religious, and economic life, and this ignited the thinking minds of that time, generating profound thoughts in diverse branches of knowledge (Bokare, 2009). Along with others, indigenous knowledge of very high calibre, reflecting a deep understanding of the subject, has been developed in the area of economics and finance. In terms of antiquity, such thoughts are comparable to the Vedas, which evolved around 1500 BCE. Scholars have pointed out that even the Rig-Veda, the oldest religious text in the world, devoted to religious and philosophical matters, contains many hymns related to matters of material prosperity, prices, bargaining, and even taxes (Saletore, 1963). As civilization progressed, economic activities started growing and profound thoughts emerged on a wide range of economic issues, and many of the thoughts are of the highest calibre, which makes them worth looking at in depth. In course of the ensuing discussion, an effort is being made in this regard by delving into some of the fundamental indigenous thoughts that emerged in the areas of market and competition, state's role in an economy and market failure and their remedies in order to have an understanding about them and analyse their relevance to the modern day knowledge in the respective areas.

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## Markets & the Role of Competition:

Since the Vedic period, Indian thinkers in their efforts to understand the nuances of economics have tried to have a thorough insight into the functioning of the markets and issues related to it. Griffith (1896), in Deodhar 2018 points out that the idea of the functioning of the markets, in terms of the determination of price through a bargaining process between the seller and the buyer, has been discussed even in the Rig-Veda. The relevant Hymn 24 of Book IV of the Rig-Veda as paraphrased by Deodhar (2018), is illustrated below :

“A customer is trying to buy wine (soma) and fried barley from a priest as sacrificial offerings to seek Indra’s favour. Customer bids a low price and the offerings remain unsold, for the priest is not ready to accept a low price. The offerings just cannot be sold for a mere price of ten cows. The needy buyer and shrewd seller both milk out the udder (i.e., bargain hard for the price). ”

However, it was in Arthashastra, the seminal work in the area of politics, economics and governance that emerged around 3<sup>rd</sup> century B.C.E. a comprehensive discussion on the functioning of markets could be observed. Despite having nascent economies, elementary markets and very basic economic activities in the background, Arthashastra reflects a profound understanding of the crux of market economies engages. It undertakes an in-depth analysis of the role of competition in market economies, its benefits, hindrances to competition and the ways to remove the hindrances.

Discussion on the functioning of markets begins in Arthashastra with the identification of the unethical and undesirable conduct of the producers which prevent the free functioning of the competitive forces in the markets (Kangle, 1965), like restriction of supplies, jacking up prices, reaping of excess and unjust profits, "adulteration", "fraud", "false description in selling". Arthashastran scholars realized that such unethical /anti-competitive conduct of the producers, which restricted competition in the markets, led to a conflict between public and private interests and resulted in the exploitation of consumers by the producers. They understood that if the market could be freed of such unethical conduct and competition prevailed there, enabling the free interplay of the forces of demand and supply, only then could there be real welfare of the people. However, Arthashastraian scholars do not just stop at this but they delve deeper, trying to find out the cause of such unethical conduct by firms in the markets. They point out that whenever producers in the market had a position of dominance, it gave them unbridled market power, and they engaged in such unethical conduct, which prevented the competitive forces from functioning (Kangle, 1965). According to Arthashastra, some firms could dominate the market because of their near-monopoly position in the markets, which was due to certain factors that restricted the entry of new firms in the markets. These factors, which restricted the free entry of new firms in commodity markets and are termed as barriers to entry in modern parlance, had their origin in the imperfections existing in the factor markets. Kautilya and his fellow scholars pointed out that these imperfections lead to high costs of the factors of production, i.e., labour and capital, which made them unaffordable for the new firms and thereby prevented the entry of new firms in the markets. Thus, Arthashastra could identify imperfections in the factor markets as the main cause of the lack of competition in the commodity markets. Consequently, Arthashastra prescribes a dual role for the state. On one hand, the state should play a regulatory role looking for any unethical conduct of the firms which vitiated the competitive environment and exploited the people and accordingly take corrective measures while on the other it would facilitate the growth of competition in different markets by ensuring unhindered that costs of labour and capital do not become too high which restricts their availability to the new and any firms (Kangle, 1965). Accordingly, suggestions were provided in Arthashastra so that the cost of labour and capital remains affordable for new firms and does not become a deterrent to their entry in the commodity markets. The detailed risk-weighted interest rate structure suggested in Arthashastra is an effort in this direction (Kangle, 1965).

The remarkable feature of such an interest rate structure was the balance that it tried to achieve between borrowers' affordability and lenders' business prospects. The interest rates proposed on the loans were such that the borrowers could repay it and lenders also could have sufficient incentives to lend. The risk-return trade-off was maintained with higher interest rates prescribed for loans to be taken for business activities where both return and risk were higher while lower interest rates were suggested for loans used for such purposes where returns and risks were both comparatively lower (Kangle, 1965). The key feature was that the peak rate of interest for every category of loan remained at a level which made capital affordable for every category of borrowers, so its inaccessibility did not deter them from doing business. Along with capital, labour was also accorded due importance. The suggestions provided in Arthashastra for ensuring stipulated minimum wages for labourers, creation of productivity linked wage structure, motivating the workers through rewards and incentives, creation of decent work environment, providing job security were all aimed towards creation of a sustainable and decent living for the labourers which would prevent unreasonable demands being made by them. Because such unreasonable demands by labourers may lead to a rise in the labour costs which the new firms may not be able to afford. and like high interest rates, it may also become a deterrent to the entry of new entrepreneurs in the commodity markets.

A survey of the ideas contained in Arthashastra on competition and related aspects bring to the fore some significant issues. Modern Competition economics, which is a branch of applied Industrial Organisation theory, consists of two aspects, a facilitative one and a regulatory one. The facilitative aspect consists of policies designed to enable competition to flourish in different sectors of the economy. Whereas the regulatory aspect revolves around the Competition Law, whose purpose is to prevent actions that may deter the growth of competition in any sector of an economy. It is indeed amazing that scholars in the Artha Shastra, which emerged more than two thousand years ago, could visualize the need for having a similar dual approach for ensuring the competitive functioning of markets, so that it may lead to the welfare of the people.

Earlier, while designing anti-monopoly laws, the emphasis was on the size and market share of firms as it was thought that the size and market shares of the firms determined the extent of competition in the markets (Kambhampati, 1996). Concentrated markets, characterized by the presence of one or few firms each with a large market share, were not supposed to deliver the benefits of competitive functioning to the consumers (Caves, 1967). The market power enjoyed by the firms in such a market structure enabled them to reap unfair profits and resort to unethical actions. Hence, the anti-monopoly laws tried to restrict and control the size and scale of operations of firms in order to curb their monopolistic tendencies. But modern day Competition Laws do not associate large-sized firms automatically with anti-competitive practices; rather, their focus is on the conduct of the firms as they try to ascertain whether any firm is misusing its position to perpetrate unethical conduct resulting in appreciable adverse effect on the level of competition in the market (Martin, 1993). If any firm engages in any such conduct, appropriate penal measures are prescribed. So, the emphasis has shifted from the size of firms to their conduct in modern-day Competition laws (Bhattacharjea, 2008).

It is indeed very surprising to find that the conduct-oriented basis of modern-day Competition Laws has its antecedents in the Arthashastra. Arthashastra does not show any inhibition about the large size of the firms, holding that responsible for lack of competition in the markets rather Arthashastra identifies the unethical conduct of the firms like collusion, restriction of supplies, jacking up prices for reaping super-normal profits as the reason for non-functioning of the competitive forces in markets and exploitation of the people. So, Arthashastra's focus was also not on size but on the conduct of firms very much like that of the modern Competition Laws.



As far as the facilitative aspect of today's Competition economics goes, it is a conglomeration of policies aimed at the factor markets, meant to ease the availability of inputs, factors of production, and technology to the entrepreneurs so that they can have an easy entry as producers in the commodity markets. Antecedents of the facilitative aspect of modern-day competition economics can also be observed in the Arthashastra in the form of the suggestions of a risk-weighted interest structure for loans, a proactive labour welfare policy (Sihag 2009). These are actually attempts at making factors of production accessible to every new entrepreneur so that they can freely enter the different commodity markets, boosting competition (Sihag, 2016).

In the entire gamut of ideas related to competition that one may come across in Arthashastra, the one which probably stands out is the concept of "Just Price" (Kangle, 1965). According to the Arthashastra, the state, through an assessment of the demand-supply situation in different markets, was to fix the 'Just Price' of the commodities. In normal circumstances, 'Just Price' is the price determined through the interplay of demand and supply forces in the market. But scholars in Arthashastra also thought about aberrations, i.e., when the market fails to arrive at the "Just Price" either due to a glut or a fall in production due to factors beyond control. In such a case, how should the price be fixed? It is here that the originality and subtlety of Arthashastra come to the fore as the economic philosophy of "Just Price" is expressed. "Just Price" is the one that is affordable for the consumer, and at the same time, it enables the producer to sustain his business. Arthashastra reflects a stupendous effort at the calculation of Just Price, which gives a tangible shape to a very abstract concept of forging a balance between producers' and consumers' interests when the market fails to do so. The quantification of Just Price, which is reflective of Arthashastra's views on competition. According to Arthashastra, competition should result in such a profit margin that would not be at the peril of either the producer or consumer. There will be affordability for the consumers and sustainability for the producers. Accordingly, the price that generated a profit margin of 5 to 10 per cent was regarded as the Just price (Kangle, 1965). In a number of recent empirical research studies on competition and profitability carried out by Pushpangadan and Shanta (2009) and some others, it has been observed that in competitive markets, the long-run profit levels usually stabilize at around 5%. Arthashastra's specification of "Just Price" as the price generating a profit margin of 5% to 10% indicates the deep understanding that Kautilya and his fellow scholars had about the feasible level of profit.

Nowadays, when soaring price levels resulting from very high profit margins are causing extreme hardships to people, the concept of Just Price may be used as a benchmark for normative profitability. This can be used to assess how much profitability levels in different sectors are above the normative level. Accordingly, policy measures may be designed for the maintenance of the profitability levels as per the competitive norms. This can create a business environment that will be attractive but not exploitative.

### **State's role : Taxes and Expenditure:**

Another issue of great socio-economic significance dealt with at length by Indian thinkers since the Vedic age is taxes. It has been pointed out by Deodhar (2018) that in Hymn 173, Book X of the Rig Veda, there is a reference to taxes (bali) and tributes to be paid by the subjects to the king. Further development of the concept of taxation can be observed during the period of the epics. In the Shanti Parva, Book XII, Hymn 88 of the Mahabharata (Ganguli, 1896 in Deodhar 2018), there are hymns describing the judicious form of revenue collection by the state. The hymns paraphrased by Deodhar (2018) are illustrated below:

"A king should milk (tax) his kingdom like a bee gathering honey from flowering plants. The king should enhance the (tax) burden on his subjects gradually, like a person gradually increases the burden of a young bullock." The opening sentence of the quote reminds us of the view expressed by Jean-Baptiste Colbert (McKechnie, 1896

in Deodhar, 2018), two millennia later, that the art of taxation consists in so plucking the goose as to procure the largest quantity of feathers with the least possible amount of hissing while the second sentence of the quote is a reflection of the most fundamental thought on the tax structure. It can be regarded as the original version of the modern economic concept of the progressive tax structure.

There is an extensive discussion on various aspects of taxation in Arthashastra. However, the fundamental principle on the entire discussion rests regarding the adoption of a system of taxation which would ensure a sustained flow of tax revenue and at the same time encourage the growth of economic activities which is akin to the modern day concept of sustainable development has its origin in the great epic Mahabharata. The following excerpt from Mahabharata Book XII, paraphrased by Deodar (2018), illustrates that.

***“Taxes should be collected just like the bees collect honey from the flowers and just as only the ripened fruits are picked from the orchards, with un-ripened ones given time to mature.”***

The underlying implication of the above is that the level of taxes should not be excessive so that economic activities, particularly the new ones, do not become unprofitable and the source of taxes does not dry up. Taxes should be moderate and economic activities should be given time to mature before subjecting them to taxation. Kautilya further advised the kings to maintain a balance between revenues and expenditure. He suggested that the kings should refrain from consuming the entire revenue for their own needs or on account of payment of wages and salaries to state's employees, rather he had to keep aside a substantive portion of the revenue for the provision of public goods and for the welfare of the marginalised sections of the population. Kautilya categorically advised spending only 25 per cent of the total revenue on account of wages and salaries of the state employees. Such advice is a precursor of the concept of fiscal prudence, which serves as the fundamental principle of modern-day fiscal policies.

The post-Kautilyan views on taxation, fiscal policy and public economics at large can be observed in the thoughts of Kamandaka and in works like Brihaspatisutra and Sukraniti Mehta (1992). Kamandaka's Nitisara, estimated to have emerged around the late fourth century A.D., is a manual explaining the duties and responsibilities of the rulers. This is a normative discourse that attaches great importance to the material well-being of people (Mehta, 1992). According to Kamandaka, it was morally binding on the king to ensure the material well-being of his people, which can be ensured in four ways through earning revenues, increasing it, protecting it, and distributing it (Deodhar, 2018). A king can fulfil the demands of his subjects only when his financial position is sound and that position is properly utilised. Accordingly, Kamandaka accords prime importance to Kosha or Treasury, underlining the indispensability of wealth in matters of governance. Treasury was meant for the purposes of dharma and artha, i.e., maintenance and support of state employees and for meeting exigencies. Kamandak advises that the Treasury should be large enough and efforts should be made by the king to increase its size through the mobilisation of revenues from every possible righteous means so that the Treasury can bear the burden of any expenditure which must always be less than the income. In case of emergency, the King may collect money from his subjects but it should be used for promoting welfare of the people (Mehta, 1992). Many of the views expressed by Kamandaka, particularly those regarding the use and augmentation of the Treasury, have relevance to modern-day policy making in the area of public economics. The idea of king's expenditure being always less than the revenue is the basic concept of fiscal discipline which is one of the guiding principles for modern-day fiscal policy. Besides, the idea of exploiting every righteous means of revenue generation without being too harsh on the people can definitely be looked upon as an antecedent to the modern-day theory of Supply-side Economics which also functions on the principle of broadening the tax base and moderating the tax rates.

Another very important work of the Post-Kautilya era is Sukraniti. It is a quality work in the area of moral science on the lines of Arthashastra. Sukraniti, estimated to have been composed sometime between the 4th century and 7<sup>th</sup> Century A.D. is essentially a moral code which is to be followed by the king for the attainment of virtue, wealth, and salvation (Mehta, 1992). Though it is an extensive discourse on the moral and ethical aspects of governance, from these moral intonations, emerge some ideas and principles of economics whose fundamental nature makes them worth considering even today. In underlining the duties of a king, Sukraniti echoes Kamadaka's idea that the king should not only try to protect the existing wealth but make every effort to increase it. The importance attached to the generation of wealth by a king becomes evident from the fact that the hierarchical structure of the kings described in Sukraniti is entirely based on the size of revenue mobilised by the rulers in their dominions. It begins with Samrat, mobilising 3 lakhs in revenue and moving up to Virat earning 50 crores in revenue with the Sarvabhauma, regarded as the Lord of the earth at the apex (Mehta, 1992). The guidelines provided in the area of public finance and economic welfare in Sukraniti were way ahead of their time. The advice regarding the generation of wealth from land revenues through an equitable system of taxes and utilisation of the wealth so generated for the provisioning of public goods is an indicator of the progressive nature of the policy prescriptions.

Another noteworthy work in the tradition of Nitishastra is Brihaspatisutra. Though Brihaspatisutra is a manual for the moral guidance of the king but matters related to finance find an important position in it. According to Brihaspatisutra, stability of a kingdom can be only ensured if the king can protect the wealth of the kingdom increase it and spend it for the right purpose (Mehta, 1992). Consequently, the Treasury becomes the key component of the state, and it needs to be augmented and protected for the security of the kingdom. The Treasury can be augmented through mobilisation of tax revenues for which a fixed rate of tax at 1/6<sup>th</sup> of the product has been advised which was to be mobilised through a graded system of taxation so that the wealth of the state increases but the source of revenue does not get dried up because of excessive taxation (Mehta, 1992). The tax policy can very well be regarded as the precursor of the modern-day principle of sustainable development, while the idea of the king providing protection, ensuring the welfare, and facilitating economic activities without receiving taxes is a classic illustration of instilling accountability in governance, which is so much talked about nowadays.

The preceding discussion reveals that Indian thinkers since the Vedic Ages i.e., around three and half millennia back were deeply concerned with the financial aspects of life. They accorded supreme importance to the financial duties of the king. According to the Indian thinkers, the security of the state and its subjects depended on how efficiently the king could accumulate wealth, preserve it and distribute it for the welfare of the masses. Right from the Vedas, Epics, Puranas, and in the great works like Arthashastra, Kamandaka nitisara, Sukranitisar, and Brihaspatisutra, there are thorough analyses followed by pragmatic suggestions regarding the collection of taxes by kings for the accumulation of wealth and the distribution of wealth for the benefit of the state. The profound thoughts expressed in the ancient Indian texts with regard to the system of tax collection, rate of taxation, coverage of taxation, spending of tax revenues and forging of a balance between the revenue and developmental expenditures by the state can indeed be considered as the antecedents of the modern day concepts of fiscal prudence and sustainable development that serves as the guiding principle in the designing of modern day facilitative fiscal policies by the governments.

### **Issues in Market Failure : Poverty and its alleviation:**

A noteworthy feature revealed in the ancient Indian literature is the views on poverty and the role of charity in its alleviation. According to Basham (1954), in ancient Indian literature, poverty was looked upon as 'living death' and worldly wealth was considered morally desirable and charity was thought as essential for alleviating the poor

from poverty. Deodhar's paraphrase of Hymn 117 of the Book X of Rig-Veda is provided below as an illustration :

***God has not ordained hunger as a form of death. Death comes in various ways even to a well-fed person and riches come to her like the rolling of a cartwheel; hence, the rich should give alms to the poor who become her friends in future troubles.***

Bhagwat Gita goes further ahead in describing the right and wrong forms of daana (charity). Vishnu Sharma's remarks in the Panchatantra are also worth mentioning here. As paraphrased by Deodhar it reads:

***Until a mortal's belly-pot is full, he does not care for love or music, wit or shame, body's care or scholar's name, virtue or social charm, gods like wisdom or youthful beauty."***

This implies that unless man's minimal material needs are fulfilled, his higher aspirations cannot be realized. Tiruvalluvar, the great Tamil philosopher in the treatise Thirukkural opines that if the power to endure hunger is great, greater still is the power to relieve other's hunger. Ancient Indian thoughts placed great reliance on economic and ethical reasoning for motivating individuals in undertaking charity, to which considerable importance was accorded for poverty alleviation (Swamy, 2012). (Deodhar 2018), highlights the voluntary nature of charity advocated in ancient Indian literature. He points out that Alberuni in his eleventh-century book, Tarikh Al-Hind speaks explicitly about this. An excerpt from the book, paraphrased by Deodhar, brings this to the fore:

***"There are various opinions on how Indians spent their income after paying taxes. Some apportion one-ninth of their income for alms. Others divide it into four parts – One fourth for usual common expenses, the second for works of a noble mind, the third for alms, and the fourth for being kept in reserve (savings)".***

The importance of charity in Indian economic life can be further realised from the fact that a thousand-page compendium on charity titled "Daankand" was authored in the 14th century by Hemadri, prime minister of Devagiri, which dealt exclusively with charity (Heim 2004). The emphasis accorded to charity for alleviation of poverty as revealed from the preceding discussion underlines the fact that intellectuals since the Vedic age realised that existence of poverty was a manifestation of market failure and poverty alleviation was not possible through usual market transactions, rather proactive measures for providing economic assistance to the downtrodden were required for sustenance of the lives and for their upliftment. Deodhar (2018) regards these texts and their views as antecedents of the literature on 'culture of poverty' by Lewis and others almost twenty-two centuries later.

