

Knowledge Generation in Āyurveda: Methodological Aspects

S N Venugopalan Nair* and Darshan Shankar**

(Received 30 April 2015; revised 30 November 2015)

Abstract

The wise consider the entire universe as their preceptor (*Caraka Saṃhitā CS.Vi.14*). Knowledge generation in Āyurveda has followed mainly four types of *siddhānta* (theory) viz. 1. *śarvatantra siddhānta* (the theory which is accepted by all *śāstrā-s*), 2. *pratitantra siddhānta* (the theories not in any other *śāstrā-s*), 3. *adhikaraṇa siddhānta* (from the related topics and theories) and 4. *abhyupagama siddhānta* (unproven and not fully tested theories). These *siddhānta-s* were debated among groups of scientists and students of various schools of thought. The methods of such discourses are guided by 44 rules of logic, 'vādamārga' (*CS. Vi.8.26*) to justify propositions. The Āyurvedic texts are formulated based on the 32 criteria (*Suśruta Saṃhitā; SS.Utta.65*) and 36 criteria by Caraka (*CS.Si.43*) known as *tantra-yukti* in order to ensure rigour. Āyurveda considers knowledge of whole cannot be obtained by knowing its parts.

Key words: Āyurveda, Darśana, Knowledge, Logic, Tantrayukti, Vādamārga.

1. INTRODUCTION

Āyurvedic knowledge has a long history in the country, most part of which is lost due to its being part of old oral tradition. Some of the oral traditions of ancient times, the Vedic brāhmaṇic and the heterodox, have survived, thanks to their sacred nature. What we know as the history of Āyurveda is mainly based on *saṃhitā-s* mainly of Suśruta and Caraka, generally dated to the period between 6th century BC and 2nd century AD. Ācarya Ātreya is the first known author of an Āyurvedic medical treatise, the *Ātreya saṃhitā*. It is believed that Caraka made his *Saṃhitā* largely based on Ātreya's work. What emerges as striking is the methodological rigour that his *Saṃhitā* exhibits. We seek to discuss generation of Āyurvedic knowledge, its logical structure, dialectical procedure.

2. GENERATION OF AYURVEDIC KNOWLEDGE

Caraka says that the entire world is the teacher to the intelligent and foe to the unintelligent. Knowing this well, with proper attention, one should listen even to an unfriendly person. 'Purucōyam lōkasammīta': 'Human being is a microcosm of the physical and biological world' (*CS. Vi.8.14*). All entities in the universe are there in the person and vice versa. Intuitive knowledge is distinct from the methodologically realised knowledge that overcomes the distinction between the knower and the known. It is the perfect knowledge, while all other knowledge is incomplete and imperfect in so far as it does not bring about identification between the subject and the object.

This knowledge was preserved as in the case of any other, initially in the form of oral compositions like *sūtra-s* (aphorisms) in which

* Associate Professor, Trans Disciplinary University, Institute of Trans Disciplinary Health Sciences and Technology, FRLHT, 74/2, Jarakabande Kaval, Post Attur, via Yelahanka, Bangalore 64; Email: venugopalansn@gmail.com

