

# Development and the Management of Knowledge: A Philosophical Appraisal

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To say that economic growth depends on innovations in technological and scientific knowledge is a truism. The major developed economies in the West took advantage of their tradition of knowledge and developed a socio-political system, which favours capitalism that relies heavily on industrialization. The Western world owes to this tradition of knowledge a great deal for their maturing to a group of modern societies with liberal political systems and high standards of living. Most of them are now keen to develop this 'knowledge culture' further as they realize that knowledge and its effective management are vital not only for economic development but also for survival.

This paper attempts to philosophically analyze the nature of knowledge culture in different societies, broadly adopting the east—west division. The nature as well as management of knowledge by societies, institutions and business organizations will be addressed. To understand the dynamics of knowledge creation and the management of knowledge, I have examined how these processes are carried out in business organizations. It is assumed that the development of a knowledge culture is a necessary prerequisite, both for economies and for organizations in a world order that is increasingly becoming globalized, not just economically but also culturally. This culture of globalization poses certain challenges and demands and to tackle them a 'knowledge culture' is essential, which does not merely constitute a set of practices accompanied by a set of mental models that economies and organizations can import ready-made to their existing system of affairs to replace the latter overnight. On the other hand, the knowledge culture has to evolve from the existing models and paradoxically, has to be rooted in the latter. Change and conservation have to go hand in hand to develop a new system. The change becomes meaningful only in the presence of the retained.

To understand this process of developing knowledge culture, this paper examines two models of knowledge management—the Western model and the Japanese model—which have been successful to a great extent in addressing and tackling the problems nations and organizations face encountering developmental issues. Hence the focus is on the management of knowledge. We have to analyse the epistemological features of the different conceptions of knowledge in these two traditions. I will examine the Indian scenario by looking into the philosophical foundations of knowledge and its management, as the situation is peculiar here. India relies on the tradition of knowledge of the West in order to address her developmental concerns, and not her own knowledge systems. The reasons are manifold. The common belief is that, either the indigenous knowledge systems are incompatible with the requirements of modern life due to various factors, or they are incapable of addressing certain issues and concerns that are peculiar to modern life practices. Yet another argument is that, in India the focus of knowledge systems is not on material development, but is exclusively on the spiritual aspects. It is difficult to be 'traditional' in a 'modern' world and spiritual in a material world. Developing a 'knowledge culture' is not as same as being traditional or spiritual. The success of the western societies impresses us and if knowledge is that which makes the difference between development and underdevelopment, then doubts have to be raised against the claims of the eastern world as being the citadel of human civilization, as it is knowledge that differentiates the civilized from the uncivilized.

#### *Alternate Models of Knowledge*

Many recent developments cast doubts on the credibility and authenticity of the western model of development, though the western civilization apparently presents a successful model of development as an immediate result of its advances in science and technology. But this civilization and its imports can be legitimately doubted, as its objectives are highly ambivalent. 'I have no sympathy for the current of European civilization and do not understand its goals, if it has any,'<sup>1</sup> writes Wittgenstein. Even when we acknowledge the success of science with great admiration, it has to be noted that the same scientific and technological advancements are also responsible for endless agonies and miseries created by mass destructive weapons. As observed by Albert Camus, '.... a period which, within fifty

years, uproots, enslaves, or kills seventy million human beings, should only, and forthwith, be condemned.<sup>72</sup> All these call for a rethinking about the ideals of development and progress and subsequently about the very notion of knowledge management. A more comprehensive notion of development is essential, which is truly multidimensional in nature. This should be able to propagate a holistic conception of life, which incorporates the ethical problematic into its fold with a strong ecological conscience. Only then the talk about total and sustainable development will become meaningful. It should more particularly express a deep concern for the vast majority living in developing and underdeveloped societies, who not only fail to get the benefits of scientific advancements, but also are being continuously exploited and betrayed by their richer counterparts. Knowledge has failed to aid or even reach them and the main reason is the separation of knowledge from moral concerns. It is not possible to have a vision of total and sustainable development without establishing strong bonds between the two. Hence it is essential to look for alternatives for the existing models.