As one looks at the Indian scenario, it can be observed that the thought process which forms the very basis for the policy-making exercise undertaken in India for poverty alleviation has striking similarity with the views held by ancient Indian intellectuals in this regard. Unemployment doles, old-age pensions, freebies like free rations, subsidised education schemes, free medical facilities, free housing facilities provided by the governments nowadays and termed as transfer payments in modern day parlance are nothing but governmental charity. These proactive measures initiated outside the ambit of the market mechanism for sustenance and upliftment of the lives of those living below the poverty line is a vindication of government's realisation that alleviation of poverty cannot be done through the market mechanism because those living in poverty have neither any skill nor knowledge which can be sold in the market and hence they are unable to participate in the market process. The objective of the proactive policy measures adopted by the government is to enable those living below the poverty line to sustain their lives and equip them with the skills and knowledge that are in demand in the market so that they can be integrated into the market process. However, the government has realised that proactive measures by them will not be sufficient enough for upliftment of the large number of downtrodden in the country. Consequently, policies have been framed

for involving and motivating the private sector in contributing towards pro-active initiatives for charity. Initially, provisions were incorporated in the Income-Tax Act for providing tax concessions to individuals or institutions on contributions for charity. But the landmark policy initiative has been the amendments in the Companies Act in 2014 as per which companies having an annual revenue of more than Rs. 10 billion or 100 million pounds have to contribute 2% of their net profit to charity. By enacting the legislation, India has become the only country in the world to make corporate charity mandatory, and after its enactment, the Indian private sector's charitable contribution has jumped to around 2.63 billion pounds from 357.5 million pounds in 2013. These measures and actions aimed at expectation-free contributions by the government and private sector towards the economic upliftment of the masses are a testimony to the profoundness and relevance of the concept of Satvik Dan espoused by intellectuals in ancient India for addressing situations of market failure like poverty (Nadkarni, 2007).

### Conclusion:

There can hardly be any comparison between the primitive economies of the ancient era when the indigenous knowledge system started developing and the intricate modern-day economies. But what is really amazing is that despite having a very basic economic structure in the background, the indigenous thoughts that developed in the area of economics were not basic at all, rather, they were of very high order. It can be observed that the issues which have been discussed here as part of the preceding discussion, are of fundamental importance, and their significance and fundamentality have not diminished even in the highly complex and sophisticated modern-day economies. The analyses of different economic issues in the indigenous knowledge system and the policy prescriptions offered have striking relevance with the modern day thought process in the respective areas and it would not at all be far-fetched to regard the economic thoughts that developed as part of the indigenous knowledge system to be the precursor of many of the modern day economic theories and policies in different areas of the subject.

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## COSMOS: The Vedic Oblivion of the Universe

Dr. Arkapratim Changdar

### Abstract:

Being the cradle of all creative and enthusiastic minds, the unfathomable darkness of the cosmic canvas exhibits crayons of knowledge since the distant past. After the postulation of Vedic Rashmi Theory, the fundamental element of this cosmos is considered to have evolved from the God Particle. There are a number of in-between stages through which this entire process of creation passes. Three primary entities of the universe that drive the causes of the universe are- Force, Motion, and Mass. In Vedas these three entities are represented by three cosmic fabrics- Satva, Rajas and Tamas respectively. As per Vedic Science, these three are properties of that matter which remained passive in the very beginning of the creation of the universe and also represent three fundamental qualities as well. In this paper, the main focus is on tracing out the creation process of universes based on Vedic cosmology and making it compatible with modern cosmic sciences. The Tesla code of the universe controls higher dimensions, and there will be an attempt to decipher the singularity, which makes "Ahamkar" to make causes to be created by the synergy of "Purush and Prakriti". This paper will focus on the gradual changes of consciousness along with the changing realms to decipher the cosmic intelligence of being.

**Keywords:** Cosmic Fabrics, Intelligence, Consciousness, Dimensions, Singularity

### Introduction:

Vedas state that the entire universe has been created due to the interaction between "Prakriti" and "Purusha". Prakriti or "Stree Tatva" is the curator and driving force for the universe. It causes the process of birth to be born within it. "Purush Tatva" helps the life kingdom to have or select suitable chances from that limitless deep ocean of energy for their hassle-free livelihood in the habitable zones of the universe. This never-ending, unparalleled energy of the universe constitutes around 68% of the cosmos; 27% constitutes Dark Energy and the last 5% is the Cosmos we all know about. Force, Motion, and Mass are three fundamental causes of the universe that define all processes of cosmic pinball. String theory proved that "Chhand" or vibration is the reason for the existence and gradual expansion of this universe. Also, it depicts the Tatvas of creation one by one. These are all linked with "Samay Tatva" (Time). Here, the focus will be on materialistic causes of the universe, which incorporates the Big Bang Theory and the Steady State Theory. As these theories are unable to answer certain questions pertaining to the concept of "Prana" and as in this work it is the objective to find out the physics behind Purusha and Prakriti synergy, here, instead of these two theories, elements from the Vedic Rashmi Theory (VRT) have been considered.

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With the study of this theory, it will be better to pass through the oblivion of the universe by a vivid picture of relativity in light of quantum entanglement and fundamental elements of creation.

### **Objectives:**

Trying to understand the structure of cosmic fabrics

To understand the synergy of Prakriti and Purusha

Deciphering Cosmic Consciousness of Realms

### **Database & Methodology:**

Based on interpretation from the Astronomical Stellar Chart and by measuring Polarization Correlation, Entanglement Swapping between two photons that never co-existed in Quantum Entanglement and its mechanism has been studied. Based on reviewing Vedic literatures and texts and by decoding those, the synergy between Prakriti and Purusha Tattvas has been attempted to be interpreted. To study Dhananjaya Prana and Vayus, the study of the main 9 dimensions has been conducted. Sources for data in this research work are mainly Vedic texts, Upanishads, and their interpretations.

### **Discussion:**

The theory envisages that the universe is made of fundamental materialistic particles, which are better known as God Particles. Before the Vedic Rashmi Theory, two theories that used to have universal acceptance in terms of explaining the creation of the universe were the Big Bang Theory and the Steady State Theory. Here, without explaining those two, the Vedic Rashmi Theory is being studied directly to understand the cosmos in a more scientific and religious way because the Cosmos is trillions of magnitudes more than humans think, know, or are trying to know. As per VRT, there are mainly three causes of the universe; as, there is nothing in this universe without causes. These three are- Force, Motion and Mass. As per the Vedas, there are also three fundamental qualities scattered in the cosmos- Satya, Raja, and Tama. As these three are basic fabrics of the universe, the entire cosmos is resting on these. In VRT, the Force, Motion, and Mass have been considered as reflections of Satya, Raj, and Tam qualities, respectively. Also, vibrations that are emitted by anything solely depend on its fundamental subtle component. However, modern era science believes the cosmos to be made of quarks and strings. In VRT, "Vayus" have been considered as reasons of creating cosmic phenomena along with strings. As per Vedas, 'Satya' is considered to be the most superior and powerful component, usually invisible, massless, least vibrant, and made of all 11 kinds of "Atm-Vayus". "Raja" component has moderate vibration, it is mainly associated with the actions towards Satya or Tama. It is less divine and have very negligible mass. It is composed of all kinds of particles of the cosmos. "Tama" is the most materialistic and vibrant subtle fabric of the cosmos. All kinds of tangible entities of the universe are made of Tama's subtle component. Similarly, if Force, Motion, and Mass are considered in the same order, it is found that Force is autonomous; it needs nothing for its formation and actions. Here, force means the dark oblivion behind the visible force (the power, which we consider as force). Scientists have not succeeded in revealing that thing yet. So, Force is considered to be the divine component of the cosmos, which controls the other two. Motion is parallel to "Raja". Basically, Satya, Raja and Tama are three fabrics of the entire cosmos. In spite of this, these three cannot be seen physically or with the help of the latest electronic microscope, nor with the help of particle accelerators like the LHC (Large Hadron Collider). These three fabrics represent the basic deep-structure of all five fundamental elements of the creation, i.e., Fire (Agnitvatva), Earth (Prithvitatva), Water (Apatatva), Ether (Akashatatva) and Wind (Vaayutatva), and vice versa.

Although these three subtle components are intangible and invisible in normal form, when they are accompanied by energy surges, these fabrics start flowing in the form of waves. Satya waves colors yellow and it has a very long wavelength. Raja waves are red, and it has a very intense wavelength. Tama waves are black, and it has an irregular wavelength. If all five elements are considered, these exist in different proportions in three fabrics. Starting from the most consolidated to the most intangible elements, all three strings are distinguished based on interchanging shares of elements, and so their behaviors change accordingly. The following table clarifies:

**Table 1: Five elements and Three fabrics.**

	<b>Sattva</b>	<b>Raja</b>	<b>Tama</b>
Earth	10%	40%	50%
Water	20%	40%	40%
Fire	30%	40%	30%
Air	40	40	20
Ether	50	40	10

(Source: Spiritual Research Foundation)

Starting from Earth or Prithvitatva the share of Satya increases towards Ether or Akashatatva in regular manner. Raja remains for same percentages in all five elements and Tama, from Earth to Ether keeps on decreasing at the same manner how Satya increases. Here lies the most profound secret of the synergy between Purusha and Prakriti. To understand this divine relationship it is easy with an example of mundane obligation, say, philanthropy as it can be understood in this light. In the world, human do philanthropy but same action with different sets of spiritual particles result differently. If someone pays alms to a beggar with a feel of pity from heart then that philanthropy is actually Tamas in nature; because while giving alms it was in the mind of donor that he or she has wealth to spare and by paying alms to that beggar the donor indirectly or passively praises himself or herself. May be the person for a moment got deluded that he or she is doing it out of pity but actually was doing out of a passive self satisfaction. In such action earth element constitutes the highest percentage and ether particle possesses lowest share. This determines the extent of possible alternative combinations of five elements in different proportions. Such alms are considered "Tamsic" in nature which de facto releases negative pulses of energy, releasing into space. As our actions are fully controlled by strings and cosmic fabrics as well, our actions do affect the cosmos too. So, in that respect if we dissect that action of alms in a graph, it will depict higher percentage of earth matter and lowest share of ether matter, i.e. the action was "Tamsic" in nature. In following table and figure it will be clear.

**Table 2: Elements and Percentages of Associated Actions.**

<b>Elements</b>	<b>Share</b>	<b>Actions</b>	<b>Multiplier</b>	<b>Tamas (%)</b>
Earth	20%	Pity	*1.84	36.8%
Water	20%	Compassion	*1.46	29.2%
Fire	20%	Satisfaction	*1.00	20.0%
Air	20%	Devotion	*0.55	11.0%
Ether	20%	Selflessness	*0.10	2.0%

(Sources: Developed by the Author based on Vedanta Texts)

The above table depicts a unique matrix of all 5 elements and associated actions that decide whether the result of the overall action will be towards Satya or Tama. From the previous table, it is clear that the more towards Earth element, the more Tama is the fabric; whereas the more towards Ether, the fabric is more towards Satya.

Here, an entity (a human) has been considered with all elements in equal percentage in the beginning, which denotes that the entity is neutral. Now there are 5 possibilities of reactions made by the entity. If the entity exhibits more "Pity" over the rest of the 4 actions, then the outcome will be 36.8% Earth element oriented, which is towards Tama. Thus, if the entity exhibits more "Compassion" over the rest of the 4 actions, then the outcome will be 29.2% Water element oriented, thus the entity will upgrade itself towards Raja (Fire and Satisfaction, 20.0%) and eventually Satya (Ether, Selflessness, 2.0%). (cont....)

As we know, energy can't be created or destroyed, it only gets transformed into an endless number of variations throughout this cosmos; here lies the synergy between Prakriti and Purusha. In Vedas, "Prakriti" has been termed as "Adi Para Shakti" (Eternal Endless Female Energy), which is responsible for each and every action, reaction, process, mechanism of creation, rearing, and destruction. This energy symbolizes Goddess Mahakaali, who is the Goddess of destruction, as per the Vedas. On the other hand, "Purusha" is the Trinity (Brahma-Vishnu-Shiva), which is actually "lifeless" at the beginning of the universe. This state can be considered as the pre existing state of Big Bang. Now here again, as energy can't be neither created nor destroyed and as the writing of Michio Kaku, Carl Sagan and Stephen Hawking envisages the existence of parallel universe and Megaverse (assemblage of several multi-verses each having distinct unique properties and inter-universal laws) as well, it is understood that before our Big Bang there was another universe and before that there was another big bang and further primeval universe. In Vedic Rashmi Theory, those "strings" (Chhand) function as the tiniest components of energy which exist in form of vibrations throughout the universe. Thus the energy never ceased, it was we who started from an in-between point of this eternal, never-ending, colossal process of cosmic pinball. In the Vedas, it is stated that both Goddess Mahakaali and the Trinity used to start a "Sristi" (Creation of the Universe), which in scientific terms we denote as "Big Bang," and the "Pralay" (Destruction of the Universe), which is known as "Big Crunch" as well. In the light of this never-ending, continuous process of creation and destruction of the universe, it is important to understand that the supreme elementary form of matter, which eventually, as per the Vedas, is transformed into "OM" (Sound of the Universe, the God Particle), is the super fabric. As per the Vedic Rashmi Theory, there are several stages of tatvas between molecules to OM. First is Molecule, it contains of Atoms; Atoms are made of Protons. Protons are further divided into Quarks, and one Proton has 2 Up Quarks and 1 Down quark. There are six categories of these Quarks (Up, Down, Strange, Charm, Bottom and Top). These quarks are connected with Gluons, the strings (Chhand Rashmi) of VRT. These strings help quarks to form matter. Till this stage, from Molecule > Atoms > Protons > Quarks > Strings, it is outer elements of matter formation. Stages beyond this level are completely made of subtle to supreme-subtle elements, and these can only be assessed after Strings are further illustrated with temporal hyperspace. In other words, at the stage of Strings a maximum limit of a Particle Accelerator (LHC, RHIC) terminates. In Vedas stages beyond Strings are explained. As per VRT, after Strings, the next stage is "Sukshma Prana" or "Maruta Rashmi", which are also called "Prana Vayu". These are massless and therefore weightless subtle forces of life which thrive in the cosmos. There are 10 such "Prana Vayus". 5 are main and rest of 5 are sub categorized. The 5 main Prana Vayus are- Prana, Apana, Udana, Vyana, and Samana. The 5 sub-vayus are- Naga, Kurma, Krikara, Dhananjaya, and Devdutta (Shrimad Bhagavatgeeta, 2/18). Together, these 10 Prana Vayus form Strings which further bind quarks to form matter. After this, the next more subtle element is "Manas Tatva" or Psyche Element. In Hindu scripture, "Shiva Purana," it is considered to be characterized by different manifestations of universal fabrics. These all vayus consist of chhandrashmi (strings) or vibrations created from the temporal interaction of sattva, raja, and tama fabrics, in some parallel dimensional realms. The frequency and intensity of vibration produced by strings cause dimensional changes and remain distinct from each other as well. Eventually this occurrence causes superimposition of the same entity but with a different scale of vibrations. In between, Samaya Tatva or Kaal



Tatva (time element) functions as the conveyance of the transformation from minor towards subtle particles of matters. Manas Tatva pertains with Manas or "mind", also known as "Chitta". Manas Tatva is considered to be the state of transformation from subtle towards super subtle state of element, which is created from a combination of "Purusha", "Buddhi" (intellect), "Ahamkara" (self-conscious) and "Manas" (mind). These all are Rajasic (tends to Raja) or Satvik (tends to Sattva) fabric made. These three strings apart from Purusha are the expressions of "Prakriti" but these three are not prakriti.

To decipher the dimensions of the universe coding system plays the primary role as it mostly rests on the behavior of three cosmic fabrics and alteration based on time and situation. Sattva, Rajas and Tamas together form the essence of all dimensions. It can be pointed out that there is a never-ending mysterious coding chain running through each and every matter of the universe. This can be termed as the "Tesla Code" of the universe. For ease of understanding, there are numbers like 0,1,2,3,4,5,6,7,8 and 9; "10" is not considered as a number as it is a pair of two numbers 0 and 1.

Let's take 1, now with doubling the number digital root calculation pattern will look like the following:

[1-1, 2-2, 4-4, 8-8, 16-7, 32-5], [64-1, 128-2, 256-4, 512-8, 1024-7, 2048-5], [4096-1, 8192-2, 16384-4, 32768-8, 65536-7, 131072-5] and in this it can go up to infinity. Here, one can find out that a particular pattern is being repeated again and again at a regular interval. That pattern is 1,2,4,8,7,5. All the dimensions that are mostly linearity-based are represented by this pattern. Now if observed, it can be found that in this pattern 3,6 and 9 are absent. Now if the multipliers of 3 and 6 are considered for digital route calculation, the pattern will look like following:

[3-3, 6-6], [12-3, 24-6], [48-3, 96-6], [192-3, 384-6], [768-3, 1536-6]. Here the pattern is 3,6,3,6,3,6,3,6,3,6. Surprisingly, here no other numbers (1,2,4,8,7,5) are present except 3 and 6. Whereas multiplying any number apart from 3 and 6 will show the previous pattern. But still there are questions unanswered, what happened to number 9? Now, if number 9 is taken, multiplying or dividing it to an infinite level will result in all digital routes to 9. This number is the unique singularity point of the universe. Everything starts from 9, ends at 9. Now a question can arise regarding 0, that universe has been created from 0 (a singular point) and its demise will be in 0 as well, so why not 0 instead of 9. Actually, there is no difference between these two. For example, a number, 2073 which have digital route of 3; but now if that 0 is replaced by 9 which makes the number 2973 having same digital route value, 3; which means 9 can not make value addition even getting replaced by 0 and 0 can not subtract digital route value even by replacing 9 which also deciphers the oblivion of cosmic pinball based on Sattva, Rajas and Tamas. This natural ability of Rajas or 9 comes from absolute singularity. As it is found that the cosmic essence of 0 and 9 is the same, hence it validates the oblivion of the Tesla Code. Thus 3,6 and 9 represent higher dimensions (4th to 11th) and 1,2,4,8,7 and 5 represent lower dimensions (0th to 3rd). These 3,6 and 9 represent Sattva, Tamas and Rajas respectively. As per Table 1, Sattva consists of more ether elements; it is lighter, therefore represented by 3; Tamas possesses more earth elements. Therefore, it's heavier and represented by 6. As Sattva and Tamas are simultaneous and are opposite in nature, 9 balances these two in the form of Rajas. Table 1 again shows that Rajas constitutes all elements equally, which means this fabric is the equalizer of the universe; it maintains the orders and movements of matter and energy. Rajas also maintains balance between Sattva and Tamas.