**Vice Chancellor, Trans Disciplinary University, Institute of Trans Disciplinary Health Sciences and Technology, FRLHT.

sets of information are strung out as if along a thread. This is like a thread which holds together beads or flowers in a garland. The knowledge thus preserved is in a condensed form, very precise and free of repetitions, enabling its remembrance and retrieval on demand relatively easy. Subsequently all this was codified and systematised in the form of written texts, namely *saṃhitā*-s (the compendia). Both the modes had followed the poetic genre for the organisation of knowledge. Āyurvedic texts start with a chapter known as *sūtra-sthāna* which explains the fundamental features and principles of the knowledge they embody by way of the philosophy, logic and concepts. The systematised texts of the *saṃhitā* tradition also followed the same style of precision. Naturally at a later stage this necessitated commentaries involving explanations (*bhāṣya*), annotations (*vārtika*) and redactions (*prati-samskaraṇa*). The compilation of pre-existing orally transmitted knowledge had led to generation of new knowledge through empirical observation and theoretical deduction. Caraka mentions about acquisition of empirical knowledge about medicinal plants, from the tribal people (CS.1:120). The codification and systematisation of inherited knowledge had the pressure of pedagogic needs on them. It appears that *saṃhitā*-s were the works of *ācārya*-s who were practitioners and teachers of the *gurukūla* tradition of education under which the pupils stayed with the teacher's family. This tradition of knowledge transmission had given birth to several lineages of teachers and pupils, namely the *guru-śiṣya parampara*-s in different domains of knowledge such as Veda, Yoga, Āyurveda etc. In certain regions this tradition has survived to the present times among certain communities of hereditary association with such domains of knowledge. Caraka underlines the primacy of practical knowledge. Vāgbhaṭa mentions three phases viz., *adhīti* (learning), *bodha* (understanding), *ācaraṇa* (practising) and *pracāraṇa* (propagating) of the knowledge (ASM. 1:28).

In Āyurveda the basic knowledge is the knowledge about the knowable object, *padārtha vijñāna*. The knowledge of the material, its practical context and the observation of results are fundamental to the generation of Āyurvedic knowledge. In Āyurveda, *padārtha vijñāna* is extended into a holistic understanding with theoretical foundations and logical arguments emphasizing practical relevance. *Samhitā*-s of Āyurveda hold this knowledge as eternal (*śāśvata*) and without beginning (*anādi*) because it deals with properties of entities of a universal nature (*svabhāva samsiddha lakṣaṇatvāt*) which has permanent (*bhāva svabhāva nityatvāt*) characters (CS. 30: 27).

3. DIALECTICAL PROCEDURE (*VĀDAMĀRGA*)

As in the case of any other stream of knowledge in traditional India, Āyurveda also had followed *Vādamārga* (dialectical procedures) based on *Nyāya siddhānta* for improving and entrenching and its knowledge (CS. Vi.8: 26). *Vāda mārga*-s are procedures and focal points of the debate used in intellectual discussions of any subjects of importance. Its focal points are given below in table 1.

Table 1. Procedures and Focal Points of Debates used in Intellectual Discussion

<i>Vāda</i>	Debate with reference texts (1. <i>jalpa</i> , 2. <i>vitāṇḍa</i>)
<i>Dravya</i>	About Substances
<i>Guṇa</i>	Physical and biological properties
<i>Karma</i>	Action
<i>Sāmānya</i>	Generality
<i>Viśēṣa</i>	Specificity
<i>Samavāya</i>	Inseparability eg. property and action
<i>Pratijha</i>	Proposition, it is a statement which is to be proved at the end of argument (e.g. man is eternal): A deductive logic
<i>Sthāpana</i>	Proof
<i>Pratisthāpana</i>	Counter proof
<i>Hētu</i>	Cause: (<i>pratyakṣa</i> , <i>anumāna</i> , <i>aīthya</i> , <i>upamāna</i>)