Moreover, since the concepts of knowledge and social development are inseparably interrelated, the nature of knowledge culture in civilizations reflects the basic assumptions of the philosophical and ethical outlook of the latter. Unless we cease to separate the means from ends, as Gandhi did, we not only fail to condemn the crimes committed in the name of religion and political ideologies but also fall short of perceiving the valuable role of knowledge in making life qualitatively better. Development is an end to be achieved by ethically legitimate means. In other words, the total development project has to be rooted in a comprehensive ethical outlook, which is not clearly visible in the accepted western models of development.

We have the Japanese model, a very successful non-Western model of development. The Japanese use the knowledge systems of the West, yet remain 'traditional' to the core. The Japanese model sticks to the traditional values when it comes to the approach towards knowledge and has developed a strong and stable economy, from almost total destruction after the Second World War. For them, economic development is the result of a process of continuous learning and innovation, which in turn is the product of a strong knowledge culture. Their system has incorporated the dynamism of knowledge creation, by essentially focusing inward and developing genuine responses to the world. This approach is uniquely Japanese

as the Western approach is predominantly outward looking. The Japanese, though depend on the knowledge systems of the west to design a developmental strategy based on scientific and technological innovations, adopt a unique approach towards them, as far as their apprehension, creation and utilization are concerned. While the West concentrates more on technological innovations to manage knowledge, the Japanese are committed to develop a unique culture of knowledge creation, which emphasizes on the integration of knowledge with life in its totality. It is useful to understand the nature of these two prevailing approaches towards knowledge and its management, before conjecturing about an Indian approach. We may note that the Japanese model could be regarded as more suitable for the Indian scenario, owing to the similar socio-cultural environments and value systems. Yet, even with its concern for values, the Japanese model fails to advocate a philosophy of total and sustainable development, as it also advocates the 'profit maximization' principle of the capitalist model of development. But compared to the western model, the Japanese model is more flexible, as its conceptual foundations permit the incorporation of broader value concepts. In this sense, the Japanese model is half way through the project of total development.

While the Western conception of knowledge and its management are topics which had been deliberated extensively by experts, the Japanese model has not been discussed in a similar fashion until recently. The Japanese approach to knowledge is unique. Knowledge management, write Hirotaka Takeuchi and Ikujiro Nonaka, is heralded today as one of the newest ideas in business management, but in Japan there are no visible signs of the knowledge management boom which has hit the West like lightning.<sup>3</sup> But this does not make the Japanese indifferent to knowledge. The Japanese model is, on the other hand, characterized with a pro-active approach towards knowledge. As Nonaka and Takeuchi put it elsewhere, Japanese companies have become successful because of their skills and expertise at organizational knowledge creation, which consists in the capability of a company to create new knowledge, disseminate it throughout the organization and embody it in products, services, and systems.<sup>4</sup> The Japanese model, adopts a different strategy towards knowledge, which is pro-active and which emphasizes on the primordial role of the creation of new knowledge. In social life the core values help close interaction and informal exchange of knowledge, as Japanese values are built upon the firm foundations

constituted by a strong spiritual tradition and a philosophical outlook that advocates the ultimate oneness of human self with the world. We will examine the philosophical basis of these different traditions.

*The Western Model of Knowledge Management: Philosophical Foundations*

The Western model assumes the Platonic definition of knowledge, where the latter is taken as 'justified true belief'. Consequently, the management practices adopted by the West assume a set of beliefs among which the belief that 'knowledge is explicit' is the prominent one. Historically, there are several factors responsible for the development of the Western economies. The advancements in science and technology—which originated in their culture—enabled them to dominate both nature and people of other societies. Ultimately, the rich tradition of scientific knowledge was responsible for this success. This tradition has its roots in the philosophical enquiries of a group of pre-Socratic thinkers.