According to Vedanta, the universe is made of several gross, subtle, and causal elements, which are also ingredients of the overall human body. These three cosmic fabrics are the curators of these elements, which create the process of creation in the universe, which is known as "Purusha-Prakriti Kram" in the Vedas. If the big bang

theory is considered, it is envisaged that initially everything in the universe were consolidated in a singular dot point and then some vibration and movement started which triggered the big bang and afterwards all processes of creation initiated. This vibration or urge or the trigger which started the creation process is the blueprint of the entire creation which is termed as “Purusha” in vedic cosmology. That initial cosmic dot is the “Prakriti” of vedic cosmology and the urge of triggering the creation process by purusha is “Ahamkara”. Once purusha and prakriti start interacting the entire universe becomes functional. Same process functions inside the human body. As per explanations in Vedanta, the human body has three states based on the senses and consciousness: the Gross Body (Sthula Shareer), the Subtle Body (Sukshma Shareer) and the Causal Body (Karan Shareer). This causal body gets the “Sanskara” transmitted through quantum astral transportation of a spirit from one life to the next, which includes the awaiting remnant consequences of past deeds, deepest affinity to particulars of that soul, thoughts and subtle imprints of past life memories.

These cosmic fabrics- Sattva, Rajas, and Tamas are understood in the scale of relative material realms. From 0 to 3rd dimensions, everything can be sensed with sense organs, but from 4th to 11th dimensions, the concept of tangibility is obliterated, and the scale of consciousness starts. In Hindu texts, 14 different realms have been depicted: 7 upper realms, the earth, and 6 nether realms. Upper realms represent eternal happiness and salvation, whereas the netherrealms represent torment. If upper realms are considered, our earth which is known as “Bhulok” and the immediate upper realm, “Bhuvarlok” represents 0 to 3rd dimensions. It means that Bhulok and Bhuvarlok are tangible realms. Bhulok is our earth, whereas Bhuvarlok is extended from earth to the Polaris Star (Dhruv Nakshatralok). The five elements of nature are limited to these two realms only. All stars, galaxies, constellations, nebulae, and all sorts of heavenly bodies that have tangible reality are limited to these two realms, Bhulok and Bhuvarlok. Beyond the rest of the upper realms are intangible and can be decoded only through the scale of consciousness, where 6th to 13th sense organs of humans need to be activated to understand these realms because these realms are beyond five elemental creation realms and made of particles of consciousness which have different names both in physical sciences and vedic cosmology as well. As per Yogasutra by Sage Patanjali Maharshi, people or human entities before cremation, on the Bhulok and Bhuvarlok look different from each other which is due to addition of six great sins with holy soul; otherwise after cremation into fire, the subtle body or the spiritual entity of human souls all look same as they leave six sins behind with gross body. Next to Bhuvarlok the first intangible realm is “Maharlok”. This realm is the abode of the creation process of all natural laws which drive the universes, for example laws of gravity, relativity, radiation, superconductivity, thermodynamics and all physical fabrics of the universe which follow particular natural laws, those are made on Maharlok. In this realm, this divine function of natural law creation is performed by five cosmic divine entities residing in this realm, namely- Kumuda, Ribhu, Prataardana, Anchanava and Prachitrava. These five divine entities correlate the functions of five elements- water, sky, wind, fire and soil. At a much higher state of consciousness, beyond the Maharlok, there is “Brahmalok” which is made of three different lokas, “Janlok”, “Tapalok”, “Satyalok”. Brahmalok is the abode of four much higher divine entities, namely- Brahmapurohit, Brahmakayika, Brahmamahakayika and Aja-Amar. These super entities create the blueprints of the senses, based on which different elements of materialistic worlds are created, in other words, based on the blueprints of the senses and consciousness created by these four entities, the fabrics of cosmos which regulate the reality are carved out. “Ahamkar” creates the blueprint of nature and five elements are created by “Tanmatra” which comes from these four divines. So, the process of creation in a flow looks like: Mool Prakriti > Mahat > Ahamkara > Indriya > Tanmatra > PanchMahabhoot. In the language of modern cosmology, it will be like: Singularity > Chaos > Big Bang > Cosmic Blueprint > Consciousness > Elements. Those four divines reside in Janlok. Now, in Taplok there are three more powerful, divine entities namely- Abhaswar, Mahabhaswar, Satyamahabhaswar. These three divine

entities are totally intangible, and possess cosmic intelligence too. Above all the realm at the top most is Satyalok or BrahmaloK. Here four more divine and intelligent entities reside namely- Achyuta, Suddhivasa, Satyabha and Sangnan-Sangnin. These are the entities with the highest cosmic intelligence. They are non-existing but existent. These four cosmic entities control all the rest of the cosmic intelligence and processes that follow downwards. These are very similar to mool prakriti and this realm is unexpressed and abstract, where there is no difference between creator and creation.

### Findings:

Purush-Prakriti synergy or the Big Bang is entirely the effect of the universal singularity.

The oblivion of the cosmos ratifies the intriguing golden ratio of universal design by Mathematics.

Matter and its existence are a relative phenomenon based on the cosmic fabric trio and their mutual changes of proportions.

### Conclusion:

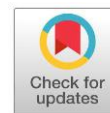
To sum up, from the above discussion and findings, it can be envisaged that all celestial or mundane activities of the universe are relative in nature. These are simultaneously existent and non-existent. Here, the singularity makes the purush-prakriti synergy so much powerful, which ultimately creates a number of universes continuously, and in the same way, a number of universes are being ended uninterruptedly. This humongous and powerful divine process is continuing on the canvas of consciousness and cosmic intelligence. This scale escalades towards intangibility from tangible realms with the divine power supported by several cosmic entities, residing in different realms. At the highest level, nothing can exist other than singularity, which deciphers the super-cosmos.

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## The Integration of Bharatiya Jnana Parampara into Modern Education Through the National Education Policy (NEP) 2020 Towards Holistic Views in Spiritual Learning

Somnath Das, Prakash Ray & Saeed Anowar

### Abstract:

The integration of Bharatiya Jnana Parampara (Indian Knowledge Systems or IKS) into modern education through the National Education Policy (NEP) 2020 aims to align education with India's cultural and philosophical heritage. However, challenges persist in blending IKS with modern technology. A key problem lies in how Artificial Intelligence (AI) can support, rather than diminish, the holistic, consciousness-based learning inherent in IKS. This study aims to explore AI's role in enhancing spiritual practices rooted in IKS, such as Ayurveda, meditation, and Vedantic studies, by analyzing how AI can preserve, enhance, and personalize these traditions. Methodologically, a qualitative approach is adopted, involving literature reviews, interviews, and focus groups with experts in education, AI, and spirituality, alongside surveys from students and educators. Results indicate AI's potential to preserve ancient texts, enhance holistic learning, and foster personalized spiritual growth. However, the experiential nature of spiritual learning presents limitations, as AI cannot fully replicate subjective consciousness experiences. The discussion highlights AI's complementary role, enhancing the accessibility of IKS through personalized learning paths, simulation tools, and interdisciplinary research. In conclusion, AI offers transformative possibilities in modernizing and preserving IKS, bridging tradition and technology, while ensuring that AI serves as an augmentation tool rather than a replacement for the deeply experiential nature of spiritual learning.

**Keywords:** Bharatiya Jnana Parampara, Virtual Reality (VR), Critical thoughts, Learning quality, Spiritual development, Augmented Reality (AR), Yoga Sutra (YS)

### Introduction:

The National Education Policy (NEP) 2020 aims to reintegrate *Bharatiya Jnana Parampara* (Indian Knowledge Systems) into the mainstream Indian education system by emphasizing the rich cultural, philosophical,

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and scientific traditions that have shaped India's history. This approach marks a significant shift from Western-oriented education to a model rooted in Indian ethos, aligning with NEP's broader vision of holistic, multi-disciplinary education. The **University Grants Commission (UGC)** has taken a proactive role in supporting this vision, organizing initiatives such as the **6-day Basic Training Programme** on IKS for faculty members and research scholars across Higher Educational Institutions (HEIs).

### How UGC's guidelines will bring this vision to Indian classrooms?

The UGC's implementation of the National Education Policy 2020, particularly its focus on Bharatiya Jnana Parampara (Indian Knowledge Systems), aims to transform the educational landscape by embedding India's cultural and intellectual heritage into the curriculum. Faculty members are trained through specialized programs to integrate traditional Indian knowledge, including Vedic mathematics, Ayurveda, and ancient sciences, into teaching practices. This initiative promotes an Indian perspective on modern science and technology, bridging ancient wisdom with contemporary developments. Research scholars are encouraged to pursue interdisciplinary studies and publish work on Indian scientific traditions, helping preserve and digitize ancient manuscripts. The curriculum is designed to include IKS across subjects, fostering holistic learning, while ensuring a balance between tradition and modernity. This approach instills cultural confidence, national pride, and ethical leadership among students, encouraging them to draw inspiration from Indian philosophy and knowledge systems while addressing modern challenges. By fostering research ecosystems and creating collaborative centers focused on IKS, the UGC promotes a well-rounded education rooted in Indian values but aligned with global advancements.

The fusion of Artificial Intelligence (AI) with traditional Indian knowledge systems (IKS) represents a promising frontier in the quest to integrate modern technology with ancient wisdom. Indian knowledge systems, with their deep roots in spirituality, philosophy, and consciousness, have long emphasized holistic approaches to learning and understanding the world. Concepts such as Ayurveda, Yoga, Vedanta, and the teachings of the Upanishads contribute to a comprehensive view of life that transcends the purely material and touches upon the spiritual and metaphysical. In recent years, the development of AI has opened up new possibilities for the study and dissemination of this knowledge, offering tools to explore, preserve, and even enhance our understanding of these ancient practices (Sharma, 2022; Patel & Rao, 2023).

AI's intervention in the realm of IKS is not merely technological but represents a convergence of different paradigms. In traditional IKS, the learning process is characterized by an emphasis on experiential knowledge and spiritual consciousness. For instance, meditation, pranayama, and the study of sacred texts are designed to expand one's awareness and cultivate an intuitive understanding of the self and the universe (Singh, 2021). AI can serve as a powerful tool to support this process, aiding in the collection, organization, and interpretation of vast amounts of textual, historical, and experiential data. The intersection of AI with IKS raises essential questions about how technology can complement, rather than disrupt, the holistic, consciousness-based learning model inherent in these systems (Kumar & Menon, 2023).

Historically, Indian knowledge systems have thrived through oral traditions, meditative practices, and teacher-student transmissions (guru-shishya parampara). These systems were designed to integrate intellectual and spiritual dimensions, providing not just information but pathways to higher consciousness (Bhardwaj, 2020). Spiritual learning in these systems involves understanding the interconnectedness of the individual with the cosmos, a notion that resonates with modern theories of consciousness in fields like cognitive science. AI, with its capacity to process and simulate complex models, may offer new insights into these age-old spiritual practices, potentially bridging the gap between ancient spiritual wisdom and contemporary scientific inquiry (Rao, 2021). This integration of AI into



IKS is not without challenges. Spiritual learning in IKS is inherently a subjective, experiential process that cannot be fully replicated or simulated by AI. There is a risk that over-reliance on AI might lead to a reductionist understanding of these deeply nuanced systems. Thus, the role of AI should be seen as complementary—a tool to facilitate access to knowledge and provide analytical capabilities that can augment, but not replace, the personal and spiritual growth intrinsic to IKS (Patel & Mukherjee, 2023).

In the context of consciousness practices, which are central to many Indian knowledge systems, AI's potential is immense. AI could assist in the development of personalized spiritual learning pathways, analyzing individual progress in meditation or mindfulness and offering tailored insights for deepening one's practice (Sharma, 2022). Moreover, AI's ability to simulate cognitive processes may help advance scientific research into consciousness itself, drawing on both modern neuroscience and the ancient insights of IKS. Such collaboration could lead to innovative approaches in understanding and experiencing consciousness, fostering a more integrated view of human cognition and spirituality (Gupta, 2023).

This paper will explore the historical context of Indian knowledge systems, their core principles regarding holistic learning and consciousness, and the potential for AI to both support and challenge these frameworks. Through this lens, we will examine the intersection of tradition and technology, offering insights into how these systems can co-evolve for the benefit of modern spiritual seekers and scholars alike.

### **Rational of the study:**

The National Education Policy (NEP) 2020 emphasizes integrating Bharatiya Jnana Parampara (Indian Knowledge Systems or IKS) into Indian education, promoting a shift from Western-centric models to an education system deeply rooted in India's cultural heritage. The University Grants Commission (UGC) plays a central role in this transformation through initiatives like a 6-day Basic Training Programme that equips faculty to incorporate traditional knowledge such as Vedic mathematics, Ayurveda, and ancient Indian philosophy into curricula. The program encourages interdisciplinary research, focusing on how traditional Indian sciences intersect with modern disciplines like healthcare and technology. However, research gaps remain. Limited empirical data exists on the long-term academic impacts of IKS integration, and practical challenges in blending IKS with modern STEM subjects require further study. Additionally, understanding faculty and student perceptions of IKS, as well as the institutional support needed for successful nationwide implementation, are crucial areas for future research. Addressing these gaps can ensure a balanced, holistic educational framework that fosters cultural pride, national identity, and ethical leadership in students while aligning with global advancements.

Indian Knowledge Systems (IKS) are a rich tapestry of traditional wisdom, extending across multiple domains such as education, health, spirituality, and social structures. Rooted in ancient practices like Ayurveda, yoga, meditation, and ethical living, IKS offers profound insights into holistic well-being and spiritual growth. Its essence is seen in the Guru-Shishya tradition, where knowledge was passed down in a highly personalized manner, often focusing on experiential wisdom rather than rote learning (Sanskriti - Hinduism & Indian Culture), with the advent of colonialism and the imposition of the Western educational model, the traditional IKS faced marginalization. The British educational system introduced in the 19th century prioritized creating a workforce suited for colonial administration, leading to the erosion of indigenous knowledge systems. Modern education emphasized Western literature and science, often at the expense of India's rich heritage of philosophical and spiritual learning (Sanskriti - Hinduism & Indian Culture).

Today, there is a resurgence of interest in these traditional knowledge systems, with scholars advocating their integration into modern education. This is evident in several academic and policy-driven initiatives aimed at revitalizing IKS, including the establishment of specialized institutions and research on its contemporary relevance. Scholars like Kumar (2023) emphasize that embracing IKS can enrich higher education by promoting a more holistic approach to learning, one that integrates spiritual and consciousness-based practices (Sanskriti - Hinduism & Indian Culture).

The advent of Artificial Intelligence (AI) presents a unique opportunity to bridge the gap between ancient knowledge systems and modern technology. AI's ability to process vast amounts of data and recognize patterns aligns with the analytical aspects of IKS, such as astrology, Ayurveda, and meditation practices. This study aims to explore how AI can act as a transformative tool in reviving IKS, especially in areas related to spiritual learning and consciousness practices. By integrating AI with IKS, educational systems can move beyond purely academic pursuits and foster a more holistic development of individuals, focusing not only on intellectual growth but also on emotional and spiritual well-being. Such integration holds the potential to offer innovative frameworks for learning, whereby AI could support personalized learning experiences, simulate consciousness-based practices, and even predict individual spiritual needs based on ancient principles (Sanskriti - Hinduism & Indian Culture).

This study also seeks to address the gap in current literature concerning the application of AI to enhance spiritual education, moving beyond materialistic applications of technology to explore its potential in fostering consciousness development and ethical learning. In summary, by exploring the intersection of AI and IKS, this research contributes to the ongoing revival of India's rich knowledge traditions and provides a framework for their modern application in education and personal development.

### **Objectives:**

Examine the role of Artificial Intelligence (AI) in enhancing and preserving Indian Knowledge Systems (IKS) to promote holistic views and spiritual learning practices rooted in consciousness.

Analyze how AI can integrate with traditional consciousness practices within IKS to foster personalized spiritual development and deepen experiential learning.

### **Methods and Materials:**

This study employs a qualitative-method approach to explore the intervention of Artificial Intelligence (AI) in enhancing Indian Knowledge Systems (IKS) through holistic spiritual learning, aligned with the National Education Policy (NEP) 2020. A systematic literature review is conducted using databases like SCOPUS and Google Scholar, focusing on AI, IKS, and consciousness practices. Qualitative data is gathered through semi-structured interviews and focus group discussions with education policymakers, AI experts, and spiritual leaders, while quantitative data is collected via surveys from educators and students using AI-driven platforms. Content analysis identifies key themes related to AI's impact on personalized spiritual learning and consciousness development. Ethical considerations, including informed consent and data anonymization, are observed throughout the study.

### **Result and Discussion:**

#### **AI's Role in Enhancing and Preserving Indian Knowledge Systems (IKS):**

**AI's Potential to Preserve IKS:** Indian Knowledge Systems (IKS) are deeply rooted in ancient texts and oral traditions, covering a wide range of disciplines such as medicine (Ayurveda), astrology (Jyotish), mathematics,

architecture (Vastu), and spirituality (Yoga and Vedanta). One of the major challenges faced by IKS today is the preservation and accessibility of this vast knowledge pool, which is often dispersed in multiple languages and formats, many of them ancient and at risk of being lost. Artificial Intelligence (AI), particularly through its natural language processing (NLP) capabilities, offers a solution to these challenges. AI can be used to digitize, categorize, and translate ancient manuscripts, making them accessible to a global audience and preventing the loss of crucial cultural heritage (Sharma, 2022).

AI has also proven useful in creating comprehensive databases of traditional knowledge. For instance, AI-driven tools can scan and catalog Sanskrit texts, allowing for semantic searches across vast corpora of literature. This not only preserves the knowledge but also facilitates interdisciplinary research by making connections between texts that would otherwise be overlooked due to language barriers or the complexity of ancient scripts (Kumar & Menon, 2023).

**Enhancing Holistic Views Through AI into IKS:** Indian Knowledge Systems offer a holistic worldview where different dimensions of existence—physical, emotional, mental, and spiritual—are interconnected. AI can enhance this holistic approach by providing tools for deeper exploration and integration of these aspects. For example, AI-driven platforms can offer personalized learning experiences tailored to an individual's mental and emotional state. In Ayurveda, personalized medicine is a key principle, and AI can analyze patient data to recommend treatments based on traditional IKS frameworks (Rajoura, 2022). AI algorithms can facilitate the integration of modern scientific methods with ancient practices. For instance, AI in Yoga can track a practitioner's progress, offering real-time feedback on postures and breathing techniques. This blend of traditional knowledge with modern technology enhances the holistic perspective by combining ancient wisdom with empirical, data-driven insights (Patukale, 2023).

**Spiritual Learning Practices Rooted in Consciousness and AI's Role:** A core aspect of Indian Knowledge Systems is the focus on consciousness, particularly through spiritual practices such as meditation, Yoga, and Vedantic studies. AI can support spiritual learning by providing tools that track consciousness development and suggest personalized learning paths. For instance, meditation apps powered by AI can monitor brainwave activity through neurofeedback mechanisms and suggest tailored practices to help individuals deepen their meditation experience (Pascoe et al., 2019). AI's data-driven insights can thus accelerate the understanding and experience of altered states of consciousness that traditional Indian practices aim to achieve. AI's predictive capabilities can be applied to gauge an individual's progress in spiritual practices. For example, by analyzing data from meditation sessions (e.g., time spent in deep meditation, heart rate variability), AI can predict when a person is most likely to experience deep states of awareness and suggest optimal times for practice. Such technology offers a way to measure and enhance subjective experiences of spiritual growth, which are typically difficult to quantify through conventional methods (Rao, 2021).

