

Indian Knowledge Systems

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Nature, Philosophy and Character

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I

INDIAN civilization has always attached great value to knowledge — witness its amazingly large body of intellectual texts, the world's largest collection of manuscripts, its attested tradition of texts, thinkers and schools in so many domains of knowledge. In *Śrīmadbhagavad-Gītā*, 4.33,37-38, Lord Kṛṣṇa tells Arjuna that knowledge is the great purifier and liberator of the self. As we had noted in our Panjab University Endowment lecture,¹ India's knowledge tradition is ancient and uninterrupted like the flow of the river Gaṅgā, from the Vedas (Upaniṣads) to Sri Aurobindo, knowledge or *jñāna* has been at the centre of all rational and speculative inquiry in India.²

Three terms are closely connected in all discussions of knowledge — *darśana*, *jñāna* and *vidyā*. *Darśana*, philosophy is the "system," the point of view, which yields/leads to *jñāna*, knowledge. When knowledge gathered about a particular domain is organized and systematized for purposes of, say, reflection and pedagogy, it is called *vidyā*, "discipline." The entire body of organized knowledge is divided into two sets in the *Muṇḍakopaniṣad* — *parā vidyā* and *aparā vidyā* (*Muṇḍakopaniṣad*, I.1.4), knowledge of the ultimate principle, *paramātmā* or *Brahman*, (that is the metaphysical domain) and

1. *Knowledge, Individual and Society in Indian Traditions*, Saini Memorial Foundation Lecture, Panjab University, Chandigarh, 2002 (monograph).
2. Sri Aurobindo says in his letters, "We Indians, born and bred in a country where *jñana* has been stored and accumulated since the race began, bear about in us the inherited gains of many thousands of years. . ." *India's Rebirth*, (1905), p. 14. Talking about his own practice, he says: "[The Mother and myself] do not found ourselves on faith alone, but on a great ground of knowledge which we have been developing and testing all our lives," (1932), *op. cit.*, p. 191.

knowledge that is secondary to the means by which one grasps *akṣara- Brahman*, (knowledge of the worldly domain). Distinction is accordingly made between *jñāna* and *viñāna*, the knowledge of facts of the perceptible world. The first kind of knowledge is observational and is gained by the eyes, etc.; the other is experiential and is gained by the inner self as *draṣṭā*. In one, the whole cognizing self is *bahirmukhī* directed towards and involved in the outer world; in the other, the whole cognizing self is *antarmukhī*, (turned inwards). To acquire the first kind of knowledge, only the sensory apparatus, including the mind, has to be prepared, but to acquire the second kind of knowledge the knower has to go through a process of preparation, *sādhana*, (for knowledge-acquisition). The Jaina thought also makes a distinction between *pratyakṣa jñāna* which is knowledge present to the self (*ātma sāpekṣa*) and *parokṣa jñāna* which is present to the senses and the mind (*indriya-mana sāpekṣa*).

II

In the tradition, knowledge has been constituted, stored and maintained in the framework of the oral culture. According to Bhartṛhari, knowledge is constituted in our inner self. There is the *antarjñātā*, constituted by the input of the senses (*indriya*), processed by the mind (*mana*) and the intellect (*buddhi*), and finally constituted knowledge exists as our transformed, alert self, *citta* (*Vākyapadīya*, I.112-14). Therefore, while both perception and inference are given primacy as epistemologies, *tarka* (argumentation) is also accorded an important place; the Indian mind has not relied completely on mind and senses and has accorded the central role in knowledge formation to meditation and deep reflection, *cintana* and *manana*. Also *śabda-pramāṇa* (verbal testimony) has always enjoyed authority with major systems of thought. Seeing with "mind's eye" is the typical epistemology of Indian thought. The Jaina thinkers, interestingly, define perception as *ātma-pratyakṣa* — what is present to the inner self³ and not as what is present to the senses. To put it in contemporary vocabulary, Indian mind has depended more on hypothetico-deductive methodology than on observational inductive methodology.

Just as knowledge is by and large constituted in the mind, it is also stored in the mind, not outside the mind. This is another requirement of the oral culture. This requirement, we noted earlier,⁴ has determined the structure

3. If empirical observation had been the condition of valid knowledge, the work of Pāṇini and Āryabhaṭṭa, the astronomer, would not have been possible.

4. Please see, "Texts of the Oral Tradition" in Kapil Kapoor, *Language, Linguistics and Literature. The Indian Perspective*, Delhi: Academic Foundation, 1994, pp. 27-30.

and style of the texts. As oral texts, they are constituted to facilitate memorization as they have to be held in the mind and transmitted orally in the *guru-śiṣya* mode. So even the dictionaries, *Amarakoṣa* for example, are metricalized. Other features of speech are also employed both to help memorization and to communicate meaning — thus, for example, Pāṇini employs pitch variation to mark the change of topic in his grammar *Aṣṭādhyāyī*. They are highly structured, are necessarily brief and are composed in abbreviated, sūtraic, mnemonic style — a highly nominalized style with the language replete with technical vocabulary. This meta-language, with its other complex devices of abbreviated expression, such as *anuvṛtti*, reading parts of earlier statements into subsequent statements, adds to the density of the texts.

The oral texts, we said, are highly structured. The Indian mind is acutely taxonomic and the layered structure of the texts reflects the structured analysis of the domain of knowledge. Overt organizers such as *adhikaraṇa* and *prakaraṇa* signify the inter-relationships and the order of treatment of subjects. Such embedding may extend up to four layers. This enables the identification of statements through a four-point reference to their location in the over-all text down to the particular *sātra* and *kārikā* as is the case with the *Ṛgveda*, *Mahābhārata* and *Arthaśāstra*, for example. One notices then that though the texts are oral, they have a high degree of complexity and stability. The complexity of organization and the density of statement are the causes of the need to abbreviate them so that they can be held in the mind along with other texts of all the contending schools in that domain of knowledge.

A different philosophy of knowledge and of cognitive processes informs this mode of orality. Knowledge in this mode is simultaneous, not sequential/linear — as is the case in the scriptal traditions. It is important to note that oral culture is an alternative culture of knowledge and not a default culture, one that is there because writing systems are unknown as is often alleged. Nobody could say this of India where there is evidence of the existence of a script in the ancient Mohenjo-Dāro civilization and where Aśoka's inscriptions (fourth century BC) come in three scripts — Brāhmī, Kharoṣṭhi and proto-Dravid. In the oral culture of knowledge, the scholar has a library in his mind and the speed of information processing is very high, much higher than in the scriptal mode where the information is first transferred to the mind through senses. In this case the mind-memory is loaded with large bodies of data — remember that the mind has a much larger capacity to store data than the hard disk of a modern computer — and there is direct visualization of

data *with the eyes shut*. This explains the puzzling requirement in the scholastic tradition for a scholar to be the master of fourteen disciplines, puzzling — because how can one master so many disciplines? It is not possible in the time consuming, linear mode of written texts that can be of inordinate length. But it certainly appears possible in the mode in which the texts are highly abbreviated⁵ and are capable of being stored in the mind. Orality thus as specific mode of knowledge formation and knowledge storage determines both the structure and the use of the texts.

Of course, the texts have a relatively high degree of opacity. The primary texts at least are not expository — they do not give the history nor do they explain the methodology of constituting knowledge. They simply state the conclusions in categorical, declarative sentences that have a ring of finality about them. Partly this was determined by the needs of brevity but, more importantly, it has something to do with the intellectual system in which the thinker in a given domain worked in a framework in which the academy shared all the earlier texts. He made a new statement only when he made an advance on the tradition. The entire tradition of texts in that domain is interwoven in a later text. Therefore, only minimal explicit statements are made and hence the texts are more or less opaque. It has nothing to do, as is often alleged, with the socio-political gesture of keeping knowledge esoteric and restricted only to a class of people. It was, in fact, the condition for facilitating countrywide academic sharing and continuity of thought. The full explication of the master mind's sūtraic statements belonged to the other part of the scholastic tradition — the commentary tradition, the *ṭikā paramparā*.

These modes of text constitution in fact enabled the maintenance of texts over long stretches of time, much more exact and assured maintenance than is apparently possible when the texts are held *outside* the mind in perishable mediums such as paper, floppy and CD.⁶ The texts were mnemonically composed and could be held in the mind with a little practice. To ensure exact reconstruction of the texts, they were re-analysed and re-arranged in various permutations and memorized by a number of scholars. This ensured

5. Pāṇini's *Aṣṭādhyāyī*, the one complete, rule-bound, explicit grammar of any natural, human language, is composed in only 32,000 syllables arranged in 3997 *sūtras* organized in 1000 *ślokas* of 4-lines each in *anuṣṭubh* metre so that it could be, as it used to be, recited in monotone in one enunciation.