This tradition of knowledge had incorporated to it an irresistible tendency to innovate and to continuously generate more knowledge, both by adapting to the changes and by creating new knowledge. Even the very first stage of the history of their knowledge systems—the early Greek Philosophy from Thales to Aristotle—exhibited splendid moments of intellectual rigour. As Karl Popper says, in every generation we find a new philosophy, one new cosmology of staggering originality and depth.<sup>5</sup> According to Popper, the secret of these ancients consisted in their tradition of critical discussion. This tradition lost its entire rigour during the medieval period but got resurrected in the modern age with rapid developments in science and technology and still survives in the West, though in a much diluted form. Knowledge generation is built into the very structure of this tradition.

Again, the Western model of economic growth also incorporates a consistent picture of knowledge management. The new developments in the global commercial activities have created a strong awareness about the value of knowledge and innovation. Though the Western culture started highly disciplined and systematic contemplations on knowledge since the time of Plato, the realization about the essential and vital role of knowledge and its management in development are recent in origin. The generation, creation and appropriate utilization of knowledge are now considered as the

necessary prerequisites of growth and welfare. The recent realizations thus reoriented knowledge management, by positing the concern for creating knowledge culture primordial to all other management practices.

Yet this modern concern is not free from the primary presuppositions of the Western culture regarding knowledge. Only those forms of knowledge, which are explicit, are being addressed and human society and organizations are treated as machines that process information. Combined with the Platonic notion of knowledge as justified belief, this practice leads to the assumption that all knowledge is formal in nature and can be systematized. As Margaret Wheatley argues, following the Platonic idea, the Western management has a set of beliefs like: (1) organizations are machines of information processing, with separate parts and functions (even people can be treated as machines), (2) only material things are real (even invisible things like knowledge are made to assume forms by assigning numbers to them), (3) only numbers are real (a belief which has its origin in the principles of Pythagoras), (4) only the measurable could be managed and (5) technology saves. These beliefs are visible in the behaviour and choices made.<sup>6</sup>

Wheatley sees that these beliefs seriously impede the Western managers from creating the organizations they need. They also hamper the evolution of a knowledge culture in the society. These beliefs are further based on the epistemological dichotomy of subject and object of knowledge and the conception of knowledge separated from both. Knowledge is thus viewed as a separate entity that could be isolated from any possible context where it can appear. It becomes measurable and managed with the help of modern technology in an effective manner, hence the emphasis on technology. A well-equipped information technology (IT) infrastructure is considered as a prerequisite by all knowledge conscious organizations in the West. The major purpose, as pointed above, is to create a knowledge culture, which includes all the major knowledge management activities like the generation, creation, storage, codification, sharing, distribution and utilization of knowledge. It also ensures that crucial knowledge is available in organizations every time, which will be achieved through various technologies like the internet, intranet, data warehousing, data mining, artificial intelligence, groupware, web mapping tools, etc.

Davenport and Prusak suggest various means by which knowledge can be generated by organizations that include acquisition, rental,

research, fusion etc.<sup>7</sup> When organizations acquire another organization, a major purchase of knowledge takes place. Rental of knowledge—includes hiring consultants and research activities—is also essential for advancement. The codification of knowledge can be effectively done by the use of IT. Organizations can create knowledge maps, which inform the management team about the location of knowledge in the organization with appropriate information regarding who knows what.

Many Western organizations are keen to regularly audit their intellectual capital, which in turn gives the investors a clear picture about the potentials of the organization. The recent tendency to assess companies on the basis of their market value in place of assessing them in terms of their assets is a clear indication for how much knowledge is being valued. Market valuation process is based on the investors' trust in an organization, which again is based on the latter's intellectual capital. Davenport and Prusak call for developing organizations into smooth markets of knowledge, where knowledge is being traded between buyers and sellers with the mediation of brokers.<sup>8</sup> Every organization will have people who have knowledge about a certain domain of activity in which the organization is engaged. Again there will be people who want this knowledge in their work. The managers of organizations can perform a creative function of a broker by mediating between these potential 'buyers' and 'sellers'. The emphasis is obviously on the development of a knowledge culture. While discussing about the price system that has to prevail in the knowledge markets, Davenport and Prusak highlight the value of 'reciprocity'—I help you with my knowledge when you need and you help me with yours when I am in need. Hence the efficiency of knowledge markets depends heavily on 'trust'. The authors underline the importance of encouraging sharing of knowledge by means of rewards and other incentives.<sup>9</sup> All these measures aim at inculcating a knowledge environment. Ultimately knowledge management in the Western model encourages the employees in an organization to see themselves, not as mere employees but as creators and distributors of knowledge.