**AI as a Tool for Interdisciplinary Knowledge Integration:** AI not only aids in the preservation and enhancement of IKS but also facilitates interdisciplinary research. For instance, the application of AI to combine Ayurvedic medicine with modern biomedical data can offer new insights into health and wellness, merging traditional and modern paradigms (Mandavkar, 2023). AI models can analyze historical and cultural contexts, thereby providing a more integrated understanding of Indian spiritual and philosophical traditions in relation to contemporary scientific knowledge.

This integration offers new pathways for understanding consciousness and its potential for human development, drawing from both the experiential knowledge found in IKS and the empirical research emerging from AI-driven

cognitive science (Kumar, 2023). By blending these two approaches, AI helps create a more unified, interdisciplinary framework for studying and practicing spiritual growth and consciousness.

### **Integrating AI with Traditional Consciousness Practices within Indian Knowledge Systems (IKS):**

The integration of Artificial Intelligence (AI) with traditional consciousness practices in Indian Knowledge Systems (IKS) offers a transformative approach to spiritual development and experiential learning. Through advanced algorithms, machine learning, and data analytics, AI can enhance the accessibility, personalization, and depth of spiritual learning processes, creating more tailored experiences that resonate with the unique needs of each individual.

**Personalization of Spiritual Development through AI:** Traditional consciousness practices in IKS, such as yoga, meditation, and pranayama, have always emphasized individualized experiences, where the guru (teacher) tailors teachings to the needs of the disciple (shishya) [14†source]. AI has the potential to replicate this personalization on a large scale by using data analytics to monitor individual spiritual progress and provide customized recommendations. For instance, AI-driven applications can track physiological data (such as heart rate, breathing patterns, and brainwave activity) during meditation or yoga sessions, offering real-time feedback that aligns with traditional practices (Sharma, 2022). AI tools such as chatbots and virtual gurus could also simulate the guru-shishya relationship by providing continuous guidance and personalized spiritual content. This allows for a dynamic learning process, where the AI adjusts the spiritual practices based on the individual's progress, mental state, and spiritual goals (Kumar & Menon, 2023). For example, AI-powered platforms could provide daily meditation routines or breathing exercises based on user preferences and progress, aligning with the traditional belief in a personalized spiritual journey [14†source].

**Deepening Experiential Learning:** In IKS, spiritual learning is not merely about acquiring knowledge; it involves experiential practices that lead to higher states of consciousness (Pascoe, Hetrick, & Parker, 2019). AI can deepen these experiential aspects by creating immersive learning environments using virtual reality (VR) or augmented reality (AR). These technologies can simulate sacred spaces, rituals, or meditative experiences, thereby offering practitioners a multisensory experience that mirrors traditional learning settings like ashrams or temples. For instance, AR applications could recreate the ambience of a temple or forest, enhancing the user's sensory involvement in meditation or prayer sessions. AI can analyze and simulate complex patterns in sacred texts and teachings, offering users deeper insights into Vedantic philosophy, Upanishadic wisdom, or Yogic practices (Patel & Mukherjee, 2023). This form of learning transcends intellectual understanding, offering users an immersive, experiential connection to the teachings, which is central to spiritual growth in IKS.

**AI's Role in Cognitive and Consciousness Studies:** Recent advances in cognitive science and AI's ability to simulate neural networks offer potential collaborations between modern science and ancient IKS. AI could be used to study and simulate altered states of consciousness attained through meditation or spiritual practices. For example, machine learning algorithms can analyze the brainwave patterns of individuals during deep meditative states, comparing these to traditional descriptions of transcendence found in the Upanishads or Yoga Sutras (Rao, 2021).

These insights can help practitioners understand the physiological and psychological transformations that occur during spiritual practices, offering both scientific validation and deeper spiritual insights. This collaboration could also lead to the development of AI systems that recommend specific consciousness-raising exercises based on an individual's mental or physical state, thus supporting personalized spiritual development.

**Data-Driven Insights for Spiritual Growth:** AI offers significant potential for processing vast amounts of data from historical texts, scriptures, and real-time user feedback. This data-driven approach can provide new interpretations of traditional IKS, while also offering personalized growth plans. For instance, AI algorithms could analyze patterns in sacred texts such as the Bhagavad Gita or the Vedas, cross-referencing them with modern interpretations to offer nuanced guidance on ethical living or spiritual practices. In a practical sense, AI-driven platforms can also analyze the progress of individuals and communities in their spiritual development, offering feedback loops that were traditionally provided by gurus in spiritual communities (Rajoura, 2022). These platforms can suggest modifications in spiritual practices, track improvements in mindfulness, and help users deepen their understanding of IKS teachings in a methodical way.

## Conclusion:

The integration of *Bharatiya Jnana Parampara* (Indian Knowledge Systems or IKS) into the Indian education system under **NEP 2020** signifies a pivotal shift in how traditional wisdom can harmonize with modern academic practices. This fusion highlights the immense potential of *AI* to bridge ancient spiritual and philosophical insights with cutting-edge technological advancements, offering a holistic approach to learning. *UGC's role* in training faculty and promoting research ensures that the curriculum balances modern scientific rigor with India's rich cultural heritage. The *AI-IKS convergence* serves not only as a tool for knowledge preservation but also as a means of enhancing consciousness-based learning, offering personalized educational pathways. However, the novelty of this integration lies in maintaining the experiential essence of IKS while utilizing AI as a complementary resource. This approach fosters **cultural pride**, **ethical leadership**, and **spiritual growth**, positioning Indian education as a model for blending tradition with global innovations.

The integration of Artificial Intelligence (AI) with Indian Knowledge Systems (IKS) presents a transformative opportunity aligned with the objectives of the National Education Policy (NEP) 2020. By focusing on the reintegration of *Bharatiya Jnana Parampara*, the NEP seeks to revitalize India's rich tapestry of cultural, philosophical, and scientific traditions within education. AI serves as a pivotal tool in this endeavor, enabling the preservation, accessibility, and interdisciplinary exploration of IKS. Through AI-driven digitization and translation of ancient texts, the vast reservoirs of knowledge in Ayurveda, Yoga, and other traditional disciplines become more accessible to learners, fostering a deeper understanding of these practices. Additionally, AI's ability to personalize learning experiences and facilitate the integration of traditional wisdom with modern methodologies encourages a holistic educational approach. By tracking progress in spiritual practices and offering data-driven insights, AI enhances the experiential learning that is central to IKS. AI's potential to bridge the gap between ancient knowledge and contemporary scientific inquiry opens new avenues for research and understanding. This synergy not only honors India's heritage but also positions IKS as a vital contributor to global knowledge discourse. Ultimately, the confluence of AI and IKS under the NEP 2020 framework promises to cultivate a generation that is not only well-versed in modern science but also deeply rooted in the rich intellectual traditions of India, fostering a comprehensive worldview that nurtures both personal and collective growth.

By reinvigorating *Bharatiya Jnana Parampara*, the NEP seeks to embed the rich tapestry of India's cultural and philosophical heritage into contemporary education. AI can play a pivotal role in this endeavor by personalizing spiritual practices and enhancing experiential learning, thereby making ancient wisdom accessible to a modern audience. Through advanced algorithms and data analytics, AI can facilitate individualized spiritual journeys that reflect the traditional guru-shishya dynamic, ensuring that learners receive tailored guidance that resonates with their unique paths. Furthermore, immersive technologies like virtual and augmented reality can recreate the sacred environments crucial for spiritual growth, deepening the connection to IKS teachings in ways that transcend mere



academic study. By leveraging data-driven insights, AI can offer contemporary interpretations of ancient texts, bridging the gap between traditional knowledge and modern contexts. This alignment not only supports personalized spiritual development but also enriches the educational landscape by fostering a deeper understanding of ethical living and consciousness studies, echoing the NEP's vision of an integrative, holistic educational framework. Ultimately, the convergence of AI and IKS within the education system can cultivate a generation that is not only well-versed in technical and scientific knowledge but also grounded in the profound wisdom of India's philosophical traditions, thus nurturing a balanced and enriched approach to learning and living.

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- <https://iksindia.org/about.php>
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## Chemical Knowledge and Practices in Ancient and Medieval India

Saptarshi Biswas

**Abstract:** Chemical process is a phenomenon that came before the formation of the Earth and increased exponentially with civilization. India is such a country where civilization started from the Indus Valley era. Science and technology are the key factors to developing a country, where chemistry is one of the accelerating factors. In ancient and medieval times, many chemical practices were used in India that many of us can't even imagine, like the mining and metallurgical industry, fermentation, wootz, etc. In this chapter, we try to enlighten such well-known and unknown chemical knowledge that might be interesting to the common people.

**Keywords:** Ancient Indian chemistry, Metallurgy, Mining, Fermentation, Wootz

### Introduction:

At the time of the ancient and medieval ages, Hindus were doing sciences in many categories, *e.g.*, mechanical, physical, chemical, mathematical, and medical sciences. Among them, chemical science has dealt with various applications towards health-related problems. In *Susruta-Samhita*<sup>1</sup> *Rasayana-tantra* (chemistry) is defined as the science “for the prolongation of human life and the invigoration of memory and the vital human organs. It deals with the recipes that enable a man to retain his manhood or youthful vigor up to a good old age, which generally serve to make the human system immune to disease and decay.” Again in the *Rgveda*<sup>2</sup> and *Atharvaveda*, the elixir of life is called Soma – which was synthesized with the knowledge of chemistry. Soma is a liquid drink to revive somebody and to delay the aging process or anti-aging. The *Atharvaveda*<sup>3</sup> advises: “Invest this Soma for long life; invest him for great hearing power.” Chemistry, a rejuvenation treatment in Ayurveda, was used to enhance the life span. This treatment helps to restock the liquid (*rasa*) and additional element (*dhatu*) to the body. The resolution of chemistry, as described by Caraka, includes the attainment of excellent memory, long life, and freedom from disease; strong body powers, good complexion; a healthy glow; and a powerful voice.<sup>4</sup> Caraka and Susruta describe the processes of sublimation, distillation, and calcination in the chemical purification of metals.<sup>5</sup> Additionally, Caraka mentions the use of iron, copper, gold, mercury, and lead in drugs and advises several ointments are synthesized from sulfur, iron sulfate, and copper sulfate used to treat many skin diseases.<sup>6</sup> Medicinal treatments also involved the use of oxides of iron, copper, zinc, tin, and lead. The Indian Peninsula is native to these metals. Caraka prepared drugs by reacting very fine sheets of gold, iron, and silver with alkali and salts.<sup>6</sup> The Upanisad mentions alloys such as gold with silver, gold with salt (borax), silver with tin, and lead with copper.<sup>7</sup>

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Venoms and antidotes were developed, frequently mentioned in the Ramayana, Mahabharata, and Kautilya's Arthashastra as *astra* (chemical weapons) used in warfare. Kautilya described a deadly method of poison gas, stating: "The smoke caused by burning the Powder of *satakardama*, uchchidihga, karavira, katutumbi, and fish, together with the chaff of the grains of *madana* and *kodrave*, or with the chaff of the seeds of *hastikarna* (castor oil tree) and *palasa* destroys animal life as far as it is carried off by the wind."<sup>8</sup> Complicated procedures were used to invent several deadly poisons: "The smoke caused by burning the powder made of the mixture of the dung and urine of pigeons, frogs, flesh-eating animals, elephants, men, and boars, the chaff and powder of barley mixed with *kasisa* (green sulphate of iron), rice, the seeds of cotton, *kutaja*, and *kosataki*, cow's urine, the root of *bhandi*, the powder of *nimba sigru*, *phanirjaka* (a kind of basil or tulsi plant), *kshibapiluka* (ripe *coreya arborea*), and *bhatiga* (a common intoxicating drug), the skin of a snake and fish, and the powder of the nails and tusk of an elephant, all mixed with the and *kodrava* (*paspalam scrobiculatum*) or with the chaff of the seeds of *hastikararana* (castor oil tree) and *palasa* (*butea frondosa*) causes immediate death wherever the smoke is carried off by the wind."<sup>8</sup> It is evident that the invention is quite complex to produce, with ingredients that are not commonly found. Items such as pigeon dung, frogs, and snake skin are rare in most chemical preparations. However, these were among the most commonly used techniques for preparing drugs and poisons in ancient times and also in medieval times.

Minerals, metals, jewels, and gems are used by ancient Hindus to treat fetal diseases. Difficult composition for chemicals was carried out before preparing a concoction. During oxidation or reduction processes of metals, forms *bhasms*, those are occasionally converted into biologically active nanoparticles.<sup>9</sup> The idea of decreasing particle size was taming the usefulness of a drug is mentioned in *Caraka-Samhita*. At high temperatures, plant extracts are quenched with metals to form a dust-like (nanoparticle) powder with chemical properties. The *bhasmas* should be glow less if the method was successful. As metals have a property of luster, so lusterless property indicates the transformation has been done. The alchemical practices of the Hindus are mentioned by Al-Biruni.<sup>10</sup>

In *The Lure and Romance of Alchemy*,<sup>11</sup> Charles Thompson wrote, "In India the earliest allusions to alchemical ideas appear in the Atharva Veda, where mention is made of the gold that is born from fire." In the *Rgveda*, *Sura* is described as an intoxicating drink consumed alongside soma. In India, the term *sura* refers to alcoholic beverages. In the fermentation section, we have discussed this in detail.

Chyawanprash is a widely used rejuvenating tonic in India, particularly in northern regions, where it is taken as a precautionary measure against the common cold during the winter season. The use of Cyavanaprash dates back to ancient times, as Caraka mentioned it for rejuvenation. In his *Caraka-Samhita*, Caraka also mentioned the syrups that contain iron. These syrups are famous as the "killing of metal" and the resultant product of those synthesized compounds is recognized as *bhasma* in Sanskrit. Caraka suggested how to achieve the removal of iron: using very thin sheets of iron, extract of Indian gooseberry (*amla*), and an underground jar with honey for a year, which form a ferrous compound from iron, as a result decreasing the amount of iron. Those are mainly processes of making nontoxic metals. Additionally, an entire chapter by Susruta is written about how alkalis are used to treat several diseases, like mucous-destroying, digestive, and virility-diminishing properties.

The above-mentioned phenomena are related to the medicinal purpose of chemistry, where most of the health issues were resolved by chemical procedures. Apart from that part, chemistry, or the chemical processes, deeply enhanced the upgradation towards the civilization in ancient India. The main three parts are as follows: a. mining and metallurgy; b. fermentation; c. wootz.

## Metallurgy and mining :

Ancient Hindus were pioneers in mining and metallurgical advancements to produce excellent Damascus steel. Steel was referred to as “*foulade Hind*”, signifying the Indian steel. Likewise, after Alexander the Great's conquest of Porus, he acknowledged steel as a valuable gift, something that the Greeks do not have. Aristotle mentions in *On Marvelous Things Heard*, that the Indian copper is renowned for its quality and is said to be “indistinguishable from gold”.<sup>12</sup> This reference likely acknowledges the quality that is exceptional for Indian bronze, which is made with copper mixed with zinc and other metals, which gave it a gold-like appearance.

In the Rgveda, the smelting process is described as the ore was located in bellows, and fire was used to intensify the temperature. The *Atharvaveda* mentions that the middle of the earth, which holds the gold, suggests the existence of mining operations and the mines of gold. In India, several ancient metals including gold, silver, iron, lead, and copper, were naturally found in many regions. The residues of Harappa and Mohenjodaro include decorated pottery and sheets of metal. Metals such as bronze, iron, gold, silver, lead, and copper were used to create a variety of items, including axes, spears, arrowheads, daggers, knives, swords, drills, metal mirrors, and cooking and storage utensils. Out of 324 objects analyzed from archaeological sites, among them approximately 184 are made of pure copper. Additionally, four copper processing kilns have been uncovered at the locations of Mohenjodaro, Harappa, and Lothal.<sup>13</sup>

Timber was collected from an ancient mine in Hutti, Karnataka, which was a depth of approximately 200 meters. After carbon dating analysis it shows that the area is nearly about 4<sup>th</sup> century BC.<sup>14</sup> Greek tourist Ktesias, residing in Persia at the time of 5<sup>th</sup> century BC, refers to large quantities of gold extracted from “high-towering mountains” and also describes a congealing process used to obtain high quality gold.<sup>15</sup> Many historians, specially Greek including Arrian, Ktesias, Megasthenes, and Herodotus, stated that in India people are using metals. The brass samples from Taxila around 3<sup>rd</sup> to 4<sup>th</sup> century BC reveals due to the 35-40% presence of zinc gives golden texture. Remarkably, smelting technicians in India developed an advanced method to obtain purified zinc, although this type of extraction techniques were not experienced in Europe until 16<sup>th</sup> century. A distillation process (downward) where zinc was smelted and the vapors of zinc were rapidly cooled to prevent the reduction process that occurs at higher temperatures. The main challenge was that zinc oxide requires at least 1150° C temperature for reduction, while zinc has a boiling point of 900° C, causing it to vaporize and escape. The furnaces excavated at Zawar (Rajasthan) feature 2 chambers, up and down, divided by a heavy perforated brick plate. The above chamber is sealed, directing the vapor into the bottom chamber, which was filled with water. The water decreased the temperature and solidified the zinc. In 600 BC, the “Painted Grey Ware of the Gangetic Valley” was build. A couple of glass bangles discovered at Hastinapur, New Delhi, were from 1100-800 BC. Comparable green-colored bangles have also been found in other parts of northern India.<sup>16</sup> Glass bangles remain a popular form of ornamental jewelry worn by Hindu women to this day. Also around 700-600 BC, cuprous oxide coloring green glass was found in Taxila known by dating.

Kautilya understood the state's economy will be gained from mining. Then he proposed “mines are the source of treasury; from treasury comes the power of government.”<sup>8</sup> He also outlined the responsibilities of the Mine Director: “must possess the knowledge of the science dealing with copper and other minerals, experienced in the art of distillation and condensation of mercury and of testing gems, aided by experts in mineralogy and equipped with mining laborers and necessary instruments, the Director of mines shall examine mines which, on account of their containing mineral excrement, crucibles, charcoal, and ashes, may appear to have been once exploited or which may be newly discovered on plains or mountain slopes possessing mineral ores, the richness of which can be ascertained by weight, depth of color, piercing smell, and taste.”<sup>8</sup> Kautilya provided guidance on identifying promising mining locations: by observing soil, stones, or water blended with metals, particularly if the color of the



object is bright or is heavy, or it emits a strong odor, which could indicate a nearby mine may be present. He outlined methods for locating mines of copper, glass, iron, silver, and gold. The mining operations was required to have knowledge of metallurgy, chemistry, and refining processes. This suggests metallurgy was a well-established area in India at the 3<sup>rd</sup> century BC. Additionally, Kautilya set ethical standards for goldsmiths, imposing severe penalties on those who unfairly mixed gold. Slightly low-priced impurities such as copper, brass, and tin mixed at the time of melting of silver and gold was deliberated a corruption, and the offenders were prosecuted and even the thieves who stole minerals were also prosecuted. Kautilya described the ores of arsenic, silver, iron, copper, gold, tin, and lead, along with their purification processes. At that time coins were used for business purpose. Kautilya also outlined the methods used by counterfeit coin manufacturers and specified a penalty for coin examiners who accepted counterfeit coins into the treasury.