6. Thus, the *Rgveda* has come down intact, with not a sound in dispute, over virtually 5000 years while Shakespeare's plays that were in fact printed in their time have many textual problems in only 500 years.

exact reconstruction of the text any time purely from memory. We are referring to the elaborate and complex *paṭha*-tradition which analysed and re-organized texts in various permutations and combinations which when stored in the mind in different arrangements/combinations ensured accurate reconstruction of the texts even when, and if, all the exteriorized, written versions were to be destroyed. The texts have thus been maintained intact and uncorrupted through intricate techniques of mental storage and oral transference.⁷

Great value has always been attached to knowledge and tremendous intellectual effort has gone into maintaining the texts of knowledge. As we have noted elsewhere⁸ even though the Hindu culture is not bibliolatrous, it has accorded a special status to certain texts, the texts of knowledge, and made them perennial objects of study. The difference, however, is that there has been a complete freedom to interpret and come up with competing interpretations, a freedom that is not always present in other cultures.⁹

But it has not been simple, this successful maintenance of texts. Various processes have been employed in this experience of loss, recovery and renewal. Dynamic communities do not allow their systems of thought to die. As we have described elsewhere,¹⁰ oral cultures have in-built mechanisms for the

7. Max-Müller has noted (in his *India — What Can It Teach Us*, Delhi: Munshiram Manoharlal, Indian Edition, 1991, p. 4) that texts in the oral tradition are maintained in memory. "This may sound startling, but what will sound more startling, and yet is a fact that can be easily ascertained . . . at the present moment, if every MS of the *R̥gveda* was lost, we should be able to recover the whole of it — from the memory of the *Srotriyas* in India. . . Here then we are not dealing with theories, but with facts, which — anybody may verify. The whole of the *R̥gveda*, and a great deal exists at the present moment in the oral tradition. . ." (*India . . .*, *op. cit.*, p. 131). Orality, as a mode of constituting and maintaining knowledge, organizes knowledge in the mind, as against the literate traditions in which knowledge is maintained externally. Max-Müller calls those who have memorized the texts, "living libraries," p. 132.
8. Please see Kapil Kapoor, "Some Reflections on the Interpretation of Texts in the Indian Tradition" in *Structures of Signification*, ed. H.S. Gill, vol. I, Delhi: Wiley Eastern Limited, 1990.
9. Bhartṛhari says: "Monism, Dualism and any number of points of view (*pravāda bahudhā mata*), all equally valid, are often all rooted in and argued from the same proposition," (*Vākyapadīya*, 1.8).
10. See, "Vyāsa Paramparā, Text renewal Mechanisms, Max-Müller and European Scholarship" in *Max-Müller and Contemporary European Scholarship*, Proceedings of the International Seminar Ramakrishna Mission, Kolkatta, 2000, pp. 117-35.

recovery of texts. A culture may, therefore, employ one or any of the following seven text maintenance/renewal mechanisms to keep the thought alive and re-contextualized:

- (i) **Commentary** — Such as Kātyāyana's *Vārttika*, 350 BC; Patañjali's *Mahābhāṣya*, second century BC; *Kāśikā*, seventh century AD Patañjali's *Mahābhāṣya* and Śāṅkara *Bhāṣya*;
- (ii) **Recension** (a critical revision) — Such as *Cāndra Vyākaraṇa*, fourth century AD, a Buddhist recension of *Aṣṭādhyāyī* that interestingly eschews what it believes is its philosophically loaded technical vocabulary; *Jainendra Vayākaraṇa/Śabdānuśāsana*, composed in the fifth century AD by Devanandin or Siddhanandin), and *Aṣṭāvakra Gītā*;
- (iii) **Reduction** (a re-arrangement) — Such as *Rūpamālā* of Vimala Saraswati, *Siddhānta Kaumudī* of Bhaṭṭojīdīkṣita, sixteenth century AD and *Laghusiddhānta Kaumudī*, eighteenth century AD of Varadarāja;
- (iv) **Adaptations** — *Hemaśabdānuśāsana* by Hemacandrācārya, eleventh century AD, an adaptation of Pāṇini's grammar to describe Prākṛt, contemporary spoken Prākṛts or Śāṅkaradeva's Assamese adaptation of Vālmiki *Rāmāyaṇa* and such other adaptations, thirteenth-fourteenth centuries onwards in almost all Indian languages.
- (v) **Translation** — For example, majority of translations of major literary and philosophical texts in almost all the modern Indian languages, fourteenth century or so onwards; Hindī paraphrase of *Aṣṭādhyāyī* by Shri Narayana Misra and English translation of the text with incorporations from *Kāśikā* by Sri S.C. Vasu (1898).
- (vi) **Popular exposition** — The *kathā-pravacana paramparā*, a hoary tradition, has been chiefly instrumental in both the maintenance and renewal of texts of thought.¹¹ The two parallel traditions, the learned and the popular, have been all through and are even today mutually enriching each other and contributing in equal measure to the development of thought through processes of paraphrase, explication, verification, falsification, illustration.

11. This *kathā-pravacana paramparā* continues to be vigorous and alive even today with many distinguished expounders of intellectual texts such as Upaniṣads, Vedānta, *Bhagavad-Gītā* and *Rāmāyaṇa* drawing huge crowds in their live discourses and having millions of devoted followers across the country. Swami Vidyananda Ji and Sri Murari Bapu are just two examples. Their discourses are learned but *sārasa* and in the functional mode laid down by the *Nāṭyaśāstra* make profound thought accessible to the people.

- (vii) **Re-creation** — The *Mahābhārata*, for example, is maintained by the repeated creative use of its themes and episodes, by re-creations, such as those by Bhāsa who wrote a number of plays on epic characters and episodes.

There is (i) the availability of the text, (ii) the ability to understand the text, and (iii) the relevance of the text, all of which are in the scope of maintenance. Of these, in the learned tradition, the commentary, *ṭīkā*, is the most important means as the continuous and cumulative *ṭīkā paramparā*, the commentary tradition, ensured all the three dimensions — availability, comprehensibility and contextual relevance of the texts. The commentary tradition is a cumulative tradition, i.e., a number of commentaries on a given text follow each other in succession with every succeeding commentary taking into account and building on the preceding ones. Almost all the major texts have been cumulatively commented upon.¹² These commentaries take many forms from bare annotation (*pañjikā*) to exhaustive, encyclopedic analysis (*Mahābhāṣya*)¹³ and the purpose is, as Vāmana-Jayāditya say “. . . to bring together and unify the . . . knowledge that lies scattered in the *vr̥ttis*, *bhāṣyas* and all *śāstras*. . . .”

Thus, texts over a period of time (i) grow opaque, and/or (ii) become asymmetrical with the context, and/or (iii) their connection with the tradition of knowledge in that domain becomes incoherent. If the Indian intellectual

12. For example, the commentaries, *ṭīkā*, on Jaimini's *Mīmāṃsāsūtra*: Śābarabhāṣya (first century AD?); Kumārila Bhaṭṭa's *Ślokaṇvṛttika* and *Tantravṛttika* (sixth century/seventh century AD?) commentaries on Śābarabhāṣya; Prabhākara Miśra's commentary on Śābarabhāṣya, *Bṛhātī* (seventh century AD ?); Śālikanātha's commentary on *Bṛhātī*, *R̥juvimalā* (ninth century AD); Pārthasārthy Miśra's *Śāstradīptikā* (fourteenth century AD?); Madhvācārya's *Nyāyamālā* (fourteenth/fifteenth century AD); Appayadīkṣita's *Upakramaparākrama*, Āpodeva's *Mīmāṃsānyāyaprakāśa*, Khaṇḍadeva's *Mīmāṃsā-kaustubha*, Vāgabhaṭa's *Bhaṭacintāmaṇī*, Nārāyaṇa Bhaṭa's *Mānamayodyā* (all seventeenth century); Kṛṣṇayajavana's *Mīmāṃsāparibhāṣā* (eighteenth century AD). The commentary literature is indeed endless; we have mentioned here only those that are most frequently cited and discussed. There are indeed commentaries on these commentaries (which is what makes the tradition “interlaced”) such as the two major *Ślokaṇvṛttika* commentaries *Kāśikā* by Sucharita Miśra and *Nyāyaratnākara* by Parthasarthy Miśra, the *Tantravṛttika* commentaries *Nyāyasudhā* by Someśvara Bhaṭa, *Tauttātīmatatīlaka* by Bhāvadeva Bhaṭa, to mention only two. (For a complete list, please see Ganganatha Jha's Introduction in his translation, *Ślokaṇvṛttika*, 1983 reprint, Delhi: Satguru Publications).
13. Rājasekhara in his *Kāvyamīmāṃsā* (ninth century AD) in chapter 1, lists eight forms of exposition: *vr̥tti*, *paddhati*, *bhāṣya*, *saṃikṣā*, *ṭīkā*, *pañjikā*, *kārikā* and *vṛttika*.