The major obstacle in this attempt to create knowledge culture is not technological but attitudinal. Management thinkers suggest various solutions, but many of them are confined to the realm of technology applications. Peter Senge stresses on the value of encouraging 'generative learning' instead of 'adaptive learning'.<sup>10</sup> Generative learning, according to Senge, requires new ways of

looking at the world and seeing the system that control events. Senge identifies the role of a leader as consisting in creating 'creative tension', by projecting a vision and contrasting it against the current reality. Senge contends that this tension between vision—what we want to be—and current reality—what we are now—prompts generative learning.

But the real problem is not the lack of vision, but the way knowledge is being approached for materializing the vision. Senge praises the Japanese approach that sees the system that controls the events. It is here the Japanese inward looking approach wins over the Western outward looking attitude. They look for the knowledge which is already there—within, but intangible. The Western model searches for the knowledge which lies largely outside and is tangible. It considers the tacit domain of human knowledge as ambiguous and even mysterious and consequently incomprehensible. As mentioned above, the justified belief about knowledge as a structured body, which is essentially explicit is the bottleneck. Davenport and Prusak admit this and argue for accounting the tacit knowledge, when knowledge management strategies are framed. 'Multimedia computing and the hypertext capabilities of intranets' they argue '...have created the possibility of effectively capturing at least some meaningful fraction of an expert's knowledge, making the tacit explicit.'<sup>11</sup> They also highlight the value of narratives in conveying the tacit.

But this evaluation of tacit knowledge is inadequate in a different culture. When the question of knowledge transfer is addressed, Davenport and Prusak themselves admit that '... knowledge transfer methods should suit the organizational (and national) culture. The attempt to impose an American knowledge transfer in Japan may also fail.'<sup>12</sup> This may as well be true in the case of India. But knowledge management initiatives, even if they happen, invariably follow the Western model in our country.

### *Knowledge and Western Epistemology*

As noted above, the very epistemology of Western knowledge systems strongly advocates the explicit nature of knowledge. The 16<sup>th</sup> century epistemological views about knowledge clarify the foundation of all knowledge systems in the West. Descartes, led the way with the notion of an 'absolutely certain and indubitable knowledge' and all his enquiries started with the concept of a mind



—the inner space—to which the entire external world of objects—the outer space—is being presented for comprehension. The inner space resembles a mirror in which the outer space is reflected or represented by means of ideas. This split of inner and outer spaces has given birth to the view of the organization as a mechanism for information processing, where organization processes information from outside world in order to adapt to new circumstances.<sup>13</sup> This representational conception of knowledge identifies knowledge with inner representations, which find articulation in language and hence are objectively accessible to all. Since they are mental representations, they have a definite structure which is the structure of the mind. Immanuel Kant, later clarified that, human mind in general has a common structure, which ultimately strengthened the representational conception of knowledge, which is context-free and which is absolutely objective. Obviously, this knowledge is bound to be explicit. Though later many thinkers, especially some contemporary philosophers, have challenged this classical standpoint, the fact that science relies on the representational conception to a great extent makes it still the most influential framework, atleast outside the philosophical world.