Kautilya defined gold percentage in a sample as varying up to sixteen different gold standards, which is comparable to the modern “carat” method. Copper was alloyed with gold to create different carat standards.<sup>8</sup> Kautilya defined several gold alloys in various colors, including yellow, blue, white, red, and green, attained by gold-containing substances like salt (rock), copper, lead, mercury, and silver. The chemical reactions involved were precisely outlined, specifying exact ratios of each component. Metal plating (gold plating) methods were described, including heating processes, mica, rock salt, wax, utilizing amalgams, and more. Additionally, Kautilya established standards for testing precious stones, including criteria for color, weight, and characteristics, as well as methods such as cutting, hammering, scratching, and rubbing.

In New Delhi, the Iron Pillar near Qutub Minar stands as a testament to the advanced metal-imitating abilities of ancient Hindus. Inscription in the pillar mentioned the era between 400-450 CE, it indicates King Candrar's period. Inscription shows minimal corrosion despite being exposed to the elements for over 1600 years. Even in the heavy rains, air, and heat, the pillar has not suffered substantial rusting, despite the very high heat and humidity condition in July and September. The pillar remains an enduring symbol of the exceptional engineering and metallurgical skills of ancient Hindus. Later in 1739 CE, when the city occupied Nadir Shah, he attempted to destroy the pillar with cannons but unsuccessful. Some marks remain where the cannon-balls struck the pillar. The pillar stands at 7.16 meters (23 feet 6 inches) in height, with a diameter of 16.4 inches at the base and about 11.8 inches at the top. Highly pure iron is not available in Indian mines, suggesting that a refining process was involved in the creation of this pillar. A very fine protective coating of  $\text{Fe}_3\text{O}_4$  given in the pillar to achieve through the use of salts and quenching. The buried portion, when excavated, revealed that the base of the pillar was protected with a sheet of lead, approximately 3 mm in thickness. The Sun Temple in Orissa and the Iron Pillar of Dhar, Madhya Pradesh, both are made by similar kind of manufacture technique. Eventually both places are in comparatively humid areas with very low rusting. The phosphorus percentage in the iron may be the cause.

Recent research has uncovered the reason of rust free pillar. The combination of iron with phosphorus is the key factor. The surface becomes porous when it gets rust, which allows the phosphorus to form phosphoric acid via reacting with other compounds. Then iron reacts with this acid to form dihydrogen phosphate. Both of these kinds of phosphates are insoluble in polar solvents like water and amorphous. This amorphous phosphate interacts with metal ions and turns into ferric phosphates, which are crystalline. It remarkably reduces the surface porosity, and as a consequence of that, rusting on the iron is reduced. So only phosphorus is responsible for the rust-free pillar.

### **Fermentation:**

The main component of beer is fermented barley mentioned in *Rgveda*: “A mixture of a thick juice of soma with barley powder.”<sup>2</sup> Also added that: “Fifteenth day old highly intoxicating soma,”<sup>2</sup> 84 different kind of alcoholic

liquors are mentioned by Caraka.<sup>17</sup> Caraka also said in the fermentation process, several resources of sugar, including sweet palmyra sap, sugarcane juice, honey, jaggery, mahua flowers, and coconut water. Additionally, apricots, grapes, bananas, dates, mangoes, rose apples, jackfruit, jamun, bilva, pomegranates, kadamba, and others sweet fruits were also used. Grains, mainly barley and rice, were employed in the fermentation process. By the time of Kautilya, a liquor supervisor was appointed to oversee the industry. The production of liquor and the regulation of its movement across borders were closely monitored.

Few fermented broth was used in medical treatment. Kautilya suggested that patients should be taught by physicians how to prepare these *arista* (distilled and fermented liquor). He mentioned various recipes: “one hundred pala of *kapittha* (*Feronia Elephantum*), 500 pala (mass) of sugar, and one prastha (mass) of honey form *asava*.”<sup>18</sup> It was also recommended to use a few hard liquors made from lentils and rice: “one drona of either boiled or unboiled paste of *masa* (*Phraseolus Radiatus*), three parts more of rice, and one karsa of *morata* (*Alangium salviifolium*) and the like form *kinva* (ferment).”<sup>19</sup> To increase the taste of the liquors, additives were added, including spices, astringents, and sweeteners. The variety of additives added mentioned in the *Arthashastra* and *Caraka-samhita* are equivalent to the variety available in the market today.

### Wootz:

The term “steel” comes since the times of 11<sup>th</sup> century CE from the name *stahal* in German, which is linked to the Sanskrit word *stakati*, meaning “it resists” or “strike against.” Manufacturing the sword it was very commonly used because of its hardness. Very little (0.10 to 1.5%) carbon (mainly Fe<sub>3</sub>C) containing alloy is steel. The characteristics of steel differ significantly by changing in small quantity in carbon content. Depends on their desired characteristics, few metals like vanadium, manganese, chromium, silicon, molybdenum, and nickel, are purposely mixed during the process e.g. tungsten steel contains more tungsten to increase its melting point and heat tolerance, while stainless steel typically contains around 12% of chromium or higher. In India, steel has been prepared and used for numerous purposes since ancient times.<sup>20</sup> A. Kumar mentioned in his book *Ancient Hindu Science*: “Ktesias, who was at the court of Persia during the 5<sup>th</sup> century BC, mentioned the two high-quality Indian steel swords that were presented to him. One sword was presented by the King of Persia, and the other by king’s mother, Parysatis.”<sup>21</sup> An army officer in Alexander the Great’s, named Nearchus, noted that Indians typically carried a broad sword about three cubits long.<sup>22</sup>

King Porus, a ruler from Punjab, was defeated in battle by Alexander the Great and captured. When brought before Alexander’s court, the conqueror asked in what way he should be treated. Porus answered, “Like a king.” This response surprised Alexander and made him realize the futility of wars. In an uncommon move, Alexander decided to release Porus and return his empire, as defeated kings were typically either killed or imprisoned. Grateful for his life, Porus sought to express his gratitude to Alexander. He chose to gift something truly priceless—more valuable than gold, gems, or spices—that Alexander did not have. Porus decided to present 6000 pounds<sup>23</sup> of steel, like a priceless gift, according to Roman historian Quintus Curtius, from the 1<sup>st</sup> century CE mentioned in the biography of Alexander the Great. Curtius referred to steel as “*ferrum candidum*”, meaning “white iron.”<sup>23</sup>

In India, steel, known as wootz, was traded as castings or cakes, which were approximately the size of ice hockey pucks.<sup>24</sup> Persians mistakenly referred to Damascus steel/sword; before that, they were made swords from wootz. Similarly, Europeans discovered steel-making techniques in 1192 CE at the time of the Crusades.<sup>25</sup> The extraordinary strength and hardness of the steel impressed them, prompting a desire to uncover the secrets of producing ultra-high carbon steel. However, the Europeans were unaware that the procedure had initiated in India. Steel manufacture was initially very difficult because of the large fuel consumption needed for extremely high temperatures to form molten components. After 1850 CE, advanced furnace technology at high temperature the

process. As a result, steel was primarily used for manufacturing blades for swords, daggers, and knives. Damascus steel is known for its distinctive swirling surface pattern, which results from the cooling process. These patterns are created by the alignment of  $\text{Fe}_3\text{C}$  components on the surface at the time of cooling. Consequently, Damascus steel/swords became renowned for their hardness and absorption power of blows, making them reliable weapons that the soldiers could depend on during battle in the Middle Ages.

Making wootz steel is a very difficult procedure, as even tiny impurities can alter the final outcome. The cooling period and temperature also significantly vary the quality of the steel. In 1589 CE, an Italian scholar, Giambattista della Porta, from Naples, highlighted the implication on temperature by handling wootz and advised avoiding “too much heat.”<sup>26</sup> Later, the Stanford University’s researchers Jeffrey Wadsworth and Oleg D. Sherby discovered that to produce very high-quality steel is to slow down the equilibrium cooling. At  $1200^\circ\text{C}$ , iron and carbon form a molten state of the steel, and then lowering the temperature spreads the carbon throughout the iron and produces white cementite forms due to the arrangement of  $\text{Fe}_3\text{C}$  (cementite) particles. Polishing reveals  $\text{Fe}_3\text{C}$  materials as white against the nearly black steel medium. These carbide components strengthen the steel without making it brittle. To harden the blade, it was heated to  $727^\circ\text{C}$ , causing crystal structure modification. The iron atoms are converted to a face-centered from a body-centered lattice. The knife/sword blade was subsequently plunged into water to be quenched.<sup>25</sup> However, the metals become fragile if before quenching, heating was done over  $800^\circ\text{C}$ .

Michael Faraday (1791-1867), a pioneer in electromagnetic discoveries, attempted to replicate Damascus steel but mistakenly concluded that aluminum oxide and silica enhanced the steel’s properties. With Stodart he also tried to create steel via alloying nickel with silver and platinum, but their efforts proved unsuccessful. Therefore, the steel manufacturing technology developed in ancient India was far superior to that of European scientists until the 19<sup>th</sup> century.<sup>21,27</sup>

## Conclusions:

It is very much clear from the above discussion is that in ancient India people are used chemistry in daily life especially for health purpose and then after various technology developed using chemistry. Many diverse applications i.e. steel, metallurgy, alcoholic beverage had been found in that period without significant literature data. Eventually few pure sculptures had been made that period which never been done till date.

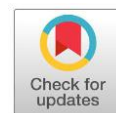
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## Brahman in Upanishads and Luminiferous Aether in Physics: An Analogy

Kousik Mukherje

### Abstract:

The present manuscript deals with the concept of Brahman as described in different Upanishads. Another entity proposed by the scientific community, which is called aether, is also briefly described in this chapter. Later, the concept of aether was rejected by the scientific community, and the special theory of relativity evolved. Then the similarities between the properties of Brahman and aether are presented and dissimilarities also. In this way, a scientific approach to relate the concepts of science and those of Indian thoughts has been presented. It has been concluded that we should further explore different inherent scientific thoughts in our traditions and culture to make them understandable to common people.

**Keywords:** Brahman, Aether, Upanishads, Relativity, Inertial frame

### Introduction:

The Upanishads are a collection of ancient Indian texts that form the philosophical foundation of Hinduism. They are considered the concluding part of the Vedas, the oldest sacred scriptures of Hinduism, and are often referred to as Vedanta, meaning the end of the Vedas. Upanishads explore profound metaphysical and spiritual concepts, including the nature of reality, the self or Atman, and the ultimate reality or Brahman. The Upanishads have had a profound impact on Indian philosophy, religion, and spirituality. They have influenced various schools of thought, including Vedanta, Yoga, and Samkhya, and have inspired countless spiritual seekers and philosophers, both in India and around the world. For example, in Bhagwat Gita Brahman has been mentioned as absolute, eternal, imperishable, and supreme in nature (8.3, 14.27). According to Yoga Vasistha, Brahman is pure consciousness, devoid of attributes and beyond the grasp of the senses, mind, and intellect (6.1.32). The Vishnu Purana (1.2.10) and Bhagavata Purana (1.2.11) describe Brahman as eternal, non-dual, without beginning or end, pervading all, formless and self-existent, and the ultimate truth. In tantras also brahman is mentioned. These shows a clear influence of Upanishads on these scriptures. The teachings of the Upanishads emphasize inner knowledge, self-inquiry, and the pursuit of truth, making them timeless texts that continue to resonate with readers seeking spiritual wisdom. Following are the key concepts in the Upanishads.

1. Brahman: The ultimate, infinite reality that pervades everything in the universe. It is the source and essence of all that exists.

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2. Atman: The individual self or soul, which is ultimately identical to Brahman. Realizing this identity is the key to spiritual liberation (Moksha).

3. Maya: The cosmic illusion that creates the perception of diversity and multiplicity in the world, obscuring the true non-dual nature of Brahman.

4. Karma and Reincarnation: The Upanishads discuss the law of karma, which dictates that actions have consequences, and the cycle of reincarnation (Samsara), from which liberation is sought.

5. Moksha: The goal of human life, achieved through self-realization and understanding the true nature of Atman and Brahman. Moksha represents liberation from the cycle of birth and death.

On the other hand, the luminiferous ether (or aether) was initially proposed to provide a medium for the propagation of light waves and to serve as an absolute frame of reference. The concept of the luminiferous ether precludes the Special Theory of Relativity and was proposed to explain light propagation through space because it was known that waves need a medium to propagate in that time. The ether was conceived as a stationary, all-pervasive, and undetectable medium that filled all of space. It was thought to be incredibly rigid to support the high speeds of light waves but also non-intrusive, allowing celestial bodies to move through it without any apparent drag. Therefore, ether is attached with contradictory properties. It has large expansion capability and at the same time large compressibility also. The ether was considered the absolute frame of reference, against which all motion could be measured. Scientists believed that the Earth's motion through the ether should produce measurable effects, such as changes in the speed of light depending on the direction of travel relative to the ether.

In the following sections, we are going to discuss Brahman as described in Upanishads, and aether as described in scientific texts. Further similarities between Brahman and Aether have been analysed in the light of Upanishadic and scientific way.

### **Brahman in the Upanishads:**

The concept of Brahman in the Upanishads represents the pinnacle of philosophical and spiritual thought in ancient India. It is a philosophical and complicated idea that go beyond the limitations of human observation and understanding. By exploring the nature of Brahman and its relationship with Atman, the Upanishads provide a route to spiritual insight and liberation. This ultimate reality, which go beyond all dualities, remains a central belief in Hindu philosophy and continues to inspire explorers of truth across the ages. The teachings of the Upanishads on Brahman highlight the importance of self-realization, ethical living, and the pursuit of knowledge. They encourage individuals to transcend the material world and realize their true nature as one with the ultimate reality. In doing so, the Upanishads offer a vision of a harmonious and interconnected universe, grounded in the realization of Brahman as the source and essence of all existence. According to Upanishads brahman has the following characteristics.

1. Infinite and Boundless: Brahman is described as limitless, without beginning or end. It transcends all spatial and temporal limitations, existing beyond the realm of cause and effect. It is the ultimate, unchanging reality underlying the universe.

2. Non-dual (Advaita): Brahman is the foundation of the Advaita (non-dual) philosophy. According to this view, there is no fundamental distinction between Brahman and the individual soul (Atman). The apparent multiplicity of the world is an illusion (Maya), and only Brahman is real.

3. Sat-Chit-Ananda: Brahman is often characterized by the attributes of Sat (truth or existence), Chit (consciousness), and Ananda (bliss). These qualities describe the intrinsic nature of Brahman as the source of all that is real, aware, and joyful.

Atman and Brahman: The Individual and the Universal. The connection between self and the universal soul (or self) or Paramatma is also described in Upanishads. The details are as follows.

1. Tat Tvam Asi : One of the central teachings of the Upanishads is the identification of Atman (the self) with Brahman (the universal self). This phrase, found in the Chandogya Upanishad, signifies the essential unity of the individual soul with the ultimate reality.

2. Journey to Self-realization: The Upanishads emphasize the importance of self-realization in understanding the true nature of Brahman. Through meditation, self-inquiry, and spiritual practice, individuals can transcend the illusions of the material world and realize their unity with Brahman.

3. Aham Brahmasmi (I am Brahman): This Mahavakya, found in the Brihadaranyaka Upanishad, reinforces the idea that the individual soul is not separate from Brahman. The realization of this truth leads to liberation (Moksha) and the end of the cycle of birth and death (Samsara).

### Descriptions of Brahman in Various Upanishads:

Different Upanishads contains different teachings about Brahman. However, if we analyse them, we can see inherent and significant similarities between those descriptions. Let us briefly discuss these below.

1. Chandogya Upanishad: This Upanishad contains several important teachings about Brahman, including the famous Mahavakya "Tat Tvam Asi." It describes Brahman as the subtle essence that pervades everything, likened to the taste in salt dissolved in water. Therefore, Brahman is all pervading as described here.

2. Brihadaranyaka Upanishad: One of the vastest Upanishads, it explores the nature of Brahman in great detail. It introduces the concept of Brahman as the ultimate reality that transcends all dualities and distinctions. The dialogue between Sage Yajnavalkya and his wife Maitreyi is particularly notable for its exploration of the self and Brahman.

3. Mundaka Upanishad: This text describes Brahman as both immanent and transcendent. It uses the metaphor of two birds on a tree, where one bird eats the fruits (symbolizing the individual soul experiencing the world), while the other bird (Brahman) watches without partaking, representing pure consciousness. In verse 1.1.6, Brahman is considered to be all-pervading, and in verse 1.1.7, it has been identified as the source of the materialistic world also.

4. Kena Upanishad: This Upanishad explores the limitations of human perception and intellect in understanding Brahman. It suggests that Brahman is beyond the reach of the senses and can only be known through direct spiritual experience. The text famously states, "That which cannot be expressed by speech, but by which speech is expressed, know that alone to be Brahman."

Despite these Ishabashyoponishad, Kathoponishad, Oitoreyoponishad, also described Paramatma or Brahman in different verses. These scripts also describe Brahman as both origin and creator of everything. According to

Upanishads, He is the supreme knowledge also, and after knowing Him, nothing is left to be known. Therefore, He is absolute.

### **Practical Implications:**

1. **Sadhana:** Realizing Brahman is the ultimate goal of life according to the Upanishads. This realization is achieved through various forms of spiritual practice, including meditation, self-inquiry, and renunciation of material desires.
2. **Dharma:** The understanding of Brahman leads to a life of Dharma, or righteous living. Recognizing the unity of all existence fosters compassion, humility, and a sense of universal brotherhood.
3. **Moksha:** The realization of Brahman leads to liberation from the cycle of birth and death. This state of Moksha is characterized by infinite bliss and freedom from all suffering.

### **Philosophical Insights:**

The concept of Brahman has the following philosophical insights.

1. **Advaita Vedanta:** The philosophy of Advaita Vedanta, founded by Adi Shankaracharya, is based on the teachings of the Upanishads. It posits that the ultimate reality is non-dual and that the apparent diversity of the world is an illusion (Maya).
2. **The Role of Maya:** Maya is the illusory power that creates the appearance of multiplicity in the world. The Upanishads teach that overcoming Maya through spiritual insight leads to the realization of Brahman.
3. **Epistemological Perspective:** The Upanishads highlight the limitations of empirical knowledge and advocate for intuitive and experiential understanding of Brahman. They emphasize that intellectual comprehension alone is insufficient for realizing the ultimate truth.

### **Luminiferous ether:**

The concept of the luminiferous ether was a theoretical idea prevalent in the 19th century, proposed to explain the propagation of light. According to this concept, the ether (or aether) was an invisible, all-pervasive medium through which light waves travelled, like how sound waves propagate through air. Here's an overview of its role and how the theory of relativity addressed it:

Before the advent of electromagnetic theory, light was thought to be a wave phenomenon. For waves to propagate, a medium is typically required. For instance, sound waves need air, and water waves need water. By analogy, scientists posited that light waves needed a medium, which they called the ether.

James Clerk Maxwell's equations described light as electromagnetic waves. However, these equations didn't specify the medium of propagation, leading to the hypothesis of the ether. Therefore, contradiction arose, and people tried to check whether the concept of aether was correct or the Maxwell's equations. And one of the most interesting

experiments was done by Michelson -Moreley (MM) in 1887 to detect the relative motion of matter through the stationary ether. They expected to measure changes in the speed of light due to the Earth's movement through the ether. This is like the situation: when a boat travels upstream of a river its velocity decreases and when it travels downstream the velocity increases. In MM experiments also this type of situation is created for light. That is light moving with the ether wind should have larger velocity and light moving against ether wind should have lower velocity compared to the velocity of light when ether is at rest. This will produce a detectable change in the experimental results after different conditions throughout the year. However, the experiment gave a null result and no difference in the speed of light was observed regardless of the direction of motion. This outcome contradicted the ether theory and puzzled scientists.