texts have not become “dead” and are still studied in the learned, though now relatively esoteric tradition, it is because the *ṭīkā paramparā* has kept them alive and pertinent. Some of India’s most original minds have been exegete, commentators — from Yāska (ninth century BC), Śabarāsvāmin (first century AD), Kumārila Bhaṭṭa (sixth century AD), Ādi Śaṅkara (seventh century AD), Sri Rāmānuja (eleventh century AD), Madhvācārya (thirteenth century AD), Śāyaṇācārya (fourteenth century AD), Jñāneśvara (fourteenth-fifteenth century AD) right down to “The Great Moderns,” Sri Aurobindo, Mahatma Gandhi, Radhakrishnan, Vinoba Bhave (who all wrote commentaries on the *Bhagavad-Gītā* in the illustrious line of Śaṅkara and Rāmānuja).

Thus, the texts of knowledge have been constituted, maintained and transmitted in the oral framework of Indian history of ideas.

III

Knowledge of different domains over a period of time has been institutionalized as so many disciplines, *vidyā* and crafts, *kalā*.

Indian disciplinary formations include fields as diverse as philosophy, architecture, grammar, mathematics, astronomy, metrics, sociology (*dharmaśāstra*), economy and polity (*arthaśāstra*), ethics (*nītiśāstra*), geography, logic, military science, weaponry, agriculture, mining, trade and commerce, metallurgy, mining, shipbuilding, medicine, poetics, biology and veterinary science. In each of these a continuous and cumulative series of texts continues to be available in spite of widespread loss and historically recorded destruction.

The tradition talks of 18 major *vidyās*, theoretical disciplines, and 64 *kalās*, applied or vocational disciplines, crafts. The 18 *vidyās* are: the four Vedas, the four subsidiary Vedas (*Āyurveda*, medicine, *Dhanurveda*, weaponry, *Gandharvaveda*, music and *Śilpa*, architecture), *Purāṇa*, *Nyāya*, *Mīmāṃsā*, *Dharmaśāstra* and *Vedāṅga*, the six auxiliary sciences, phonetics, grammar, metre, astronomy, ritual and philology — these constituted the 18 sciences in ancient India. As far as the applied sciences are concerned, there are competing enumerations¹⁴ of 64. These “crafts” have a direct bearing on day-to-day life of the people and most of them are still a part of the Indian life. For the craftsmen, the craft is not only their profession, it is also their worship. These

14. By Śrībhāṣavarājendra in *Śivatattvaratnākara*, Vātsyāyana in *Kāmasūtra*, Śrīdharasvāmī in his commentary on *Śrīmadbhāgavata*, 10.45.64 and Śukrācārya in *Śukranīti*.

crafts were taught, are still taught, by a teacher to his disciples, for the learning of a craft requires watching the teacher at work, starting by doing odd, little jobs assigned by the teacher and then the long practice, *abhyāsa*, on one's own. Only after considerable experience the learner refines his art and then may set-up on his own. We can see this even today in Indian dance, music and even automobile-repair, which must now be counted among the crafts. The traditional lists, as the Śrībāsavarājendra's list, enumerate, history, poetry, calligraphy, metrical compositions, dancing, evaluating precious stones, wrestling, cooking, magic, shoe-making, thieving, iron smithery, painting, gardening, carpentry, hair-dressing, hunting, trading, agriculture, animal husbandry, making medicines, leather work, driving, fishing, speech-making among the crafts. Other lists add singing, playing musical instruments, preparing manuscripts, garland-making, dyeing, body-care, use of weapons, making moulds, performing *pūjā*, (daily worship), inlay work, arranging flowers, preparing scents, bangle-making, stitching, making ornaments, making sweets, home-planning, training animals, training birds, coding, making instruments/machines, training memory, physical exercise and yogic practices. It is easy to see their close relationship with ordinary life. It is also easy to see that these crafts are still important means of livelihood. It is also easy to see the realism in the enumeration — gambling and thieving are also recognized as "arts."

It is significant that no opposition is set-up in the Indian tradition between "art" and "craft." The craftsman is held in high esteem as a *sādhaka*, a devotee whose mind attaches with great reverence to his object. His training is a form of *tapa*, a dedication and the primary virtue he has to acquire is concentration, *ekāgratā*.¹⁵

Even for the crafts, which are "practical" disciplines there are basic texts, for example, the popular prosody text, *Piṅgalā*. But it is true in the case of crafts just as it is true in the case of *vidyās* that the knowledge resides in the teacher, the *guru* or the *ustād*, the term a man in the street uses these days. This is the root of the great reverence attached to the *gurus* in the Indian tradition as he is the source and the ultimate authority in the given domain of knowledge. In each discipline, there are Schools; in each School there are thinkers and texts. We illustrate this with reference to Poetics:

15. Therefore, for Ādi Śāṅkara the arrow maker was the paradigm example of a *yogi*.

Table 1: Major schools, thinkers and texts

School	Thinker (s)	Text (s)
Rasa	Bharata	<i>Nāṭyaśāstra</i> (second century BC)
	Dhanika-Dhanañjaya	<i>Daśarūpaka</i> (tenth century AD)
Alaṅkāra	Bhāmaha	<i>Kāvyaalankāra</i> (sixth century AD)
	Daṇḍin	<i>Kāvyaadarśa</i> (seventh century AD)
	Udbhaṭa	<i>Kāvyaalankārasārasaṅgraha</i> (ninth century AD)
	Rudraṭa	<i>Kāvyaalankāra</i> (ninth century AD)
Rīti	Vāmana	<i>Kāvyaalankārasūtra</i> (ninth century AD)
Dhvani	Ānandavardhana	<i>Dhvanyāloka</i> (ninth century AD)
	Abhinavagupta	<i>Abhinavabhāratī</i> (also for <i>rasa</i> theory) (eleventh century AD) and <i>Locana</i> (commentary on <i>Dhvanyāloka</i>) (eleventh century AD)
	Mahimabhaṭṭa	<i>Vyaktiviveka</i> (eleventh century AD)
Vakrokti	Kuntaka	<i>Vakroktijīvita</i> (eleventh century AD)
Guṇa-Doṣa	Daṇḍin	<i>Kāvyaadarśa</i> (listed above)
	Also Bhāmaha	<i>Kāvyaalankāra</i> (listed above)
Aucitya	Kṣemendra	<i>Aucityavicāracarcā</i> (eleventh century AD)

Table 2: Major *saṅgraha* texts

Thinker	Text(s)
Rājaśekhara	<i>Kāvyaṁīmāṃsā</i> (ninth century AD)
Bhojarāja	<i>Sarasvatīkaṇṭhābharaṇa</i> , <i>Śṛṅgāraprakāśa</i> (eleventh century AD)
Mammaṭa	<i>Kāvyaaprakāśa</i> (eleventh century AD)
Viśvanātha	<i>Sāhityadarpaṇa</i> (fourteenth century AD)
Pt. Jagannātha	<i>Rasaṅgādhara</i> (seventeenth century AD)

This is not an exhaustive but a representative list of the texts of poetics. Two kinds of texts are noted in Tables 1 and 2 — primary texts which lay down the foundational principles and *saṅgraha* texts which are a compendium of all Schools in that discipline. In fact, one may talk of three kinds of texts — primary (*śāstra*), compendium (*saṅgraha*) and commentary/expository (*ṭīkā*). Thus Bharata's *Nāṭyaśāstra* is a primary text, Mammaṭa's *Kāvyaaprakāśa* is a compendium text, Abhinavagupta's *Abhinavabhāratī* is a commentary (*ṭīkā*).

These three kinds of texts are available in most disciplines — this is the way knowledge is organized and presented for purposes of pedagogy.

The entire verbal discourse, the large body of learned literature, may be structured as in the *fig.*, 1 provided on next page (Kapoor, 1998, 61).