The insistence on tangible nature of knowledge is a direct consequence of the epistemological separation of knowledge from the knower and the known. The empiricist tradition takes this concept of tangibility to its extremes and in Russell and AJ Ayer we see the conception of sense data, what is given by the senses tangibly, as the ultimate source of both meaning and truth, as well as of both understanding and knowledge.<sup>14</sup> Though Russell distinguishes the 'knowledge by acquaintance' from 'knowledge by description', ultimately both fit into the representational conception of knowledge. Richard Rorty, while commenting on the basic presuppositions of European philosophical thinking, shows how this representational conception—the belief that there is a world 'out there' and human language has to conform to its structural features—has generated a set of assumptions that defined and determined what truth, knowledge and reality are. The representational epistemology has also proliferated tools to establish the distinctions between absolutism and relativism, between rationality and irrationality, and between morality and expediency. Rorty calls for replacing them as they are obsolete and clumsy tools.<sup>15</sup>

The representational model also fails to see the role played by historical as well as the socio-cultural factors in the creation,

distribution and assimilation of knowledge. We will see how the Eastern – in this context, the Japanese and the Indian—knowledge traditions and epistemology respond to these aspects. The tools are different in these cultures. We will see this with the examination of the Japanese model of knowledge management explicated by Nonaka and Takeuchi.

### *The Japanese Model of Knowledge Creation*

To understand the Japanese model, we have to understand the value of tacit knowledge. Nonaka and Takeuchi trace the foundation of the Japanese approach towards knowledge in the Japanese intellectual tradition, which has its roots in the teachings of Buddha and Confucius. According to them the oneness of humanity and other, the oneness of body and mind and the oneness of self and other constitute the three major distinctions of Japanese intellectual tradition, compared to the West.<sup>16</sup> The absence of the epistemological split prevents the positing of a representational conception of knowledge and consequently it is not possible to separate knowledge from the knower and isolate it from its context. Hence a large amount of knowledge remains at a tacit level in the mind of the individual knower.

Hence the Western model proves inadequate in the Japanese context and probably in all eastern organizations and societies. The Western approach, apparently conceives every unit of society, including organizations, as a mechanism for information processing. But this may be effective in explaining how organizations function, but it fails to explain the process of innovation and how societies redefine themselves by inventing new internal meanings. Innovation is essentially an internal process, which involves involvement and not separation. This process of innovation can be explained by means of a theory of organizational knowledge creation. The epistemological foundation of this theory distinguishes the tacit level of knowledge from the explicit level. The interaction between these two levels constitutes the process of knowledge conversion, which involves four processes: socialization, externalization, combination and internalization. These four modes of knowledge conversion constitute the very engine of the entire knowledge-creation process.<sup>17</sup>

Out of these four modes, three of them involve tacit knowledge.

Knowledge creation begins with socialization where tacit knowledge is being shared. Socialization is a process where tacit knowledge is directly acquired, by means of sharing experiences. In externalization tacit knowledge becomes explicit, and this is materialised by means of dialogue and collective reflection, with the mediation of metaphors, analogies and concepts. In internalization, explicit knowledge is embodied into tacit knowledge. Experiences are internalized into the tacit knowledge bases in the form of shared mental models or technical know-how.

Nonaka and Takeuchi present their view as a general theory for organizational knowledge creation. Since it takes into account both tacit knowledge and explicit knowledge, the Nonaka-Takeuchi model incorporates a comprehensive knowledge management approach, which will work across different cultures. Ultimately, here also the emphasis is on creating a knowledge culture, an environment for continuous knowledge creation. This model views such an environment as a necessary prerequisite, since tacit knowledge, which constitutes a major part of an organization's knowledge asset, cannot be communicated or passed to others easily. An environment of mutual trust has to be created and the sharing of emotions, feelings and mental models has to be encouraged. In their language;

To effect that sharing, we need a "field" in which individuals can interact with each other through face-to-face dialogues. It is here that they share experiences and synchronize their bodily rhythm. The typical field of interaction is a self-organizing team in which members from various functional departments work together to achieve a common goal.<sup>18</sup>

Our examination of the two models leads us to arrive at certain assumptions about knowledge and its management, both in societies and in organizations. Both models aim at creating a 'knowledge culture, but in different ways. Here cultural differences play a major role. They represent different paradigms of knowledge utilization—how knowledge is converted into competitive edge by organizations. The type of knowledge used is important. But equally important is our approach towards managing it. But ultimately it becomes evident that the Japanese model is more comprehensive compared to the Western model, as it recognizes the value of tacit knowledge and asserts that the intangible is not essentially ambivalent and mysterious. It shows how tacit knowledge is assimilated to the organizational framework and is well distributed. We will now examine the Indian scenario.