### **Luminiferous ether and the philosophical idea of Brahman:**

The concept of the luminiferous ether and the philosophical idea of Brahman in the Upanishads share some similarities in their roles and functions within their respective frameworks, though they are fundamentally different in nature and origin. Let us explore these similarities and differences.

In Ishabasyoponishad, the concept of Brahman is illustrated in detail. In the verses 1.1, 1.4, 1.5, it describes the Brahman. This description has many similarities with that of the ether in special theory of relativity. Both Brahman and ether are all-pervading, infinite, have characteristics of an inertial frame, well connected to every part of itself, non-interacting and hence undetectable. The same type of information about Brahman is also found in Kathoponishad (Verse 2.10).

### **Similarities between Brahman and Aether:**

**Medium for Existence:** As described above, the 19th-century physics, the ether was postulated as the medium through which light waves propagated. It was considered a ubiquitous substance filling all space, necessary for the transmission of electromagnetic waves.

In the Upanishads, Brahman is described as the ultimate reality that pervades everything. It is the substratum of all existence, the essence that underlies the material world and the cosmos.

### **Ubiquity:**

The ether was believed to be present everywhere, permeating all of space and matter.

Brahman is also omnipresent, existing in every part of the universe. It is both immanent in the world and transcendent beyond it.

### **Invisible and Undetectable:**

Despite its supposed presence, the ether could not be directly detected or observed. Its existence was inferred from the behaviour of mechanical waves.

Brahman is formless, beyond sensory perception, and cannot be detected or measured by empirical means. It is known through spiritual insight and realization.

### **Differences:**

#### **Nature and Essence:**

The ether was a scientific hypothesis within the framework of classical physics. It was conceived as a material substance, albeit one that is undetectable.

Brahman is a metaphysical and philosophical concept. It is considered the ultimate reality, beyond material existence, and not a substance in the physical sense.

#### **Scientific Versus Philosophical Context:**

The concept of the ether was eventually discarded with the advent of modern physics, particularly after the Michelson-Morley experiment and the development of the theory of relativity by Albert Einstein, which showed that light does not require a medium to propagate.

The concept of Brahman remains central to Hindu philosophy and spirituality. It is a timeless principle that continues to be a foundation for various schools of Indian thought, such as Vedanta.

#### **Purpose and Function:**

The ether was proposed to explain the propagation of light and electromagnetic waves in a vacuum.

Brahman serves as the ultimate cause, source, and essence of the universe. It is the ground of all being and the ultimate reality that transcends and sustains the cosmos.

While the luminiferous ether and Brahman share some conceptual similarities in being ubiquitous and undetectable mediums, they belong to entirely different realms of understanding. The ether was a scientific hypothesis aimed at explaining physical phenomena, which was eventually disproven. The solution was given by Physicist Albert Einstein by the hypothesis of the special theory of relativity that the speed of light in free space is a constant. On the other hand, Brahman is a profound philosophical and spiritual concept representing the ultimate reality. Understanding these distinctions highlights the unique roles each concept plays within its respective domains—one in the realm of science and the other in the realm of spirituality. Therefore, it is required to further explore the subjects to understand these similarities, whether it is just an accident, or any other indication of greater scientific thought that can be found in our culture and manuscripts.

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## Gettier-like Problem in Indian Epistemology

Prakash Mondal

### Abstract:

There is a widespread tendency among modern scholars of Indian philosophy to locate Nyāyā epistemology in Western tradition. Modern scholars like B.K. Matilal, J.N. Mohanty, and P.K. Sen have tried to discover the justified true belief factor in the Nyāyā concept of *pramā*. In the first part of my paper, I have distinguished a few kinds of scepticism and their sources. I have also shown that like the contemporary epistemologists the classical Indian Philosophers were aware of these. But the approach the Indian Philosophers adopted to meet the challenge of scepticism is significantly different from the approach epistemologists adopt. In the second part, at least one Gettier-like problem is found in Indian philosophy and is cited and explained. In the third part, I have discussed an instance of the characteristic way in which the Indian Philosophers meet the challenge of scepticism like Śrīharṣa.

### Introduction:

Man is an epistemic animal. He wants to unravel the mystery around him. Not only he wants to know, he also wants to know why things happen the way they happen. Man also endeavours to know what will happen in future on the basis of what he knows now. Philosophers since antiquity have been grappling with the nature of knowledge and the means of knowing. All these are questions constitute what is known as epistemology or theory of knowledge.

This seemingly simple question has aroused the interest of numerous philosophers of East and West from ancient time down to the present, and very many different answers have been given. This article aims at giving a clear account of the definition of knowledge along with some observations thereon. Let me start with an analysis of the ancient idea of the knowledge as found in Greek philosophy as there is a widespread tendency among the modern scholars to interoperate the western concept of knowledge into Indian system.

### (I)

Before 1963, Western philosophers seemed that the definition of knowledge is justified true belief (JTB)<sup>i</sup>. In 1963, the renowned philosopher Edmund L. Gettier<sup>ii</sup> claimed that justified true belief is not the sufficient condition of knowledge. The importance of (Gettier and) Gettier-like problem is best understood in the context of scepticism. And scepticism is a major concern of philosophers of every age and culture.

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The founder of skepticism is supposed to Pyro, the Greek philosopher. He claimed the no knowledge is possible. But the pyro's theory is not established due to extremist. But there is another type of skepticism that is moderate skepticism. This type of skepticism had a great influence on philosophy. There are two types of moderate skepticism, namely antecedent and consequence skepticism. However, the main goal of both types of skepticism was to cast doubt on the definition of knowledge. Gettier also use sceptic method to raise doubts on the definition of knowledge.

In order to show the inadequacy of the traditional definition, Gettier offers two counter-examples. In both these examples Gettier has tried to show the absence of knowledge even if justified true belief is present.<sup>iii</sup>

### Case I:

In the first counter-example, two men Smith and Jones are found to have applied for job. Smith has been told by the president of the company that Jones would get the job. Further, Smith counted the coins in Jones's pocket a few minutes ago. This gave Smith sufficient justification for believing the conjunctive proposition "Jones will get the job and Jones has ten coins in his pocket". Then Smith derives the proposition "The man who will get the job has ten coins in his pocket" from the conjunctive proposition. However, Smith gets the job, though he did not expect it. And unknown to Smith, there were ten coins in his pocket. The proposition "The man who will get the job has ten coins in his pocket" becomes true and Smith is justified in believing the proposition and he believes it. Thus, Smith has justified true belief, but he cannot be said to know, for his being right in this case is due to chance or luck.

### Case II:

The second counterexample runs as follows. A person called Smith has ample evidence for believing the proposition (1) 'Jones owns a Ford'. The evidence may be that Jones has given Smith a ride while driving a Ford and he remembers that Jones had always in the past owned a Ford. Now Smith has a friend called Brown whose whereabouts are unknown to Smith. Smith picks up three place names quite at random and constructs the following three disjunctive propositions:

- (2) Either Jones owns a Ford or Brown is in Boston.
- (3) Either Jones owns a Ford or Brown is in Barcelona.
- (4) Either Jones owns a Ford or Brown is in Brest Litovsk.

All the three propositions (2), (3), and (4) are entailed by (1) and Smith knows (1) and comes to believe each of the propositions (2), (3) and (4).

Surprisingly enough, Jones does not own a Ford. The car he was seen driving is a rented car. However, quite accidentally, Brown happens to be in Barcelona. The proposition (3) thus happens to be true. Smith is justified in believing the proposition and he believes it. But he has no knowledge about it for he does not know where at present Brown is. So, we can see that justified true belief is there but Knowledge is not achieved.

## (II)

### Gettier Types Cases in Nyāya Epistemology:

There is a widespread tendency among the modern scholars of Indian philosophy to locate Nyāyā epistemology in Western tradition. Modern scholars like B.K. Matilal, J.N. Mohanty, and P.K. Sen have tried to discover justified true belief factor in the Nyāyā concept of *pramā*.<sup>iv</sup> According to P. K. Sen, "we cannot allow any definition of *pramā*

which would identify it with a mere true belief”<sup>v</sup>. He identifies the concept of *pramāṇajanyatva* with the concept of justification and suggests that the former concept must be inserted in the Nyāyā definition of *pramā* in order to make it acceptable.<sup>vi</sup> Before discussing Gettier type cases in Indian epistemology, I would like to give an idea of the concept of *pramā* in Nyāya philosophy.

Goutama, who propounded Nyāya philosophy for the first time, did not mention any definition of *pramā* directly. But in *Nyāyadarśana*, vol-1, translated by Phanibhusan Tarkavagisa, we find a definition of *pratyakṣa*<sup>vii</sup>.

‘indriyārthasannikarṣotpannam jñānam avyapadeshyam                      avyabhichāri vyavasāyātmakam  
pratyakṣm’.<sup>viii</sup> |I|4|

In Nyāya Kusumāñjali, Udayanācārya discussed the definition of *pramā*,

“Aprāpterdhikvyāpterlakṣṇmpūrbdrk |

Yathārthānubhavomāmanapekṣatayeṣyate”<sup>ix</sup> |I|

In *Bhāṣā-pariccheda*, Viśvanātha discussed the definition of *pramā*,

Athavā tatprakaraṇajajñānaṁ tadviśeṣyakam |

Tat pramā, na pramā nāpi bhramḥ syannirvikalpakam<sup>x</sup> ||135

From the above discussion, we can summarise the definition of *Pramā* in general. An awareness episode is considered as *pramā* only if it satisfies the following three conditions:

It should be a presentation (*anubhava*) of things,

It should be true or unerring (*yathārtha*), and

It should be indubitable and assured (*asamdigdha*).

For a proper understanding of this definition, it is necessary to grasp what the Naiyāyikas mean by the key terms *asamdigdha*, *yathārtha*, and *anubhava*.

Let me substantiate the point by referring to the Gettier type counter-examples discussed by Matilal<sup>xi</sup>. These are the examples primarily given by Śrīharṣa in his *Khaṇḍanakhaṇḍakhādyā* against Udayana’s definition of *pramā* as ‘true presentative cognition’ (*tattvānubūtiḥ pramā*). I will briefly narrate the examples to facilitate the discussion.

A man holding three coins in his palm asks the cognizer: how many coins are there in my hand? The cognizer having no clue makes a guess and says ‘three’; but her guess turns out to be true. The cognizer should not be credited with *pramā*, even though it satisfies the definition of *pramā*. So, it has turned out to be true only by accident (*ajā-kripānīya-nyāya*). It cannot be regarded, according to Śrīharṣa, as a case of *pramā*.

A person sees a cloud of dust on a distant hill, but he mistakes it for smoke. On the basis of this misperception or the false evidence provided by the senses, he concludes that there is fire on the hill. As a matter of fact, it so happens that there is fire on the hill, which makes his awareness episode true. It cannot be regarded a case of *pramā*.

From a distance, a person sees two horns and infers the presence of a bull in the field. But later it is discovered that he sees a pair of wooden horns. The real horns of the animal were cut-off and, in its place, artificial ones were fitted a long time back. In this case, the subject's awareness about the presence of bull was true and there was evidential justification for the truth of the awareness. Śrīharṣa's point is that though all the conditions of knowledge are satisfied, this would not be considered as a case of knowledge.

Śrīharṣa<sup>xii</sup> point out that as justification in the above cases does not ensure the truth of the awareness episodes, truth is not properly and adequately connected to the awareness episode. Truth being only accidental to the awareness episode under discussion, there is always the possibility of error.

### (III)

Now I would like to focus on B.K. Matilal's interpretation. He tried to overcome the Gettier type problems in Indian philosophy. In his book *Perception* he discussed this in detail. To quote:

"I shall now try to formulate, deriving my points from the philosophical insights of Gaṅgeśa, the possible Nyāya response to Śrīharṣa's criticism. The following considerations are directly relevant for resolving the problem with Śrīharṣa's examples.

First, following Gaṅgeśa, we might want to restrict the primary (philosophical) use of 'to know' (*pramā*) to designate simply any 'truth-hitting' cognitive episode, any awareness that grasps x as F provided x is F. This will turn many cases of awareness into true awareness, into knowledge, even when we are not sure that those events are not knowledge-events.

Second, Gaṅgeśa emphasizes that knowledge-hood and illation-hood are not two mutually exclusive class-properties or universals (*jāti*). A particular cognitive event can therefore be instantiating the property knowledge-hood only in one part and lack of it in another part. It has been argued that even in a typical illation 'this is a snake' there is knowledge-hood in so far as the word 'this' correctly refers to an object lying in front of the speaker (which means that the object referred to is qualified by whatever is signified by 'this-ness').

Third, following Nyāya, we might introduce a distinction between one's knowing and one's knowing that one knows. As we shall see, in the Nyāya analytical study of knowledge, these two are treated as two distinct events. Presumably they arise in us in quick succession and thereby falsely generate the notion of simultaneity (or on rare occasion may arise simultaneously provided all the required conditions are fulfilled). It is mentioned that these two events often remain indistinguishable in ordinary parlance. One's knowing that p is much simpler event than one's knowing that she knows that p, and hence the set of 'causal' factors leading to the first is non-identical with those leading to the second. Ordinarily, whenever I can say that I know, I can unhesitatingly say that I know that I know. But when we can say of somebody else that he knows, it is not invariably the case that we can say that he knows that he knows. In other words, the subject must be aware of some 'evidential' support, and this awareness (*liṅga-parāmarśa*) will give the required 'casual' basis for the knowledge that he knows".

If the above considerations are taken into account, we can proceed to resolve Śrīharṣa's problem as follows. In all such cases we have to say that the subject 'knows' (in the primary sense defined by Gaṅgeśa) as long as the cognitive episode is endowed with the truth-hitting character. But the subject does not know that he knows, for his inference, his evidential support, has not been faultless! The subject thinks that he knows and hence being asked can cite his evidence (false awareness of smoke or dewlap), but if his mistake is pointed out he would withdraw



saying, ‘Oh! I did not know’. One could interpret this as saying, ‘Oh! I thought I knew, but I did not know that my awareness was right for a different reason.

### Upshot:

I think that in Indian philosophy there is no Gettier-type problem as they can be found in Western tradition. If we summarise the Nyāya definition of *pramā* given by different Naiyāyikas, we can say it is ‘*Yathārthānubhava pramā*’ and ‘*pramā karaṇama pramāṇam*’. There are four kinds of *pramā* and *pramāṇa* (perception, inference, Comparison, testimony) in Nyāya philosophy. If we study carefully the process of *pramāṇa* referred to here, we must acquire the concept of valid cognition. So the examples given by Gettier<sup>xiii</sup> and the Indian sceptic philosopher Śrīharṣa<sup>xiv</sup> cannot make the definition of *pramā* invalid. The main foundation of inference is *vyāpti jñāna*. If *vyāpti jñāna* occurs correctly, inference must be valid. So the example of misperception of dust as smoke given by Śrīharṣa is not appropriate here, because there is no valid *vyāpti jñāna*. Though there is a *vyāpti* relation between smoke and fire, it is not possible to draw any *vyāpti* relation between dust and fire. Therefore we can say that Śrīharṣa could not apply the process of inference properly in this case. This is why Śrīharṣa could not achieve valid inferential knowledge.

In the case of Śabda *pramāṇa*, the example of Śrīharṣa<sup>xv</sup> is invalid. The statement of *āpta vyakti* is called testimony. We cannot doubt the statement of *āpta vyakti*. If we doubt the statement, *vyakti* cannot be called *āpta*. So the example, ‘a man holding three coins....’ given by Śrīharṣa cannot be valid because if the referred person is ‘*āpta*’, he has knowingly talked about three coins. If we doubt his knowledge, it cannot be said ‘*āpta-vyakti*’. So in my opinion, there is no Gettier-type problem in so far as the Nyaya definition of *prama* is concerned.

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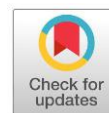
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## Teacher Education in Colonial India: An Indian Intellectual Discourse

Dr. Ajoy Ghosh

### Abstract:

Teacher education is an integral component of any educational system. It is intimately connected with society and is conditioned by the ethics, culture, and character of a nation. Teacher education in the modern period was characterized by the British in India. Different committees were instituted to look into the system of teacher education and training. In the present section, an attempt has been made to shed light on eight erudite positions on Teacher & Teacher Training in Colonial Bengal. Basically, the philosophical basis of teacher education has been discussed from Indian perspective. Mainly, an attempt has been made to discuss the opinion of a great person of India regarding teacher education. Few of them later came to be acknowledged afterwards as pioneering educators amongst whom the name of Tagore, Vivekananda, Aurobindo and Nivedita are worth mentioning. Exploration of the documents will be the first phase of the study, which will be followed by the qualitative content analysis, and in the second phase, historical research criticism, both internal and external, will be used. It would describe why and when teacher training had been established as a system of education in India. It would identify and clarify the opinions and thoughts of a great person and their role in that historical context.

**Keywords:** Development, Teacher education, Teacher training, Bengal, Normal school, Elite Views

### Introduction:

In the present section, an attempt has been made to shed light on eight erudite positions on Teacher & Teacher Training in Colonial Bengal. A few of them later came to be acknowledged afterwards as pioneering educators amongst whom the names of Tagore, Vivekananda, Aurobindo, and Nivedita are worth mentioning. Though Nivedita was born in Ireland and brought up mostly in England, she gave away her all for India and whatever educational ideas she had to offer to the world were deeply grounded and got their vigour and vitality from Indian soil. Hence, the present researcher had no hesitation to discuss about her in the present section. Others about whom some discussion has been rendered here are Bhudev Mukhopadhyay, Somnath Mukhopadhyay, Gopal Chunder Bandyopadhyay and Benoy Kumar Sarkar.

Here in this Section the contribution of Mary Carpenter (1807-1877) who visited India in 1866 could have been discussed separately but, since her strong belief that 'Christian and moral teaching had to run in parallel with learning a trade' does not match with the spirit of this section, her pedagogical position has not been dealt with here separately. However, Carpenter had an ambition of hers as regards the spreading of Girls' education in India since

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her meeting with Raja Ram Mohan Roy in 1833. She visited Calcutta, Madras and Bombay, finding that for the most part girls were not educated past the age of twelve years, mainly due to a lack of educated female teachers. During her visit Carpenter met Keshab Chandra Sen, the leader of Brahmo Samaj. Sen asked her to form an organisation in Britain to improve communication between British and Indian reformers, which she did in 1870, establishing the National Indian Association. She visited many schools, hospitals and gaols and encouraged both Indian and British colonial administrators to improve and fund these. She was particularly concerned that the lack of good female education led to a shortage of women teachers, nurses and prison attendants. The Mary Carpenter Hall at the Brahmo Girls school in Calcutta was erected as a memorial to this work.