<i>Dr̥ṣṭānta</i>	Example
<i>Upanaya</i>	Leading towards truth
<i>Nigamana</i>	Inference
<i>Uttara</i>	Rejoinder, asserts disparity between cause and effect:
<i>Siddhānta</i>	Theoretical conclusion: (universal as well as specific generalisation)
<i>Śabda</i>	<i>Dr̥ṣṭārtha</i> (observable meaning), <i>Adr̥ṣṭārtha</i> (unobservable meaning), <i>Satya</i> (truth), <i>Anruta</i> (false)
<i>Pratyakṣa</i>	Direct perception : (Mind, sensory experience)
<i>Anumāna</i>	Inference: Logical conclusion based on reason
<i>Ait̥hya</i>	Verbal Testimony: <i>Āptopadēsa</i> , <i>Veda</i> (Pure reason)
<i>Aoupamya</i>	Analogy
<i>Samśaya</i>	Doubt
<i>Prayojana</i>	Purpose
<i>Savyabhicāra</i>	Exceptional statements
<i>Jijñāsā</i>	Enquiry
<i>Vyavasāya</i>	Determination
<i>Arthāpatti</i>	Implied meaning
<i>Sambhava</i>	Origin or source
<i>Anuyojya</i>	Imperfect statement
<i>Ananuyojya</i>	Perfect statement
<i>Anuyoga</i>	Question
<i>Pratyanyoga</i>	Further question
<i>Vākyadoṣa</i>	Flaws of speech: (insufficient, superfluous, meaningless, wrong and contradictory)
<i>Vākyaprasamsā</i>	Excellence of speech
<i>Chhālam</i>	Quibbling
<i>Ahetu</i>	Fallacy (no reason): (of common cause, of doubt, of analogy)
<i>Aītākālam</i>	Delayed in time
<i>Upālabha</i>	Adjoining factors:
<i>Parihāra</i>	Amendment
<i>Pratijñāhāni</i>	Abandonment of proposition
<i>Abhanujā</i>	Acceptance
<i>Hetvantaram</i>	Fallacy of reason
<i>Arthāntaram</i>	Differential meaning, Confusion
<i>Nigraha-sthāna</i>	Defeat or discomfiture: by any of the items of 29-43 also can bring out rejection of the theory proposed

In the process of defining the concept of health, the *siddhānta* (theory) about the *svastha* (healthy individual) the parameters (3 *doṣa*-s, 7 body tissues, mind and *ātma* etc.) are discussed in detail on the basis of *Vādamārgā*-s by the group of scientists on the basis of theoretical and practical understanding of the subject. The health is defined by Suśruta as follows:

“*samadōṣaḥ samāgniśca samadhātu-malakriyāḥ* |

prasannātmēndriya manāḥ svastha ityabhidhīyatē ||

[SS.15/10]

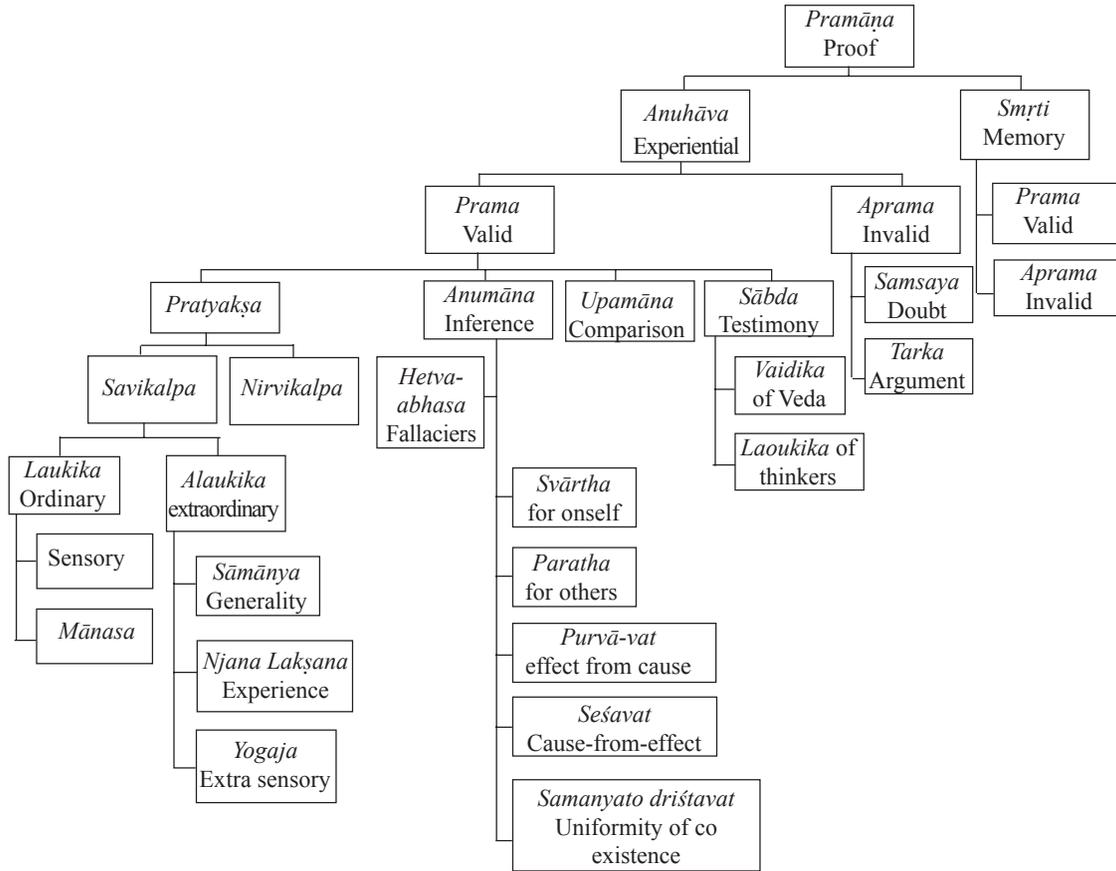
Human being is considered to be completely healthy only when the body constituents namely *tridoṣa*-s (*vāta*, *pitta*, *kapha*), *dhātu*-s (seven body tissues), effluents like three *mala*-s (essential waste products), *pañcendriya* (5 sense organs), *manas* (mind) and *ātma* (soul) are all in equilibrium / contentment stage.