*The Indian Scenario and the Dynamics of Knowledge Creation*

The awareness regarding the value of knowledge is present in the Indian culture from the days of the Veda. The ancient Indian society had a meticulously planned knowledge management system, which has its benefits and drawbacks. Today there is a strong urge and political will to create a knowledge culture in the country. The realization that knowledge provides a major competitive edge in economic progress and is the most important factor that makes innovation possible is already present. At the corporate level, many organizations in the country have already strong knowledge management initiatives, though they fail to make visible changes due to various reasons. These initiatives are mostly designed after the practices adopted by western organizations, and get confined mostly to the application of technology and a few HRD activities. Yet many of them have made significant impacts. Here there are valuable lessons to be learned from the Japanese.

The Indian scenario is much similar to the Japanese one, as far as the nature of knowledge and the intellectual traditions are concerned. In India, as in the case of Japan, knowledge is essentially value embedded and cannot be separated from the general ethos of life practices. As in the case of the West and Japan, it is the philosophical tradition in India that highlights the essence of this ethos and presents a comprehensive view of knowledge, by relating it with various other aspects of reality. None of the Indian philosophical schools hold an epistemological conception that fundamentally separates knowledge from the knower and the context. The Yogachara even takes the extreme position which declares that 'identity' (*abheda*) is the condition of knowability.<sup>19</sup> They believe that the apparently external object is the construction of imagination.<sup>20</sup> Vacaspati, though criticises this idealistic position, argues that knowledge manifests an object to the consciousness and hence cannot exist in the absence of the object. Therefore, the knowledge cannot be separated totally from the epistemological unit of knower, known and knowledge.

The realism-idealism debate, with which the western philosophical tradition is rich with, does not occupy a similar space in the Indian tradition. Even while asserting an uncompromising realist outlook, the Nyaya system makes knowledge a property—though an adventitious property—of the soul, which is generated by the object or non-soul. The active involvement of the subject and object is essential to produce knowledge.<sup>21</sup> For the Sankhya system, *Purusa*

—the spiritual category in its metaphysical framework—which is incidentally also the knower, is the foundation of all knowledge. Without *Purusa*, which is pure consciousness, knowledge cannot occur. The advaidic framework, with a notion of pure conscious atman as knower, binds knowledge to the subject intimately.

All these systems, though differ among themselves with regard to many crucial conceptual issues, share certain common attitudes towards knowledge. Discussions on knowledge and the known (reality or world) are invariably related with a domain of values. But in the West, the traditional ideal was to observe the world with detachment in order to arrive at objective knowledge about the latter. But by making the knower - known dichotomy blurred, the Indian conception does not end up in subjectivism. On the other hand, it suggests a comprehensive epistemological framework where the subject and object interact and are not separated. These systems also argue that all knowledge cannot be structured and communicated with the help of a linguistic medium. There is a vast amount of experience, which we cannot share with language. Therefore, a major part of knowledge is tacit in nature and requires different means to share and communicate.

Nonaka and Takeuchi suggest various methods by which this tacit knowledge is converted and communicated. These methods are rooted in the traditional pedagogical practices adopted by the Japanese tradition. Similarly, the Indian tradition had developed indigenous methods to create knowledge. The *Upanishadic* approach is quite unique in this context.

### *The Upanishadic Model of Knowledge Creation*

The *Upanishads* are treatises on knowledge: knowledge creation, sharing and assimilation. All *Upanishads* begin with a *Santi mantra* (as in India all knowledge ultimately aim at *santi* or peace and realization of the ultimate union) and proceed with a dialogue between the teacher and the disciples. Here both of them become the participants in the processes of knowledge creation and sharing.