In the Indian context of orality, literature has been an act of public communication, a performance. The word used for literature, *vāṇmāya*, underlines the orality of all compositions. India has the world's earliest poetry (*R̥gveda*) and the earliest prose (*Brāhmaṇas*) and the largest body of literature ranging from lyrics to philosophy, astronomy, mathematics and myths. This massive body of literature has in turn generated considerable theoretical thinking about verbal discourse. Several typologies were set-up to characterize different discourses, to classify all verbal discourse into a cline of reliability, as discourses of knowledge and to establish a mutual order among them. To begin with, a basic opposition is made between a *śāstra*, a technical composition/treatise to be used for teaching a discipline and *kāvya*, an imaginative composition. As a broad division based on the overall purpose, of education as against entertainment, it is a useful division — philosophical systems which come under *śāstra* are certainly studied differently. There is then another typology, an opposition between *apauruṣeya* and *pauruṣeya*. This separates the Vedic compositions from all the rest. It is a knowledge typology — *apauruṣeya* discourse is non-contingent and its assertions like those of science are not dependent on an individual for their truth. Yet another typology, *śruti-smṛti-kāvya* is based in the sources of knowledge — knowledge contained in the *śruti* has been apprehended directly. These are autonomous compositions. *Smṛti* literally means memory. *Smṛti* texts are products of recall — the knowledge contained in them was already available and it has been put down in an organized manner by some thinker. *Kāvya* texts construct meanings in an individual's understanding. Pāṇini, the grammarian, modifies and extends this typology into a refined five-fold system: *dr̥ṣṭa-prokta-upajñāta-kṛta-vyākhyāna*. The first category corresponds to *apauruṣeya* and *śruti* except that it renders its knowledge still more authentic by replacing the epistemological parameter of "heard," *śruta*, by the stronger epistemology of "seen," *dr̥ṣṭa*. *Prokta* discourse renounces a body of knowledge constituted earlier by someone else. *Upaniṣads*, etc., belong here. *Upajñāta* texts are systematizations of existing knowledge by another known thinker who however is not the source of this knowledge. *Kṛta* literally means "composed" and Pāṇini mentions as examples some imaginative compositions such as *Mahābhārata* and *Yayāti*. Pāṇini adds another new class of literature — the commentary literature,

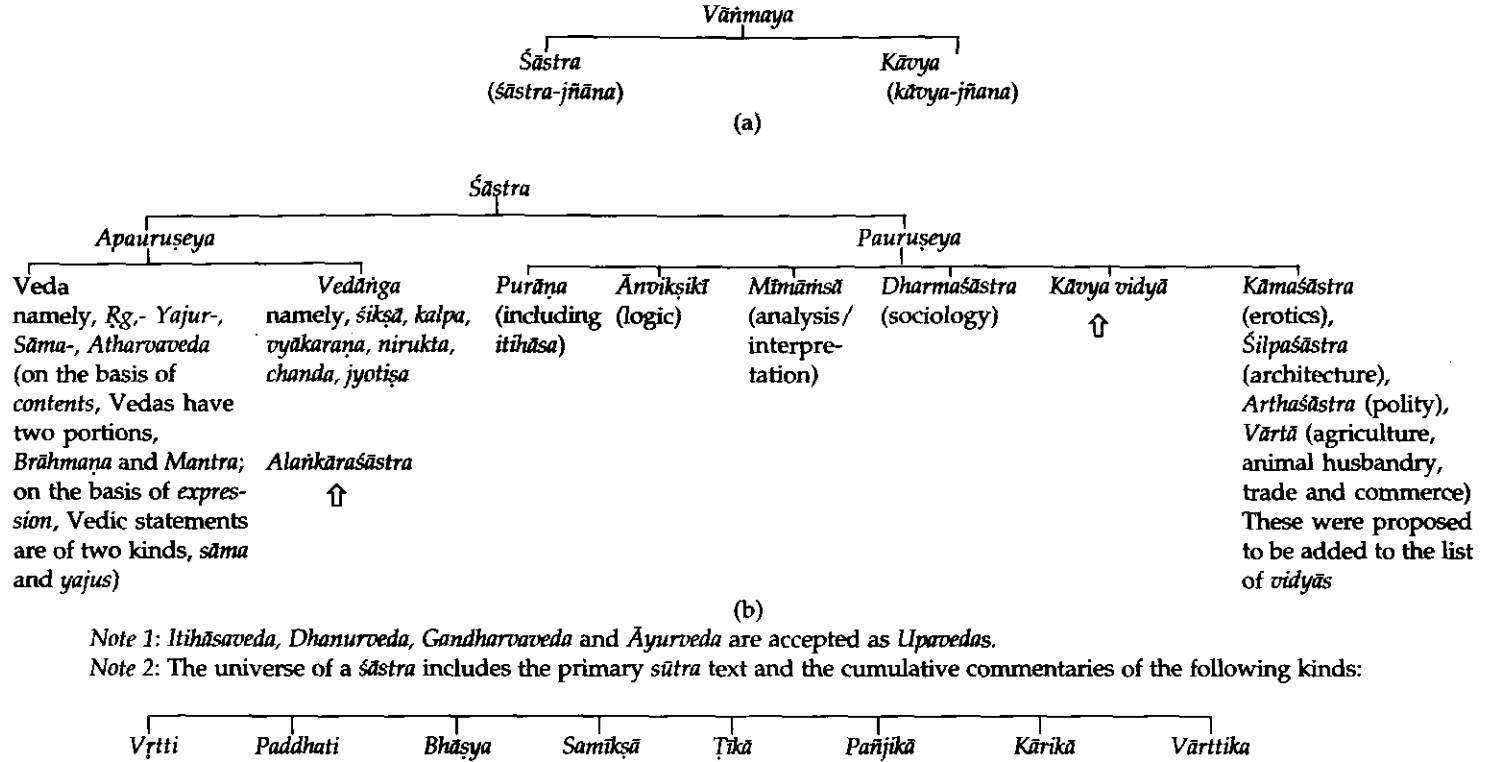


fig. 1

vyākhyāna. Finally, there is available in the tradition a three-fold classification of statements: *prabhu sammita*, *suhṛda sammita*, *kānta sammita*. First, we have statements that have the status of laws — such are the statements of science. Their language and meaning both are inviolate. Statements in *śruti* literature belong to this class. Next, we have the statements whose actual words are not so important as the (intended) meaning. Such are the statements of a well-wisher in which case it is the *bhāva* (the intended meaning) that matters. The assertions of *itihāsa-purāṇa* have that status. Third kind of statements are of imaginative compositions — ideas are fancifully conceived and the language is charming and the statements are not to be weighed for their accuracy or profundity — “I shall pluck stars from the sky and decorate your bodice,” says the young lover. It is the craft or archedness in the suggestion or in the expression or in the idea itself that is of interest.

IV

It is also important to note that there has been uninterrupted reflection on philosophy, nature and character of knowledge in the Indian tradition. Knowledge is not seen as one undifferentiated entity. Depending on what its object is and depending on what effect it has on people, knowledge is classified into sub-sets. Thus, distinction is made between knowledge of the non-perceptible reality, *jñāna* and, what is conventionally understood by “knowledge,” an awareness of facts of the perceptible world, called *vijñāna*. Three-fold distinction is further made between:

- (i) *sāttvika jñāna* of non-difference, of one imperishable principle equally present in all, *akṣara-Brahman*;
- (ii) *rājasika jñāna* of many existences of various kinds as apart from one another, of multiplicity and difference; and
- (iii) *tāmasika jñāna* which clings to one body, to self, as if it were whole and which is irrational, has no real object and is trivial.

Advaita-Vedānta also distinguishes between *nitya* (constant) and *anitya* (variable) knowledge. Knowledge generated by *vṛttis*, powers of the mind, that is senses, in the form of sensory cognitions is *anitya*, variable and is likely to change. But knowledge gained experientially in the self is *nitya*, constant. As we noted in the very beginning, there has been a long and continuous reflection on the question of knowledge in the Indian history of ideas and a number of schools, competing schools of thought, have taken well-defined positions on this question. But the awareness that there are

various kinds of knowledge and that they require different epistemologies runs like a thread through them. We have already said that Advaita-Vedānta makes a distinction between constant (*nitya*) and variable (*anitya*) knowledge and asserts that knowledge exists as a quality of the self as it is the self which is the knower and it is the same self which takes the form of knowledge in the presence of the object of knowledge.