Again in the present Section the philosophical positions of the prominent Brahmo Leaders have not been dealt in details since most of them were in favour of imitating the pedagogy as well as contents prevalent in the then West only with a little tint of Upanishadic flavour. In this context we may quote from Rammohun Roy:

*“We now find that the Government are establishing a Sanskrit school under Hindoo Pundits to impart such knowledge as is already current in India. This Seminary (similar in character to those which existed in Europe before the time of Lord Bacon) can only be expected to load the minds of youth with grammatical niceties and metaphysical distinctions of little or no practicable use to the possessors or to society. The pupils will there acquire what was known two thousand years ago, with the addition of vain and empty subtilties since produced by speculative men, such as is already commonly taught in all parts of India.*

*The Sanskrit language, so difficult that almost a life time is necessary for its perfect acquisition, is well known to have been for ages a lamentable check on the diffusion of knowledge; and the learning concealed under this almost impervious veil is far from sufficient to reward the labour of acquiring it.*

*If it had been intended to keep the British nation in ignorance of real knowledge the Baconian philosophy would not have been allowed to displace the system of the schoolmen, which was the best calculated to perpetuate ignorance. In the same manner the Sanskrit system of education would be the best calculated to keep this country in darkness, if such had been the policy of the British Legislature. But as the improvement of the native population is the object of the Government, it will consequently promote a more liberal and enlightened system of instruction, embracing mathematics, natural philosophy, chemistry and anatomy, with other useful sciences which may be accomplished with the sum proposed by employing a few gentlemen of talents and learning educated in Europe, and providing a college furnished with the necessary books, instruments and other apparatus” (Bureau of Education, 1920, Pp. 98-101).*

### **Ishwar Chandra Vidyasagar (1820-1891):**

Born in a more obscure village in Medinipur District on 26 September 1820, Vidyasagar started his teaching career at the age of 21 in Fort William College, Calcutta, and later joined Sanskrit College as its principal. However, his career was never important to him. His vision was set beyond.

Vidyasagar felt that mass education, irrespective of caste, creed and sex, was the necessity of the day to bring about a real change in the society and to ensure it, spread of education among women was very much essential. Then, the Bengali society was still holding on to medievalism. Besides the commoners, many highly educated men too were averse to any change in women’s status, particularly to their education. Prior to 1850 the government was not too keen on education of Indian women. In his Report on The State of Education in Bengal (1836) William Adam wrote: “A superstitious feeling is alleged to exist in the majority of Hindu families, principally cherished by

the women and not discouraged by the men, that a girl taught to read and write will soon after marriage become a widow.”

Vidyasagar’s well-documented protestations against Education department officials of the day testify to the degree of intensity with which he pursued the course of education reform (Sen, 1962.P-26):

- ❖ He favoured English and Bengali as a medium of learning alongside Sanskrit.
- ❖ He wanted to offer to students a wider range of subjects and thus broaden their horizons in examining European and Indian concepts and practices side by side so they could apply their own judgement in discovering the truth for themselves.
- ❖ He was not afraid of discarding erroneous beliefs of Indian *shastras* and in preferring European science in its place where appropriate.
- ❖ Similarly he did not accept everything that Europe had to offer. His mind was open only to discovering the truth and reality.
- ❖ In these matters his determination was unmistakable and his resolve unshakable.
- ❖ In his famous “Notes on the Sanskrit College” Vidyasagar put forward a comprehensive scheme through which he aimed at creating an elegant Bengali style based on a combination of sound knowledge of both Sanskrit and English languages.
- ❖ He laid equal stress on learning the three branches in English- History, Mathematics and Natural Philosophy.
- ❖ He prevailed upon the government to select as deputy magistrates some of the graduates of this college and established the Normal School for training Bengali teachers at the College thereby broadening the prospect of career opportunities as well as the range of academic interests that could be pursued on its campus. Vidyasagar took several such measures to expand enrolment and strengthen student commitment in Sanskrit College. In this way, he rescued classical education from medieval scholasticism.

### **Bhudeb Mukhopadhyay (1827-1894):**

Bhudeb Mukhopadhyay (1827-1894) who served in the then Bengal Presidency in various capacities including a Teacher, a Headmaster, a District Inspector of Schools, wrote extensively on various modalities of content knowledge as well as pedagogic knowledge including a handy manual for school teachers. The whole manual which was the first book by him, was written in Bengali under the title “*Siksha Bidhayak Prastab*’ (Mukhopadhyay, 1856) and while writing it he was the Headmaster of one School in the Howrah District.

In the Preamble of the said manual, Sri Mukhopadhyay wanted the then school teachers to reflect upon some serious issues as if involving them in pursuing self-introspection in the following manner:

Firstly, the teachers need to ask themselves the basic question so as to why they have chosen the profession of teaching; is it for any financial benefit or is it for intensely loving teaching? If there remains anybody who took it for any monetary benefit he needs to leave this profession immediately because it won’t serve his intended purpose.



Secondly, a prerequisite of teaching is to get joy in helping the tender hearted students in conceptualizing *Vidya* and inoculating in them the basic values of life.

Thirdly, while being engaged in teaching, teachers need to inspire students to make their minds go beyond the four walls of the classroom and beyond only textbooks.

Fourthly, we need to impart such type of socially relevant knowledge that would help students to be self-reliant and self-dependent in all practical senses.

Fifthly, besides philosophy, our students are to be made well adept in Geography, Physics, Economics and History etc. and,

Lastly, just after the completion of their studies our students hanker after getting governmental jobs, but, they need to be enticed towards running independent businesses and the education system needs to be instrumental in this regard.

In the next few chapters of '*Siksha Bidhayak Prastab*', Bhudev Mukhopadhyay dealt with the following important issues:

### ***'Siksha Bidhayak Prastab' at a Glance***

2 <sup>nd</sup> Chapter	Special instructions to the teachers teaching in the <i>Pathshalas</i> .
3 <sup>rd</sup> Chapter	Developing reading and writing style – Use of wooden plate in this regard.
4 <sup>th</sup> Chapter	Mathematics Teaching – Abacus – Counting etc.
5 <sup>th</sup> Chapter	Demonstration lessons – some examples from text books.
6 <sup>th</sup> Chapter	Teaching physics – Topic: Glass
7 <sup>th</sup> Chapter	Teaching Bengali grammar – morphology and syntax – citation from text books
8 <sup>th</sup> Chapter	Perimeter – height and distance – rectangular perimeter and pentagon
9 <sup>th</sup> Chapter	Oral teaching – oral test related to natural sciences
10 <sup>th</sup> Chapter	Teaching of Geography and history using maps
11 <sup>th</sup> Chapter	Necessity of making <i>Dharma</i> (Moral and spiritual education) and physical education mandatory in schools and how to impart it

In the 11<sup>th</sup> Chapter what Bhudev Mukhopadhyay presented in Bengali can be translated into English in a summary form as follows (English translation is rendered by the present researcher):

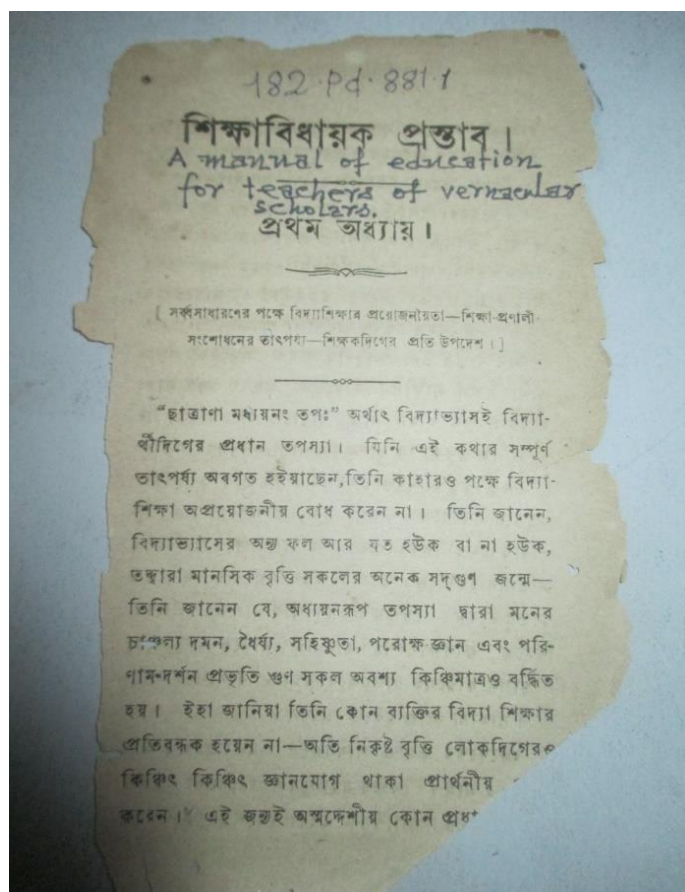
“Whatever has been hitherto told is all related only to bringing changes at cognitive domain and chiseling the intellectual faculty of our students, but chiseling the intellectual faculty is not holistic development and hence, is not sufficient. The moral qualities remaining dormant in a student, it is impossible for him to become perfectly happy in life. Such instances are plenty where even a person not as much of being learned but then again endowed with righteousness of high standard is leading a commendable life and an unethical person incurring disrespect and

distrust of everybody in the society. Hence, it is the bounden duty of every teacher to impart value education to every student.

The schools also need to frame some regulations so that students are seriously involved in physical exercises of indigenous nature. Some feel that for this we need to introduce such games and sports which are popular in western countries, but we sincerely feel that even the indigenous sports and games are sufficient to make the physique of our students strong and steady.

But, whatever is done within schools hours, will remain all fruitless unless our children don't get good education from their parents. Everyone knows that a child suffers from malnutrition unless he/she gets mother's milk in his/her childhood; likewise, a person all through the life suffers for his/her ill character if he or she does not get good moral education from his/her mother in the early days. This is a very wrong notion that the learning of child begins at the age of five years. Actual learning of a child starts at the age when he or she is 2/3 months old....."

Thus the above discussed manual is astonishing in the sense that at one hand it gave stress upon 'learner centric pedagogy' as if under the influence of western pedagogic models but on the other it did not deny the importance of pedagogic tradition followed in India during ancient times, moreover, it went on justifying making *Dharma* (Moral and spiritual education) mandatory in schools (Barik, 2016).



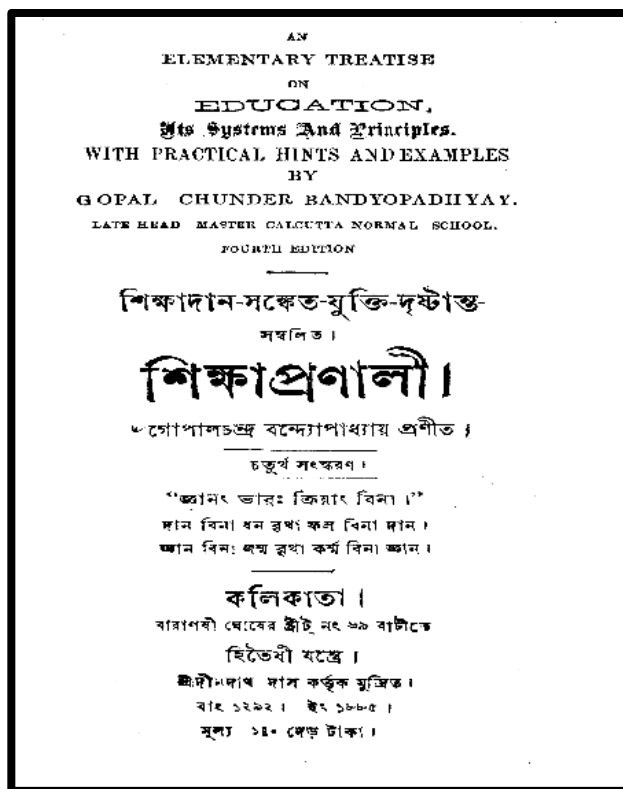
**Figure 1. Copy of the First page of 'Siksha Vidhayak Prastab'**

As regards preceptor-disciple relationship Mukhopadhyay opined, "The behavior between the Guru and his students should be the same as between fathers and sons. But in this country, there is very little effort to encourage

mutual affection and understanding between fathers and sons” (Sengupta, 2011, p. 81). In our contemporary context the utterances of Bhudev Mukhopadhyay is proven to be a genuine prophecy.

### Gopal Chunder Bandyopadhyay:

Gopal Chunder (Spelling unchanged) Bandyopadhyay, Headmaster of renowned Calcutta Normal School and writer of several text books as well as Treatise on Education, can claim the fame of presenting expected teaching ethos in colonial Bengal.



**Figure 2. First page of Gopal Chunder Bandyopadhyay's Elementary Treatise on Education**

In his treatise on Education Gopal Chandra had firstly acknowledged teaching to be a difficult but glamorous as well as joyful task. According to him in grooming up a child the responsibilities of the parents are in no way less important, rather those parents are the enemies of the children who do not take care to impart good education in their childhood. According to Gopal Chandra Bandyopadhyay a good teacher should have possessed the following qualities:

1. Teachers should have an inclination towards teaching.
2. Teachers should not be engaged in any other professions.
3. Teachers need to be affectionate towards the students like their own parents.
4. Teachers need to be the real well-wisher of the students.
5. Teachers should have the capability to judge the character, personality and skillfulness of the students.
6. Teachers should have real passion for learning.

7. They should have mastery over multidisciplinary subjects.
8. They should have proper communication skills.
9. Teachers themselves should always be morally upright.
10. Besides subjects, they are the disseminators of moral education amongst their students.
11. They need to be initiated in the dictum of plain living and high thinking.

**Annexure of the Elementary Treatise include in details the followings:**

- a. Modalities of reading, writing and speaking and teachers' role in those activities.
- b. List of words - synonyms, antonyms and homophones.
- c. List of low cost no cost learning-teaching materials.
- d. Pedagogical sequences following minute micro teaching skills.
- e. Demonstration of teaching following question-answer method.
- f. Demonstration of teaching science following demonstration method.
- g. Modalities of imparting value education through reciting relevant poems and rhymes.
- h. Modalities of teaching mathematics through verbal interaction.
- i. Modalities of using the knowledge of geography while teaching history and the vice versa.
- j. Utility of reflective application of mind while memorizing text.
- k. Modalities of using black board/ Maps/ Charts/ Globes.
- l. Utility of reading history – biographical approach.
- m. Significance of composition, translation and grammar in language learning and their appropriate methodology.
- n. Content and modalities of imparting Ethics.

**Rabindranath Tagore (1861-1941):**

Most of the technical discussions on the educational philosophy of Rabindranath Tagore endeavor with the proposition that in Tagore's educational philosophy was a culmination of the harmonized synthesis of idealism, naturalism and pragmatism. According to those theorists, he was an idealist as he laid great emphasis on self-realization as the aim of human life and a true seeker after 'Tranquility (*Shantam*), Peace (*Shivam*) and Oneness (*Advaitam*)' only can have the rarest joy and privilege of self-realization; moreover there has always been an unanimity of existence of these *Shantam*, *Shivam* and *Advaitam* in the physical or phenomenal world, in human society and in human consciousness and the realization of this unanimity of existence in both the three planes at a time leads to universal consciousness or *Visva-chetana*. The uniqueness of this universal consciousness is that it enables one to unveil the unity in diversity, and not only that; it clearly shows one's individuality to be a part and

parcel of that universal unity: “*Asim kaler je hillole, joar bhatai bhuvan dole, narite more raktadharai legeche tar tan*”. Educational critics use to call these types of ‘abstract’ ideas as ‘idealism’!

Tagore is a naturalist thinker, according to those theorists, as he laid much emphasis on the harmony of education with the environment. True it is that wanted our children imbibing their national cultural heritage by means of their interaction with the environment: “*Ai akashe amar mukti alloy alloy, amar mukti dhulay dhulay ghase ghase...*”

Explaining the aim of education, Tagore said, “If we believe that the chief aim of education in India is to be initiated into this unique pursuit of India, then we must constantly remember that neither the education of the senses, nor the education of the intellect, but the education of the feeling receive the place of honour in our schools.....Our true education is possible only in the forest, through intimate contact with nature and purifying austere pursuits” (Tagore, 1935/1342, p.145).

Moreover, Tagore was a pragmatist thinker, according to those theorists, as he earnestly admitted bread earning to be a necessary part of any sound goal of education and this admittance stirred him to create *Sri Niketan* even after creating *Shantiniketan*. Therefore, he said, “from the very beginning, such education should be imparted to them, i.e. village folks, that they may know well what mass welfare means and may become practically efficient in all respects for earning their livelihood” (Tagore, 1944, p. 522).

While he is critical of the British system of education which wanted to create clerks out of the Indian educated people, he emphasized that the real aim of education is to develop men and women who may be able to fulfill the needs of the country. In his own words, “one of the main aims of education is to prepare the individual for the service of the country” (Tagore, 1944, p. 517). But the main proposition of this paper is to establish that Tagore was neither influenced by idealism or naturalism nor by pragmatism though his educational thought bear semblances with those western ‘isms’, however, he was well aware of those educational ideas prevalent in the west. Speaking about the genesis of his school at Santiniketan, Tagore stated that it owed its origin not to any ‘new theory of education but to the memory of my school days’. It is well known to all that the experiences that he had in schools – he attended more than one school – was not very pleasant. The main cause of his unhappiness were twofold: One is the relation between the teacher and the taught, which he found degrading and the other was the general atmosphere in school, which gave him the impression of a dull prison house rather than a place of joy (Das, 2004, p.). The game he described in his autobiography in which he played the role of a teacher with a cane in hand with the wish that the wooden bars of the railings in a corner of the Verandah as his pupils is a startling instance of the impact of the contemporary teaching method on the sensitive child: “I had decided which was the good boys and which the bad – nay, further, I could distinguish clearly the quiet from naughty, the clever from the stupid, the bad rail had suffered so much from my constant caning that they must have longed to give up the ghost have they been alive. And the more scared they got with my strokes the worse they angered me, till I knew not how to punish them enough. None remains to bear witness today how tremendously I tyrannized over that poor dumb class of mine” (Tagore, 1959, p. ). No doubt, Tagore was unfortunate for not having even an ideal teacher during his childhood life, because, even in the worst time of our cultural history there were teachers who had been perennial sources to their students. However, on the reverse, Tagore was very much fascinated by the glory of the Upanishadic *Taovana* and the green and placid civilization of the forest; his educational ideas were directly related with his poetic vision of that time:

“The life that was yours in the *tapovana*,

The life that was yours in the abodes of kings,



We welcome that life, free and radiant,  
Give us that mantra  
That overcomes death and conquers fear.”

In China, Tagore told his audience that he ‘tried to found a school where the boys must be free in spite of the school’ (Tagore, 1925, p. 69). He succeeded in ample measures in creating that atmosphere of freedom and joy in his school in Santiniketan. The concept of this freedom and joy didn’t come from the west but he got it in the Upanishads: “(He) knew Bliss as Brahman; for from bliss, indeed, all these beings originate; having been born, they are sustained by Bliss; they move towards and merge in Bliss” (Taittiriya Upanishad, 1998, p. ). In his many essays entitled ‘*Dharma*’ and ‘*Shantiniketan*’ Tagore exemplified these ideas of joy and freedom. His priorities of joy and freedom both in education and in work were further manifested in his concerns for rural reconstruction and his endeavor towards the empowerment of the poor and the illiterate villagers around *Surul*. One of his legendary poems in *Naivedya* can be taken as the official manifesto of his educational thought: “Where the mind is without fear and the head is held high,

Where knowledge is free,  
Where the world has not been broken up into fragments by narrow domestic walls,  
Where words come out from the depth of truth,  
Where tireless striving stretches its arms towards perfection:  
Where the clear stream of reason has not lost its way  
Into the dreary desert sand of dead habits,  
Where the mind is led forward by thee into ever widening thought and action  
– Into that heaven of freedom, my Father, let my country awake”  
(Tagore, 1994, p. 669).