How this *Upanishadic* model could be developed into a model for knowledge creation or into knowledge paradigm is an issue that requires detailed examination. But it is obvious that re-using a method that the indigenous tradition developed through centuries of experimentation will be far more practical and fruitful than adopting the Western paradigm which heavily relies on technological

innovations to manage knowledge. Since knowledge and the ways it appears—creation, generation etc.—are intimately related with culture, it is necessary to recognize the vast tacit realm of knowledge. Nonaka and Takeuchi talk about the three processes that make possible the conversion of this tacit knowledge. Socialization, externalization and internalization directly deal with the tacit realm. All these three processes highlight the value of direct interaction. This is a prominent feature of the *Upanishadic* knowledge paradigm. Knowledge sharing in the latter takes place by means of a dialogic interaction, which involves not just the written and spoken language but also the whole practices of life. The disciples live with the Guru and together develop these practices.

Knowledge societies presuppose common platforms where people can come together and participate in collective learning and innovating practices. Creation and utilization of knowledge take place in such collective endeavours. To inculcate the dialogue culture of the *Upanishadic* knowledge paradigm is an immediate solution for removing the blocks in knowledge sharing. The Japanese policy makers and managers do something similar by encouraging informal brainstorming sessions, where people come together and contemplate on grand ideas, which will be ultimately translated into actual practices and products.

The *Upanishadic* model strongly advocates dialogue, which presupposes checking of one's own prejudices, openness to what is in store in other perspectives, willingness to be questioned and challenged by alien views and developing a common language of linguistic communication and understanding, so that the end result will be *santi* or peace. At the very outset, dialogue enables one to go beyond the boundaries of one's subjective life and limited perspectives. As Hans-Georg Gadamer puts it, the I-lessness is an essential feature of the being of languages. He continues:

... speaking does not belong in the sphere of the "I" but in the sphere of the "we" ... the spiritual reality of language is that of the *pneuma*, the spirit, which unifies I and Thou... the actuality of speaking consists in the dialogue. But in every dialogue a spirit rules, a bad one or a good one, a spirit of obdurateness and hesitancy or a spirit of communication and of easy exchange between I and Thou.<sup>22</sup>

This explains how the structure of 'question' is implicit in all our experiences. In all conversational contexts, we encounter different perspectives which eventually question us. Dialogue makes this more

explicit. One's openness to other perspectives leads to the admission that one is not the authority on the subject matter and many things are left out for one to know. This opens room for further learning and knowledge generation.

The gist of the *Upanishadic* knowledge paradigm is the dialogic structure. It also refers explicitly to the ethical perspective. The *Upanishadic* framework for knowledge creation is an ethical framework, which addresses all developmental concerns with the view of total development and welfare. The *santi mantra* of *Svetasvataropanisad* emphasizes the importance of the collective exploration of knowledge, which ultimately becomes meaningful only when there is peace. All progress and development should eventually aim at peace, which is the fundamental ethical objective and it has to be attained through the observance of other ethical values like non-violence, detachment and renunciation.<sup>23</sup> The *Isa Upanishad* categorically asserts the importance of detachment and urges to enjoy or consume through renunciation. The idea of a personal proprietary relationship with the objects in the world, the idea that one possesses something, has to be renounced, since everything is enveloped by *Isa*, or God.<sup>24</sup>

This idea of enjoyment with detachment contains a strong ethical message and remains at the foundation of the *Upanishadic* ideal. The concept of development without an ethical concern built into it will be an imbalanced one. It becomes the responsibility of the knowledge paradigms to take into account of all those factors that impede development. With its incorporation of the ethical problematic, the *Upanishadic* paradigm advocates a different concept of innovation and a true idea of sustainable development. The western model, as pointed out earlier, relies heavily on technology, but operates mainly with tangible explicit knowledge. The Japanese acknowledge the vast intangible realm of knowledge, which can be created, generated and shared, with a perfect mix of technological apparatus and 'creation' of knowledge culture, where knowledge creation and sharing take place naturally. The *Upanishadic* model can supplement the Japanese model by incorporating the ethical perspective into the paradigm, so as to promote the evolution of a balanced concept of sustainable development.

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