Ādi Śaṅkara talks of *viśuddha jñāna* (purified knowledge) which is isolated from senses and located in the self. He also sets up an opposition between *jñāna* (knowledge) and *karma* (action) saying that action (*karma*) leads only to *sattva-śuddhi* (purification of instrumentalities). Some Advaita thinkers later sought to transcend *jñāna-karma* opposition¹⁶ and talked of *jñāna-karma-samuccaya*, totality of knowledge and action. The Jaina thought also makes a distinction between *pratyakṣa jñāna* which is knowledge present to the self (*ātma sāpekṣa*) and *parokṣa jñāna* which is present to the senses and the mind (*indriya-māna sāpekṣa*). The Nyāya contribution is to postulate validity as a parameter of kinds of knowledge. They distinguish between knowledge based on memory (*smṛti*) and knowledge based on experience (*anubhava*) which is then sub-classified as either *yathārtha* (valid) and *a-yathārtha* (non-valid).¹⁷

Almost all schools discuss the question of "valid knowledge." The Buddhist thinkers talk of two kinds of means of knowledge that generate two different kinds of knowledge — *grahana* produces knowledge of form/appearance while *adhyavasāya* produces the knowledge of attributes. These two categories correspond only roughly to the Nyāya categories of non-determinate (*nirvikalpa*) and determinate (*savikalpa*) knowledge (*jñāna*).¹⁸ *Vijñānavādīs*, the materialist school of Buddhist thought, acknowledges the reality of objects of knowledge saying that "*vijñāna* itself appears like the external object . . . and is sufficient for acknowledging the independent existence of the objects." Mīmāṃsā sets up an opposition between knowledge and action and says that one is entitled to knowledge of the self (*ātma-jñāna*) only after renouncing action (*karma*). At the same time the one desirous of knowledge has to pass through action, as action purifies the cognizing self (*citta-śuddhi*). The Vaiśeṣika system posits mind as the great, necessary but not sufficient instrument of knowledge. It talks of knowledge of external

16. The *Bhagavad-Gītā* too transcends it when it says that all action ends in knowledge (4.33).

17. The question of "valid knowledge" is discussed by almost all schools.

18. Broadly grammarians (*vaiyākaraṇas*) do not accept *nirvikalpa jñāna* and Buddhist schools do not accept the existence of *savikalpa jñāna*.

objects and of internal objects (*sukha, duḥkha*). While different senses are needed for external objects, mind (*mana*) must be the instrument of that inner sense that grasps/experiences internal objects. An important Vaiśeṣika claim is that knowledge is sequential (*kramika*) and not simultaneous (*yugapat*). Thus, a man watching flowers, listening to music and feeling the smoothness of the table experiences sequential grasp and not one that is simultaneous in time. This points to the concept of *ekāgratā* (one point focusing of the mind) as the condition of valid knowledge.

It is the *Bhagavad-Gītā* which then integrates all the insights available in the tradition and then proceeds to organize a philosophy. We have already noted how it argues that *jñāna* (knowledge), *karma* (action) and *bhakti* (devotion) are deeply imbricated with each other and are not really in opposition to each other. While specific references to *jñāna* (knowledge), are dispersed over the whole text,¹⁹ chapter 4 is an intensive meditation on knowledge and its contents are described as *jñāna-yoga*.

The second kind of *jñāna* consists in the ability to discriminate between *sat* (true/right) and *asat* (false/wrong) (BG, 5.16), between *kartavya* (duty) and *akartavya* (non-duty or what one ought not to do) (BG, 4.41). It also consists in the awareness of what is (*tattva jñāna*) (BG, 13.12) and of object (*kṣetra*) and subject (*kṣetrajña*). This knowledge enables self-control (BG, 4.27), stabilizes consciousness (BG, 4.23), destroys the opposition between the self and non-self (BG, 4.23), and carries one like a raft through the rapids of this worldly life (BG, 4.36).

This knowledge variously called *adhyātma-jñāna*, *viśuddha-jñāna*, *nirguṇa-jñāna* or simply *jñāna* (in opposition to *vijñāna*) arises in the individual self and, therefore, each individual constitutes it in/for himself. This explains the intellectual freedom of an average Hindu — he has an autonomous self. This knowledge is for his liberation, his own happiness. Wisdom born of this knowledge kindles his self-control (BG, 4.28). Pursuit of this knowledge becomes a self-discipline, *svādhyāya*, and after obtaining this knowledge, one sees the entire creation first within own self and then in the divinity that suppresses all existence (BG, 4.35). Like blazing fire, it turns all actions to ashes, that is, actions cease to affect the doer (BG, 4.37). There is no purifier as great as knowledge, and it rids the knower of all impurities of thought and deed (BG, 4.38) and all his doubt born of ignorance is torn to shreds (BG, 4.41.42).

19. Apart from 4.10-42, please see 3.32, 39, 41; 5.16, 17; 6.8, 46; 7.2, 16-18; 9.1, 12, 15; 10.4, 11, 38; 13.2.

This is *Bhagavad-Gītā's* *jñāna-yoga* or *jñāna-mārga*, the discipline or path of knowledge.

V

How does one characterize the Indian knowledge tradition?

In Indian thought, there being no imperative of One Given Truth, a plurality of "truths" is allowed. While allowing for the fact that some truth is always there, the Indian thinkers are sceptical about the possibility of accessing or recognizing it. They allow therefore "several/multiple paths" to truth. The great differentia of world-views, of ontologies and epistemologies stems from this foundational principle. There is no requirement, therefore, to conform and the individual is not subjected to the societal or the communal.²⁰ Faced with immense variety and multiplicity so characteristic of Indian geographical and social reality, the Indian mind has concluded that the highest form of knowledge is the knowledge of Oneness of all, *abheda* (of non-difference), of transcending the opposition between the Self and the Other(s). But this *ekatvabuddhi* (synthesizing intellect), is not in opposition to the different points of view — *ekatvabuddhi sarvavada avirodhinī*. Further, the goal of knowledge is not promotion of man's material comfort but the enhancement of mental and physical well-being of all, a position finally and decisively articulated by Lord Buddha in seeking *nirvāṇa* of all the suffering humanity rather than one's own, individual *nirvāṇa*. Knowledge thus has never been divorced from justice. In fact, it has always been imbricated with ethics, with the dominant ethical value of *dharma*. All disciplines of knowledge, *vidyā*, have this social-ethical imperative.

It is significant, we had noted in an earlier study,²¹ that in the Western tradition, "knowledge" has been held as opposed to innocence, and associated with "power" that leads to the Fall of man. What is common throughout the Western history of ideas is the man-centered world-view. In the middle ages, God is the object of study for the sake of man, for his Redemption. Renaissance onwards, focus shifts to Nature as the object of study for the sake of man. It is interesting that a marked adversarial axis has always been obtained between the Western man and his object of study. It is almost as if man is always

20. Thus, after explaining all the issues involved in the need to fight the Mahābhārata war, a presentation of the societal/communal point of view, one may argue, Kṛṣṇa leaves it to Arjuna to take the final decision. See, *Śrīmadbhagavad-Gītā*, 18.63.

21. *Knowledge, Individual and Society in Indian Traditions*, Saini Memorial Foundation Lecture, Panjab University, Chandigarh, 2002, (monograph).

threatened by or is at the least in the presence of an adversary which has to be subdued or neutralized or used in the interest of man. While through the Middle Ages, God entered into this adversarial relationship with man — seeking obedience from him, punishing him, (*Old Testament*, Deuteronomy, 4.10, 43.) now Nature becomes the great adversary and the new knowledge, Science, is put to service to bend Nature to man's purpose. In the nineteenth century it is man or a class of men against man or a class of men in the Class-war Marxist doctrine and now in the twentieth century it is woman against man. The Hebraic man-centered view which subordinates everything to man's comfort is the obvious foundation for this conflict model which informs practically all the Western disciplinary codes — sociological, economic, political and is at the heart of the Darwinian evolutionary thought as well.

Knowledge is an instrument of power in this conflict model, an instrument to handle the "adversary." In the *Old Testament*, we have already noted, man is given "dominion over the fish of the sea, and over the fowl of the air, and over the cattle, and over all the earth. . ." (Genesis, 1.26). The Western man has been granted this dominion and treated it as a matter of his right to maintain and extend this dominion. Therefore, at the Renaissance, the whole project of knowledge is to bend nature to man's purpose, his purpose being to achieve life of comfort, something that has been promised to him by his God as a birthright. This explains the rise of sciences and the retreat of Christian ontology before the advancing empirical science which rendered much of Christian dogma indefensible and led finally to the collapse of faith with drastic intellectual and spiritual consequences for the Western Christendom in the nineteenth century.