May be, thus, Tagore’s educational thought was an utopia, but it was and still remains a necessary utopia which have the potential to be instrumental in rejuvenating and reconstructing the Indian nation in an truly Indian way and to Tagore the Upanishads were the rock bed upon which he asserted his ideas of ‘fullest growth and the freedom of soul’.

Tagore felt it difficult to find the sufficient number of ideal type of teachers for his schools (Das Gupta, 2006, p. 138). He was looking for Gurus as an alternative of Schoolmasters. The Sanskrit term *guru* means teacher, yet accentuates spiritual knowledge and practices and is connected to the ancient tradition of *brahmacharya ashrams* and *tapovans*. According to Tagore, *gurus* are “active in the efforts to achieve the fullness of humanity” (Tagore, R, 2001, p. 44) and will give their entire souls to their students instead of merely sharing the material as prescribed in the curriculum. Being a *guru* is a true calling instead of a job to earn money, and the motivation for it consists in love for children and for the subject, not in love for power (Tagore, R, 2001, Pp. 44-50). Good teachers, wrote Tagore, stimulate children’s minds instead of helping them to collect information, and inspire children through their own self-development. They encourage them to work on the teacher’s own original projects and thereby travel together on their journey to more understanding (Tagore, R, 2001, p. 44).

“A teacher can never truly teach unless he is still learning himself. A lamp can never light another lamp unless it continues to burn its own flame. The teacher who has come to the end of his subject, who has no living traffic with his knowledge, but merely repeats his lesson to his students, can only load to their minds. He cannot quicken them. Truth not only must inform, but also must inspire. If the inspiration dies out and the information only accumulates then truth loses its infinity. The greater part of our learning in the school has been a waste because for most of our teachers, their subjects are like dead specimens of once living things, with which they have a learned acquaintance, but no communication of life and love” (Tagore, R, 2002, p. 187).

Tagore argues that teachers would be strengthened through a higher status that, in India, might come through the title "guru." He also says that teacher's education needed to improve, and that it should include a thorough understanding of children's psychology (Tagore, 2006, 507). Their teaching would additionally be of higher value if teachers were given more freedom regarding their teaching methods and, to a certain degree, regarding the content of what they teach.

In general, Tagore is convinced that education "is not a matter of 'teaching', of methodology or of 'educational equipment' (Tagore, Rabindranath, 2001, p. 44) but depend upon the personality of the teacher and the relationship to the student. He said to one of the teachers at his school: *"Do not be preoccupied with method. Leave your instincts to guide you to life. Children differ from one another. One must learn to know them, to navigate among them as one navigates among reefs. To explore the geography of their minds, a mysterious instinct that is sympathetic to life, is the best of all guides"* (Tagore, Rabindranath, 1946, p. 9).

### **Somnath Mukhopadhyay:**

Very little is known about Somnath Mukhopadhyay, the first Headmaster of the Dacca Normal School but his 'Siksha Paddhati'- 1870(Pedagogical science of Teaching) was an astonishing amalgamation of epistemological, ontological and axiological standing of pedagogy particularly in the arena when colonial philosophy was about to eat up the vitality of Indianness in education in all respect (Mukhopadhyay, 1870).

### **Swami Vivekananda (1863-1902):**

“Swami Vivekananda's relevance depends not on the nature of the problems we face but on the spirit with which those problems have to be tackled,” Wrote Swami Lokeshwarananda in “The Message of Swami Vivekananda.” True it is that Swamiji's stress was on man himself, for, given the right kind of man, no problem need be daunting. “Man-making is my mission”- he used to say; there is no denying the fact that any country can produce one or two men of inhuman or superhuman acumen but unless the common masses are ‘empowered’ in the truest sense of the term to play their role in tackling national problems, the fate of that country to be branded as belonging to the ‘Third and Undeveloped World’ could never be overcome and here comes the significance of Swami Vivekananda's deep concern for the warning people of India, who had long been neglected and had had no access to education, should now receive special attention so that they could quickly overcome their initial drawbacks.

A pioneer in education for all time and all places for one and all, Swami Vivekananda's Philosophy of Education and teacher preparation is very significant for excellence and ascent of man. As a firm believer of the self by the self and for the self, he draws our attention to the role of the teacher as a sincere and devoted task master in enabling the learning to justify his/ her perfection already in him/ her as best as possible (Chakrabarti, 2014, p. 103). Vivekananda's explanation is explicit in the following well known utterances:

“A child teaches itself. But you can help it to go forward in its own way. What you can do is not of a positive nature, but of a negative one. You can take away the obstacles, but knowledge comes out of its own nature. Loosen the soil a little, so that it may come out easily. Put a hedge round it; see that it is not killed by anything, and there your work stops. You cannot do anything else. The rest is manifestation from within its own nature.”

“No one can teach anybody. The teacher spoils everything by thinking that he is teaching. Thus, Vedanta says that within man is all knowledge -- even in a boy it is so -- and it requires only an awakening, and that much is the work of a teacher.”

“No one was ever really taught by another; each of us has to teach himself. The external teacher offers only the suggestion which rouses the internal teacher to work to understand things.”

“Negative thoughts weaken men. Do you not find that where parents are constantly taxing their sons to read and write, telling them they will never learn anything, and calling them fools and so forth, the latter do actually turn out to be so in many cases? If you speak kind words to boys and encourage them, they are bound to improve in time.”

“If you can give them positive ideas, people will grow up to be men and learn to stand on their own legs.”

“In language and literature, in poetry and in arts, in everything we must point out not the mistakes that people are making in their thoughts and actions, but the way in which they will gradually be able to do these things better. Pointing out mistakes wounds a man's feelings.”

“(Another) condition necessary in the teacher is that he must be sinless. The question was once asked me in England by a friend, “Why should we look to the personality of a teacher? We have only to judge of what he says, and take that up.” Not so. If a man wants to teach me something of dynamics or chemistry or any other physical science, he may be of any character; he can still teach dynamics or any other science. For the knowledge that the physical sciences require is simply intellectual and depends on intellectual strength; a man can have in such a case a gigantic intellectual power without the least development of his soul. But in the spiritual sciences it is impossible from first to last” (Vivekananda, 1986, p. 43-56).

### **Sister Nivedita (1867-1911):**

Nivedita (previously Miss Margaret Noble) was a Scots-Irish social worker, author, teacher and a disciple of Swami Vivekananda. She spent her childhood and early days of her youth in Ireland. From her father and her college professor, she learned many valuable lessons, like – service to mankind is the true service to God. She worked as school teacher and later also opened a school. She was committed to marry a Welsh youth who died soon after their engagement. She carried on her life.

Sister Nivedita met Swami Vivekananda in 1895 in London and travelled to Calcutta (present-day Kolkata), India in 1898. Swami Vivekananda gave her the name *Nivedita* (meaning “Dedicated to God”) when he initiated her into the vow of *Brahmacharya* on 25 March 1898. In November 1898, she opened a girls' school in Bagbazar area of Calcutta. She wanted to educate those girls who were deprived of even basic education.

Nivedita knew very clearly the kind of education she would like to give to the girls in her school. She had considerable experience in teaching and was familiar with the new ideas of education of the West but she felt the task she faced in Calcutta was different. For she had to succeed in attracting Indian girls to her school and she felt she had to reject the kind of education that was systematized and gave all students a prescribed uniform dose of

instruction. For the girls in her charge she had to provide an education that took into account their existing knowledge.

The girls she would teach would know stories from the two Indian epics: the Mahabharata and Ramayana which were written to teach people ``dharma ``or right conduct and the aims of life. This was deep culture. She felt it was important to make a reverent and patient study of the lives of the girls, what they knew, and the conditions in which they lived before she could proceed to firm up the details of instructions she would provide. Her thoughts on why a ``reverent" study was necessary are explained in the following quote ``Of all the creations of a people, their art, their sciences, their customs, their buildings, and the like, the highest and most spiritual is their language. In it is the left the impress of their love and hope, their

ideas of achievement and their criticism of the world....as language holds the soul of a nation, so in like fashion its literature holds the soul of the language....First there are the philosophical ideas which give its tone to the dream-world of the race. Then there is the great gallery of ideal characters of which every Indian child by his birth is made a freeman, that gallery in which a man may wander all his life without one excursion into formal history: the dramatic background, as it were, of each generation of the national struggle. Then there are the proverbs and fables innumerable, village-legends, quaint stories and metaphors, beggars' songs, ancestral hero-tales, cherished memories of saints and leaders, and all the floating literature that makes so large a part of the spiritual home of man without even incarnating itself in letters:

“Gradually it dawns upon one that behind all this there is some central source of thought and strength, a fountain of authority, a standard of correctness that gives

dignity and assurance. This academic authority lies in Sanskrit..." (Sen, 2018, p. 40).

This deep analysis of the roots of Indian culture and the true nature of education we have quoted shows the way Nivedita approached any task: there had to be well thought out principles in place, there had to time set aside to familiarize oneself to the environment in which the task had to be carried out, and then a well thought out method had to be drawn up which was then to be followed and modified if necessary (Sen, 2018, Pp. 40-50).

Nivedita's entry into political work was helped by the fact that both of the two major political movements of 1905 had an educational dimension. The first was the reaction of educated Indians to the University Commission report which led to the Universities Act of 1904 and the second was the popular agitation against the Bill for the Partition of Bengal in 1905. The Universities Act was strongly criticized because it gave the government full control over all educational institutions and as stressed by Nivedita there was no provision for science education or research. She expressed her strong reservations regarding the Act through letters, articles, and speeches, which established Nivedita as an ardent supporter and a strong voice for the cause of India. She was an important voice supporting the setting up of the National Council of Education and later the Bengal National College (Sen, 2018, p. 50).

The educational vision and the teachers' task as envisaged by Nivedita can be put in her own words as follows,

“Education! Ay, that is the problem of India. How to give true education, national education; how to make you full men, true sons of *Bharatvarsha*, and not poor copies of Europe? Your education should be an education of the heart and the spirit, and of the spirit as much of the brain; it should be a living connection between yourselves and your past as well as the modern world!

“Have the Hindu women of the past been a source of shame to us that we should hasten to discard their old-time grace and sweetness, their gentleness and piety, their tolerance and childlike depth of love and pity, in favour

of the first crude product of Western information and social aggressiveness?... An education of the brain that uprooted humility and took away tenderness, would be no true education at all.

“The question that has to be solved for Indian women, therefore, is a form of education that might attain this end of developing the faculties of soul and mind in harmony with one another.

“And in this particular respect there is perhaps no other country in the world so fortunately placed as India. She is, above all others, the land of great women. Whenever we turn, whether to history or literature, we are met on every hand by those figures whose strength she mothered and recognised, while she their memory eternally held sacred.

“There can never be any sound education of the Indian woman which does not begin and end in exaltation of the national ideals of womanhood, as embodied in her own history and heroic literature”.

### **Sri Aurobindo (1872-1950):**

Sri Aurobindo's thoughts on education have a philosophical basis, which mingles spiritual framework with pragmatic approach. His thoughts reflect upon the learner's world - from within and without. They direct teacher educators to develop a significant viewpoint towards the pupils. This is necessary to promote lifelong learning and bring about transformation in the pupils.

Sri Aurobindo believes in the evolution of human mind which passes through four stages where he discovers himself/ herself as firstly, a rational individual, an individual with a particular national identity, an individual with international citizenship and an individual who is one with infinity respectively. The education which ensures this process of evolution is integral education that is composed of 5 components as follows:

- a. Physical education – Games and sports, Yoga, Athletics, Free hand exercises, Swimming, First aid training.
- b. Mental Education – Language learning, Competency in Mathematics, Getting test in Social Sciences.
- c. Vital Education: Sense Training, Life and Physical Science, Aesthetics.
- d. Spiritual Education – Reading of the lives of the Great people, Singing Bhajans.
- e. Psychic Education – Meditation.

Some of these thoughts on education with reference to teachers and teacher educators as interpreted by Sri Aurobindo are mentioned below:

- i. “The first principle of true teaching is that nothing can be taught. The teacher is not an instructor or task-master. He is a helper and a guide. His business is to suggest and not to impose.
- ii. Sri Aurobindo focuses also upon the education of the heart apart from the education of the mind. He considers the education of the heart as a necessary aspect of life. The education of the heart is beneficial to the teachers as well as to the pupils. This can bring about meaningful transformation amongst the learners (Vaidya, 1955, p. 21).

From the following utterances of Sri Aurobindo we can have his ideas about Teacher and Teacher education:



“The first principle of true teaching is that nothing can be taught. The teacher is not an instructor or taskmaster; he is a helper and guide. His business is to suggest and not to impose. He does not actually train the pupil's mind, he only shows him how to perfect his instruments of knowledge and helps and encourages him in the process. He does not impart knowledge to him; he shows him how to acquire knowledge for himself. He does not call forth the knowledge that is within; he only shows him where it lies and how it can be habituated to rise to the surface. The distinction that reserves this principle for the teaching of adolescent and adult minds and denies its application to the child is a conservative and unintelligent doctrine. Child or man, boy or girl, there is only one sound principle of good teaching. Difference of age only serves to diminish or increase the amount of help and guidance necessary it does not change its nature” (Aurobindo, 1966, p. 20).

“The discovery that education must be a bringing out of the child's own intellectual and moral capacities to their highest possible value and must be based on the psychology of the child-nature was a step forward towards a more healthy because a more subjective system; but it still fell short because it still regarded him as an object to be handled and moulded by the teacher, to be educated” (Aurobindo, 1972, p. 49).

“In order to awaken the child to the understanding of the relation existing between the two worlds which he discovers almost simultaneously- the inner and the outer- he should be told how to observe carefully what happens in himself” (Pavitra, 2002, p. 31).

“The teacher becomes a guide pointing out how to become an animal, how to become a river, a cloud, an electron or a galaxy. We do not have distinguished over selves as animals, but we have to discover in ourselves that we are animals disguised as men, and at the same time men disguised as animals. We do not have to imagine ourselves being an electron, because we are electrons who imagine themselves building cells, who imagine themselves building a human being” (Artaud, 1996, p. 36).

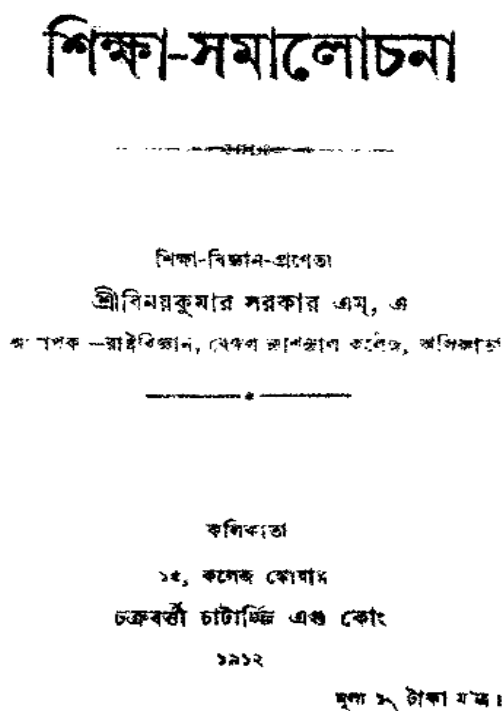
The first result of such a continuous stimulation to identify oneself with a world, in which there is nothing strange, nothing hostile, nothing other or non-self, is that we emerge into a universe where the only possible relations are relation of love. In such a universe even the virus which threatens the life of our physical body, as well as the lions who devour the gazelle, does it out of love. In such a vision there is no place for hatred. The only not – love is indifference, and indifference is the failure to recognise oneself in another (Artaud, 1996, p. 36).

“The first attention of the teacher must be given to the medium and the instruments, and until these are perfected, to multiply subjects of regular instruction is to waste time and energy. When the mental instruments are sufficiently developed to acquire a language easily and swiftly, that is the time to introduce him to many languages, not when he can only partially understand what he is taught and masters it laboriously and imperfectly. Moreover, one who has mastered his own language has one very necessary facility for mastering another. With the linguistic facilities an satisfactory developed in one's own tongue, to master others is impossible to study science with the faculties of observation, judgement, reasoning and comparison only slightly developed is to undertake a useless and thankless labour. So it is with all other subjects” (Aurobindo, 2002, p. 3).

### **Benoy Kumar Sarkar (1887–1949):**

Benoy Kumar Sarkar was a pioneering thinker who was confronting late nineteenth-century modernity and making sense of this complex phenomenon. Sarkar was an speaker who critically engaged theories of modernity presented by those who would later be crowned the founding fathers of Sociology. Sarkar functioned with a cosmopolitan, trans-Asian frame of reference and recognized unifying forces in the space labelled ‘Asia’ despite the diversity and complexity within. He was writing at the turn of the twentieth century, from a non-Western locale,

but deeply and critically engaged with social science concepts, theories, issues and problematic currents in the 'West.' He is exposed as an early critic of European theorizing about Asia, in general, and India, in particular, and offers alternate readings of the same.



**Figure 3. Copy of the First page of 'Siksha- Somalochana'**

In his famous “*Siksha Samalochana*” (A Critique on Education), which was written when he was only 25 years old, Prof. Sarkar presented an expected Indian ideal of teachers and teaching which were utterly relevant during his time. The Critique starts with the following ‘Preamble’ in English:

- I. “General:- Aim and Criterion of Education twofold: the man must be (i) intellectually, a discoverer of truths and a pioneer of learning (ii) morally, an organiser of institutions and a leader of men.
- II. Moral Training to be imparted not through lessons culled from moral and religious text-books, but through arrangements by which the student is actually made to develop habits of self-sacrifice and devotion to the interests of others by undertaking works of philanthropy and social service.
- III. To build up character and determine the aim or mission of life (i) the ‘design,’ plan and personal responsibility of a single guide-philosopher-friend, and (ii) the control of the whole life and career of the student are indispensable. These circumstances provide the pre-condition for true Spiritual Education.

IV. *Educational Institution and Movements must not be made planks in political, industrial, social or religious agitations and propagandas, but controlled and governed by Science of Education based on the rational grounds of Sociology.*

A. *Tutorial-*

I. *Even the most elementary course must have a Multiplicity of subjects with due interrelation and co-ordination. Up to a certain stage the training must be encyclopaedic and as comprehensive as possible.*

II. *The mother-tongue must be the Medium of instruction in all subjects and through all standards. And if in India the provincial languages are really inadequate and poor the educationists must make it a point to develop and enrich them within the shortest possible time by a system of patronage and endowments on the 'protective principle.'*

III. *The sentence, not word, must be the basis of Language-training, whether in Inflexional or Analytical tongues-even in Sanskrit; and the Inductive Method of proceeding from the known to the unknown, concrete to the abstract, facts and phenomena to general principles, is to be the tutorial method in all branches of learning.*

IV. *Two Foreign languages besides English and at least two provincial vernaculars must be made compulsory for all Higher Culture in India.*

C. *Organisational-*

I. *Examinations must be daily. The day's work must be finished and tested during the day. And terms of academic life as well as the system of giving credit should be not by years or months but according to subjects or portions of subjects studied. Steady and constant discipline, both intellectual and moral, are possible only under these conditions.*

II. *The Laboratory and Environment of student-life must be whole world of men and things. The day's routine must therefore provide opportunities for self-sacrifice, devotion, recreations, excursions, etc. as well as pure intellectual work. There should consequently be no long holidays or periodical vacations except when necessitated by pedagogic interests" (Sarkar, 1912).*

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