4. LOGIC OF ĀYURVEDIC KNOWLEDGE (*TANTRA-YUKTI*)

It appears that the codification and systematisation of Āyurvedic knowledge into *saṃhitā*-s were influenced by the *ṣaḍ-darśana*-s, the six schools of thought (*Nyāya*, *Vaiśeṣika*, *Sāṅghya*, *Yoga*, *Pūrvamīmāṃsā*, and *Uttaramīmāṃsā*), the exact chronology of which is not known. There is a preponderance of the methods of the *Nyāya* school in the constitution of Āyurvedic knowledge. Its structure and the pattern of the organisation of knowledge is based on the logical constructs of the *Nyāya* thought. Gautama's influence is explicit in the logical procedures adopted in the *saṃhitā*-s by Suśruta and Caraka.

5. LOGICAL REASONING OF NYĀYA (GAUTAMA 600 BC) ON PROOF OF KNOWLEDGE

The term *tantra-yukti* means the logical plan of knowledge constitution. This enables



expansion of knowledge, elucidation of its meaning (semantics) and systematic exposition of its subject matter (thesis). It provides the focal points of logical statements and deductive procedures for the constitution of solid knowledge. One can scan a systematised body of knowledge using the prescriptions of *tantra-yukti* and gauge its intellectual depth, authenticity and applicability. *Samhitā-s* of Āyurveda represent the

constitution of knowledge based on the logical parameters stipulated by *tantra-yukti*. According to Caraka, a person well versed in the postulates of *tantra-yukti* can ascertain the logic of systematised knowledge in any of intellectual domains (*CS.Si. 12.47*). The *saṃhitā-s* of Caraka and Suśruta have the following postulates of *tantra-yukti* as their basic constituents:

Sl	Caraka.Si.41	Suśruta.Utta.65	Meaning
1	<i>Adhikaraṇa</i>	<i>Adhikaraṇa</i>	Subject matter, with authority,
2	<i>Yoga</i>	<i>Yoga</i>	Union, unification
3	<i>Hētvartha</i>	<i>Hētvartha</i>	Extension of argument, logical argument
4	<i>Padārtha</i>	<i>Padārtha</i>	Word meaning / about knowable objects
5	<i>Pradēsa</i>	<i>Pradēsa</i>	Partial enunciation
6	<i>Uddēśa</i>	<i>Uddēśa</i>	Concise statement, objective
7	<i>Nirdēśa</i>	<i>Nirdēśa</i>	Amplification
8	<i>Vākyaśēṣa</i>	<i>Vākyaśēṣa</i>	Supply of missing parts of words or sentences, remainder
9	<i>Prayojana</i>	<i>Prayojana</i>	Objectives