"Knowledge" in this paradigm is exteriorized — constituted in the empiricist mode through the senses and stored *outside* the mind in the "texts" that have or acquire societal authority. The individual is its passive recipient and user. Its power consists in the control it exercises over and the conformity it extracts from the individual. And as the Western history shows, this "organized" knowledge has often proved destructive. Its power rests in the authority of "truth" it attains through societal and institutional support. At a given time in the Western history, there has always been a dominant "truth" of the time. This is the consequence of the Hebraic monistic imperative — "man" in the humanist phase, "language" then and "science" now. There is in the Western mind, a monistic imperative — a "truth" at a time. Between the dichotomies, only one is true and has to be cognized and then adhered to.

This imperative is driven by the uncompromising monism of the Hebraic world-view.²² In sum, the goal of knowledge is the gaining and exercise of "power." Its consequence is not always happy — in more fundamental terms, it leads to Fall which is tantamount to loss of freedom. Its categories (particularly metaphysical) are linguistic constructs but they are assigned "value"/"truth" through "legitimation" which in the case of such categories does not/cannot come from experience, but comes instead from outside itself and outside the individual who "knows." Such legitimation comes from some major belief-system, a master narrative, say religion or science or aesthetics or ethics. In this structure, the individual has neither any role nor freedom (to evaluate for himself the validity of these categories of thought) as he is subjected to the societally exercised imposition of "belief."

In the Indian thought system, the function/goal of knowledge is not exercise of power over others but power over one self, *mokṣa*, liberation of the self from its own limitations/constraints. The direction of governing thought is the exact opposite of what pertains in the Western framework. The movement is from the individual to the social/collective — a continuum; not, from the social to individual in a relationship of rupture or tension. It is to be noted that while in the Western framework, knowledge is an exercise of power over the individual, to bind him and to fetter his mind, in the Indian framework, knowledge (*jñāna*), is an instrument of liberation of the individual not from just the superficial, external societal constraints of a collective code, but from the very fundamental, inner, existential constraints of his own mind and self. This is true freedom, the inner freedom. The goal of knowledge in the Indian tradition therefore is so very different — it is to promote the freedom of the individual.

Of course, what constitutes "freedom of the Individual" in our thought has to be clearly understood. Indian knowledge systems, specifically Sāṅkhya, define *mokṣa* as liberation from *duḥkha*; suffering, — suffering here and now. Is this a purely individual salvation at the cost of social well-being? No because the question of knowledge has always been discussed/located in an ethical framework²³ that is accepted by all systems of thought. It is a very widely used conceptual structure and one that again is present in the language of

22. The Post-Modernists argue that there is no one "truth," or truth at all. This is ultimately an argument for plurality and/or nihilism and accords to a greater degree with the Hindu assumption.

23. *Dharma, artha, kāma, mokṣa* (righteousness, material goals, worldly desires and liberation) form all this. The post-modernist return to ethics may be recalled here.

ordinary speakers of almost all Indian languages. It concerns the goals of all human effort — happiness or avoidance of pain/suffering. Two of these ends pertain to worldly pursuits, *artha* and *kāma*, and most of the life, much too often gets restricted to these two. But these ends are bracketed in this framework by two ethical imperatives — *dharma* and *mokṣa*. If these brackets are absent or are removed, life degenerates into a mere worldly pursuit of desires and as such may end in failure and frustration.

But above all this ethical framework establishes the continuum between the individual and the society. For true individual freedom, the only goal has to be *mokṣa*. So the individual seeks/pursues his *mokṣa*. But the instrument or means of *mokṣa* is Knowledge. But what kind of Knowledge? That which promotes *dharma*, which the *Mahābhārata* defines as that which promotes the general welfare of mankind. So the individual has to seek knowledge that promotes, what the *Bhagavad-Gītā* calls, *loka-saṃgraha* (BG, 3.20), the collective well-being. Knowledge informed by *dharma* binds the individual and the society.

Knowledge that is argued to be the means of *dharma* is understandably an altogether different paradigm from that of “knowledge” that is an instrument of power in the Western tradition. “Knowledge” in this tradition is not a synonym for information, is not sensory in its source and is not an instrument either for promoting man’s comfort or for enabling him to exercise power over Nature and men. This “knowledge” is the knowledge of the indeclinable verities, of what it means to be a human being, a good human being, a knowledge that is rooted/sourced in deep meditation on the nature of human condition, a knowledge that seeks to promote “happiness” not comfort and a knowledge that enables man to free himself (from the narrow bounds of his own small self) rather than to limit the freedom of the other.

It is also to be noted that contrary to the popular impression, knowledge in India is not, and has not been, a repository of the few. Along with the learned, scholarly tradition, there has always been a parallel popular tradition of narration and exposition of texts, the *kathā-pravacana paramparā*, which has all through mediated between the learned tradition of the texts of learning and the ordinary masses. Even Ādi Śaṅkarācārya, one of the greatest minds, besides composing numerous intellectual texts was also a *pravacanakāra*, a popular expounder, who travelled through the length and breadth of India addressing village congregations and explaining to them and sharing with

them his understanding of Advaita Vedānta.²⁴ Similarly, Śrī Rāmānujācārya expounded for twelve years in Tamil, the people's language, his Viśiṣṭādvaita philosophy in the village of Melkote near Mysore. There is strong reason to believe that the great, learned commentaries originated in such popular expositions.

This also explains the presence of illustrations and analogies, *upamā* and *dṛṣṭānta*, borrowed from the activities of day-to-day ordinary life of the people — from the universe of ornaments, cooking, family-relationships and obligations. Even in Indian logic, the third step in the five-step syllogism, *udāharaṇam* (a real life example), is the applied example that binds logic and life together “and it is characteristic of India's practical outlook and its practical conception of proof . . .” (Heimann, 1994: 86-87). The two parallel traditions are thus very closely linked with each other — they mutually enrich each other and necessarily contribute in equal measure to the development of thought through processes of paraphrase, explication, verification, falsification, illustration, etc. The effect has been that in India, contrary to the popular propaganda, knowledge is neither a privileged discourse nor a discourse of the privileged. A definite proof that knowledge is not esoterically held and is not a prerogative of the few (elite?) is present in the fact that the learned vocabulary of Indian thought is today a part of the ordinary language of the people. Words such as *jaḍa*, *cetana*, *jīva*, *ātma*, *saṁsāra*, *dhyāna*, *kṣamā*, *dayā*, *maitrī*, *karuṇā*, *aṇu*, *jñāna*, *jñānī*, *citta*, *buddhi*, *pratyakṣa*, are present today as ordinary words in all Indian languages. Not only terms of philosophy, even technical terms, *sañjās*, such as *vṛddhi* and *guṇa* of grammar are high frequency words in the ordinary speech of the speakers of almost all Indian languages. Even the conceptual propositions as maxims are part of the ordinary thinking of the people. It is not just a question of words being present — it is a matter of ideas being still alive. It is also an example of what may be unequivocally termed as the true democratization of thought in India. This democratization makes knowledge a civilizational value in India.

VI

What are the assumptions, models and methods of Indian Knowledge Systems?

24. In a personal conversation with Śrī Śaṅkarācārya of Sharda Peetha, Śṛṅgerī, it was confirmed that in the seventh century apart from the fact that Sanskrit was a very widely understood language, the Indian speech.

The first thing to note is the constructivist dimension of Indian thought. At one time in its intellectual history, from 1000 BC to almost AD 600, the Indian mind, it appears, was deeply involved in empire-building, both of the *terra firma* and of the *terra cognita*. Few cultures can show such wide ranging, structured systems of ideas in almost all spheres of human life as was witnessed in India during this long phase. This system building has left behind a great stock of ideas and has deeply impacted the Indian mind and made it naturally reflective and ideational.

We are also able to isolate some of its founding assumptions, the *drivers*. Indian thought systems support a kind of pagan pluralism and make plurality a ground reality of Indian intellectual life. This contrasts sharply with Hebraic monism and monotheism. A certain synthesizing universalism is closely related to, and facilitated by, this pagan pluralism. It also implies *inclusive* individualism, in which all are included as against the *exclusive* individualism of the nineteenth-century Europe. This also explains why the Indian thought looks upon *bheda buddhi*, (difference), as a form of ignorance, *avidyā* and upon *bheda* (difference), as an epistemological rather than as an ontological category.

Again, the Indian thought rests on cyclicity as against the Western linearity. This means that Indian thought does not operate with the principle of evolution, does not believe that with the passage of time, progress takes place. The direction of human change is towards decay rather than progress suggesting the imperative of constantly struggling for perfection or goodness. This also explains why Indians are so sceptical about the concept of development. Also, the Indian mind operates not with pre-X-post apparatus but with the configurational model.

The Indian knowledge systems show remarkable tolerance for the other, the *pūrva pakṣa*, which is always represented in the tradition of disputation, *vāda paramparā* with great deal of truth and accuracy before it is contested. This tolerance also takes the form of respect for both the earlier and the dissenting thinkers. This also explains why the Indian thinkers, including the most original among them, all disclaim originality. Also it is very clear that they all aim at happiness, not comfort, and enable a harmony between man and man and between man and nature.

Next we note three facts pertaining to methods and models. Indian mind has often searched for a single explanatory construct for multifarious reality and experience — *Brahman* in philosophy, *Śabda-Brahman* in grammar and *rasa* in aesthetic experience. Its dominating model of analysis has been Advaita, a

system that is at the root of European structuralism via Ferdinand de Saussure. Also the knowledge systems have sought and found validation through a strong, attested tradition of disputation. Further Indian systems are empirical and their final authority is *loka*.

Finally the movement of Indian thought has been in a direction opposite to that of the Western thought — it has moved from concrete to abstract, from materialism to idealism, from Cārvāka to Vedānta, from *prekṣaka* to *sahyādaya* in literary thought, and from *dhvani* to *śabda-Brahman* in grammar.

Above all, note the great eclecticism of the Hindu mind — at the end of the second *kāṇḍa* of his *Vākyapadīya*, Bhartṛhari says, "Mind acquires critical acumen by interacting with the other traditions. What does he know, who knows only his own tradition?" A beautiful thought but sadly today, with our systems of knowledge having been marginalized and excluded from the mainstream education, we have to ask — "What does he know who does not know his own tradition?"

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Social Organization of Knowledge in India

Folk and Classical Traditions

A. V. Balasubramanian

It is an interesting and fascinating aspect of knowledge in India that it prevails in diverse ways and is expressed at varied levels. In many areas such as Medicine, Arithmetic, Agriculture, Grammar, Language, Dance, Music and Astrology, to name just a few, there is wide and extensive knowledge both at the level of the classical texts and the folk traditions. Quite commonly, they are referred to as *śāstra* and *loka paramparā* respectively. This is a significant feature of knowledge formation in India and perhaps no major civilization other than the Chinese has this aspect. I would like to illustrate this with examples from a few areas and discuss the implications.

Let us start with Traditional Health.

Indigenous Health Traditions

The Indian sub-continent abounds as it were in a variety and diversity of health traditions. We have with us what is perhaps the longest unbroken health tradition which has not only a stream of practitioners but also a textual and theoretical backing in terms of the Āyurvedic and *siddha* systems of medicine (Balasubramanian & Radhika:1989). They have made their presence felt even outside India, in other parts of Asia such as China, Thailand, Cambodia and Indonesia. However, what is most remarkable about the Indian medical tradition is that it prevails at two different levels, namely the classical system and the folk system. By the classical system, we refer to the codified systems such as *Āyurveda*, *Siddha* and *Ūnānī* traditions. They are characterized by institutionally trained practitioners, a body of texts and highly developed theories to support their practices. As against this, we also have a folk tradition (or what may be termed as the *loka paramparā*) which is an oral tradition

passed on from father to son or mother to daughter (or daughter-in-law) or from guru to śiṣya in tens and thousands of our villages through the ages. These folk traditions are rich and diverse and include several practitioners as the following list illustrates :

- Home remedies and cures for common ailments.
- Hundreds of thousands of folk and tribal practitioners known as — *vaidus*, *nāttu vaidhyars*, *bhagats* who learn through oral traditions and who treat a variety of ailments.
- Knowledge and beliefs regarding foods — *pathyam* and *apathyam*, i.e., foods to be preferred or avoided during specific diseases or conditions such as pregnancy, by lactating mothers, etc.
- Folklore on health (e.g., proverbs relating to health).
- Individuals/families specializing in the treatment of specific diseases, e.g., jaundice, asthma.
- Knowledge of diagnostic procedures.
- Knowledge of preventive measures.
- Knowledge of *ṛtucaryā* or adaptation of food and regimen to suit the seasons.
- Yoga and other physical cultural practices of a preventive and promotive nature.
- Special areas such as bone setting, *viṣa-cikitsā* (treatment for poisons), *pañcakarma* (five purificatory procedures), etc.
- Over 600,000 *dāis* (traditional birth attendants) who perform home deliveries.

The relationship between folk and classical traditions is found to be symbiotic. There is a strong commonality of underlying theory and world-view expressed at the level of — *pañcamahābhūta* — theory of composition of matter, and *tridoṣa* — theory of causation of disease. There is also a striking common ground between the technical terms that are used by the expert practitioners and what is known to the folk practitioners. The technical vocabulary such as *vāta*, *pitta*, *kapha*, *uṣṇa*, *śīta*, *laghu*, *guru*, *guṇa*, *vīrya*, etc., are also very much part of the knowledge of folk practitioners and the households.

It is also interesting to see what the classical texts of *Āyurveda* say about folk tradition. The *Caraka-Saṁhitā* states that — *ouṣadihi nāma rūpabhyām, jañānte hyajapā vane, avipāścaiva gopāśca ye ca anye vanavāsinaha* — "the goat herds,

shepherds, cowherds and other forest dwellers know the drugs by name and form. . ." (*Caraka-Saṃhitā*, *Sūtrasthāna*, Chapter 1, śloka 120-21). Similarly *Suśruta-Saṃhitā* states that — *gopālasthāpasā vyādha ye cānye vana carinaha, mūla jātihi ca tebhya bheṣaja vyakti iṣyate* — one can know about the drugs from the cowherds, *tapasvīs*, hunters, those who live in the forest and those who live by eating roots and tubers (*Suśruta-Saṃhitā*, *Sūtrasthāna*, Chapter 36, śloka 10).

Proverbs in Tamil Literature

Though proverbs by their very nature are part of oral tradition, even amongst the most ancient Tamil literature, there are compilations of proverbs as well as profuse use of proverbs and references to them. The most ancient Tamil grammar *Tolkappiyam* (*Poruladhigaram*, (II part) (Pillai)) assigns a formal status to proverbs. In the *Poruladhigaram* section of this text, we find the definition *Mudumozhi* is that which conveys its intent and meaning being possessed of the qualities of subtlety, brevity, clarity and simplicity. Proverbs carry an enormous amount of knowledge regarding priorities of foods, herbs and treatment — for example a Tamil proverb states that the paste of *haritaki* (*Terminalia chebula*) can be used for swelling of the eyes — this conveys the traditional wisdom that this herb is excellent and wholesome for the eyes. In *Āyurvedic* terms, it is described as *Cakṣuṣyam* that is beneficial to the eyes. Properties of foods are widely reflected in proverbs. A Tamil proverb says — "Sesame for the lean man and horsegram for the stout man." Horsegram is considered as *laṅghantya* and depletes tissues and Sesame is considered *brumhantya* that helps build tissues.

Seasonal Variations

Knowledge regarding changes in our digestive power with the varying seasons, has been well understood in society. As per the *Āyurvedic* view, food is digested by *agni* within us — just as it is cooked by *agni* outside. According to *Āyurveda*, there is a "stimulus-response" relation between the *agni* within us and the outside *agni* — namely the sun. When the *agni* outside is strong (i.e., in summer) the *agni* inside us (our digestion) is weak and vice versa. This is reflected in the way in which our food customs have been adapted to seasonal changes (Radhika & Balasubramanian, 1990). For example during winter, the breakfast taken is more *guru*, i.e., heavy (to digest) than what is consumed in summer; this is in keeping with the greater strength of our inner *agni*, i.e., the power of digestion, in winter. In south India, a variety of sweets are prepared to celebrate *Gokulāṣṭamī*, which is celebrated in a cold month. In contrast *Rāmanavamī* which is celebrated in summer, usually merits only *nīrmoar* (diluted buttermilk) and

pānakam (a ginger-jaggery lemonade)! The effect of various seasons on health has also been noted. For example, in Andhra Pradesh, it is a custom to partake of preparations containing neem flowers and tender neem leaves at the onset of the *Vasanta ṛtu* (Spring season) and to continue taking it during that season. This is indeed a sound practice, since this serves as a corrective measure for *kapha doṣa*, which gets vitiated in this season.

Folk Knowledge Compared With Classical Textual Knowledge

The large number of proverbs in diverse areas such as agriculture or medicine are very important since they constitute a vast body of knowledge being the wisdom of thousands of years of experience. However, what is equally interesting is to know the relative importance or status assigned to such "folklore" in our tradition. While in any given area (such as medicine), there may be a body of experts or learned professionals who have specialised knowledge, knowledge also prevails in other forms more diffuse or scattered among the rest of the people. In Indian tradition, it seems to be a general principle running through all types of learning, that knowledge can and does prevail in various forms and also gets communicated in many ways, with each form serving its own purpose.

For example, songs and literary works are classified in five groups based on how they are formulated and how easy they are to comprehend, namely, as — *Nārikelapākam*, *Ikṣupākam*, *Kadalīpākam*, *Drākṣāpākam* and *Kṣīrapākam*, [Swaminatha Iyer, 1937]. The form most difficult to comprehend is the *Nārikelapākam* — it is like a coconut; to be eaten, the shell must be broken, the fruit grated and then mixed with food. *Ikṣupākam*, is the sugar-cane form — which has to be crushed to extract the juice. Next is the *Kadalīpākam*, the banana form which has to be just peeled to be eaten. Easier still is the *Drākṣāpākam* — grape form which can be eaten without any processing, and the easiest of all is the *Kṣīrapākam* or the milk form which cannot only be easily consumed, but also is a wholesome food for all ages and people in all conditions. In a similar vein in Sanskrit the literary compositions are classified into three groups: *Prabhu-Samhitā*, *Suhyt-Samhitā* and *Kāṇṭha-Samhitā* (Raghavan, 1979). *Prabhu-Samhitā* instructs like a *prabhu* or master who punishes when rules are transgressed (e.g., Instructions such as in the Vedas), *Suhyt-Samhitā* instructs like a friend who advises on what to do and what not to do (e.g., like the *Purāṇas*), and *Kāṇṭha-Samhitā* which instructs like a *kāṇṭha* or one's beloved who advises and cites examples, coaxes or pleads or persuades as

the situation may require to achieve the same end, namely *upadeśa* (e.g., as in *kāvya*).

It is noteworthy that these different formulations or forms of communication are not understood as being part of a hierarchical system where one cannot replace or supercede another or is considered the generally superior form. Each one serves a specific need and may be the most appropriate for a particular context or for a given purpose.

The Nature and Social Organization of Knowledge in the Indian Tradition

In conclusion, we would like to sum up some aspects of the traditional Indian systems of knowledge, specifically theory construction and its relation to popular knowledge. The main feature is that the theories do not employ a great degree of "formalization" in the sense of providing laws or rules that are "absolute" and can be blindly applied outside of, or irrespective of, the context of their formulation. The terms and variables used in the theory and laws are closely related to actual observed phenomena or measured quantities often being their refinements. This does not mean that the theories lack rigour or precision or power. For example, the most rigorous and precise formulations and argumentation in areas such as logic or grammar or metaphysics are carried on in our tradition in *śāstric* Sanskrit, which is but a refinement of the natural Sanskrit language without recourse to any "formal" devices of abstraction. Thus, the laws, theories and its terminology bear a very live and intimate relation to the popular mode of discourse on the subject and the "folk-knowledge" of it.

This points to a very important feature of our Science and Technology namely that its knowledge, theories and principles are not meant to be reposed in a small number of experts, institutions or texts, but are created and shared on a wide scale, even by the ordinary folk who are the day-to-day practitioners of the arts and sciences. In fact, though we have used the term "folk knowledge" to denote knowledge with our people for want of a better term, its connotation is quite different in the modern context. In the modern Western view, "Folklore" is used to denote knowledge that prevails with the common people and gets propagated by oral tradition. This is as against classical or "proper" scientific knowledge which uses its own terminology, theories and abstractions and resides in a different body of people — viz., the experts. But in our tradition, this kind of a sharp qualitative difference does not seem to exist. The "folk" practitioners are also equally the innovators in the frontiers

of their discipline and the theories and technical categories belong to their domain as well. If we consider, for example, a highly developed branch of Indian Science such as medicine, the basic theories at its foundation, such as the *pañcabhūta* theory of matter and the *tridoṣa* theory of causation of disease and its treatment are part of common knowledge of our people and a number of technical terms such as *vāta*, *pitta*, *kapha*, *agni*, *rasa*, *uṣṇa*, *śīta*, *vīrya*, etc., are all part of the vocabulary of our households.

The expert or specialist, seems to play a very different kind of role here, namely that of systematizing the corpus of knowledge. For example, in a discussion about the role of the Grammarian, the famous Grammarian Patañjali says:

He who has the use of a pot goes to a potter's house and says 'make a pot; I have to use it.' But no one similarly goes to a Grammarian and says 'coin words; I shall make use of them.' He thinks of objects and makes use of words denoting them . . . the *loka* (i.e., what prevails in the world as usage) is the authority for the use of words. [Subramanya Sastri, 1944]

— *Paśpaśāhnika* of Patañjali *Mahābhāṣyam*

Thus there is no looking down upon the common folk or the lay practitioners; on the contrary the *śāstra* themselves assert repeatedly that it is in the concrete particular and in their use in a real situation that the truth of the *śāstras* ultimately resides.

A strikingly similar expression is found in the attitude of Tamils towards their own grammar. It is said that the legendary poet, Kamban who composed the Tamil version of the *Rāmāyaṇa* once made use of the word — *nīrthumi* to represent water drop in a verse in the *Rāmāyaṇa* (Chettiar 165-67). He was promptly challenged by his counterpart, the great poet Ottakoothan who pointed out that all the standard lexicons of Tamil only used the word *neerthuli*. Kamban replied that the usage is correct since it is an accepted usage among the people. The story of the life of Kamban goes on to describe an instance where Kamban went for a stroll with Ottakoothan and the Coja King and while they were passing the tenement of the cowherd they heard the old lady of the household use the word *thumi* to describe a drop of buttermilk. Upon this, Kamban triumphantly expressed that his stand was vindicated and this was accepted by Ottakoothan.

Folk Traditions Today

There is every reason to believe that on the ground today, folk traditions are

widespread in all areas in various walks of life and vibrant. There is every indication that they are showing dynamism and continuing to develop. Take for example the case of the resource base of traditional medicine. In the 1980s the Department of Environment of the Government of India initiated an — “All India Coordinated Research Project on Ethnobiology” with the objective of taking up a detailed assessment of the knowledge and use of Natural Resources by the tribal communities of India. The mid-term report of this programme that was published in 1994 indicated that these communities have knowledge of about 9,500 species of plants of which the single largest used category is medicinal plants accounting for over 7,500 species. This should be seen in the light of the fact that in the classical systems of medicine it has been estimated that the total number of medicinal plants referred to in the three major texts of *Āyurveda* is about 900 species. Hence, this is a truly stupendous number by any standard. We should also assess the information in the light of the fact that tribals constitute only about 7 per cent of the total Indian population even though they are perhaps a section of the population that live most closely in communion with nature.

Creativity at the Grass Roots

Several examples can be seen all around of the active use of not only natural products but also the new synthetic products for a variety of purposes. A remarkable instance of the use of an exotic species by the tribal has been documented by Winin Periera (Periera, 2000: 34). In the 1980s the Forest Department had started to introduce the species *Acacia auriculaeformis* in rural areas of Maharashtra. The seeds of these exotic species were first introduced in the area of Warli *ādivāsīs* around 1985. It was observed as early as 1987 that the Warlis have been catching fish by stupefying them with the seeds of *Acacia*. It takes about two years for *Acacia* to flower and fruit and the *ādivāsīs* research has indeed been carried out very quickly. What makes this achievement truly remarkable is that there is no record of the use of seeds of *Acacia* for this purpose as of that time either in modern literature or a traditional use in Australia which is the place of its origin. It is a remarkable testimony to a keen sense of observation and creativity at the grass roots. Many such examples can be given.

Regarding Establishing Links between Folk and Classical Traditions

In recent years there has been a strong revival of interest in traditional knowledge systems particularly in the context of the use of bio-resources.

There has been extensive research and documentation of folk and tribal traditions of bio-resource use in Asia, Africa and Latin America. What makes the Indian situation quite strikingly impressive is that we have not merely extensive and deep folk traditions but also classical textual traditions that bear symbiotic relationship to the folk traditions. This offers outstanding opportunity and possibilities for revival and strengthening of traditional knowledge since a weakened oral tradition can also derive strength and vitality from its classical counterpart. A linkage between the folk and classical can also infuse new life into the theories of classical systems which may have got alienated or cut off to some extent from the mainstream Indian society. This may have happened particularly in the last two centuries during the colonial period where there was a widespread and large scale disruption and disorganization of many of our traditions, societies and institutions. It appears that our society is in the phase of a slow process of regeneration of folk traditions and establishment of linkages between folk and classical traditions. This would certainly prove to be an important step in exploring and developing the current relevance and potential of Indian knowledge systems in varied areas.

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