10	<i>Upadēśa</i>	<i>Upadēśa</i>	Authoritative instructions, the scope
11	<i>Apadēśa</i>	<i>Apadēśa</i>	Reasoning a statement
12	<i>Atidēśa</i>	<i>Atidēśa</i>	Indication, extrapolation
13	<i>Arthāpatti</i>	<i>Arthāpatti</i>	Implication, inference
14	<i>Nirṇaya</i>	<i>Nirṇaya</i>	Decision, conclusion
15	<i>Prasanga</i>	<i>Prasanga</i>	Restatement, case illustration
16	<i>Ekānta</i>	<i>Ekānta</i>	Categorical statement, the sole meaning
17	<i>Anekānta</i>	<i>Anekānta</i>	Compromising statement, multimeaning
18	<i>Apavarga</i>	<i>Apavarja</i>	Exceptions
19	<i>Viparyaya</i>	<i>Viparyaya</i>	Reconfirmation with other opposite statement, the contradiction
20	<i>Pūrvapakṣa</i>	<i>Pūrvapakṣa</i>	Amplification of earlier statement, earlier premises
21	<i>Vidhāna</i>	<i>Vidhāna</i>	Correct interpretation, methodology
22	<i>Anumata</i>	<i>Anumata</i>	Confession, consent
23	<i>Vyākhyāna</i>	<i>Vyākhyāna</i>	Explanation, commentary
24	<i>Samśaya</i>	<i>Samśaya</i>	Doubt
25	<i>Atīta-avēkṣaṇa</i>	<i>Atikranta-vēkṣaṇa</i>	Retrospective statement, back reference
26	<i>Anāgata- atīta-avēkṣaṇa</i>	<i>Anāgata- atīta-avēkṣaṇa</i>	reference, foretelling
27	<i>Sva-samjñā</i>	<i>Sva-sanga</i>	Use of technical terms, terminology
28	<i>Ūhya</i>	<i>ūhya</i>	Deduction
29	<i>Samuccaya</i>	<i>Samuccaya</i>	Specification, group statement
30	<i>Nidarśana</i>	<i>Nidarśana</i>	Illustration
31	<i>Nirvācana</i>	<i>Nirvācana</i>	Citation of analogy, definition
32	<i>Samyoga</i>	<i>Niyoga</i>	Injunction, commandment
33	<i>Vikalpa</i>	<i>Vikalpa</i>	Option, alternative
34	<i>Pratyutsāra</i>	-	Rebuttal
35	<i>Uddhāra</i>	-	Reaffirmation
36	<i>Sambhava</i>	-	Possibility

Caraka emphasizes that all biological events are based on cause and effect relationships.

“vikārah prakṛtiścaiva dvayam sarvam samāsatah.

tad hetu-vaśagam hetor abhāvannanu vartate.”

There are three types of causes: 1) *Samavāyi kāraṇa*, 2) *Asamavāyi kāraṇa* 3) *Nimitta kāraṇa*. For example, the relationship with *doṣa* and health or diseases is *Samavāyi kāraṇa*. The relationship with excessive eating which increases *kapha* is *Asamavāyi kāraṇa*, the relationship with other factors increasing the *kapha* while taking the food is *Nimitta kāraṇa*. In another context, the threads that constitute a cloth are *samavāyi*

kāraṇa, the colour of cloth is *Asamavāyi kāraṇa*, and the process of the person or tools for making the cloth is *Nimitta kāraṇa*. The cause and effect is explained in detail in Āyurveda. An external factor or an infection is always considered as a *Nimitta kāraṇa*. According to *Tarka-saṃgraha* of *Annambhaṭṭa* (1876) on establishing causation, explains that *“vyāptiviśiṣṭa pakṣadharmatā jnānam parāmarśah”* this *Pakṣadharmata* is used to establish cause and effect relationship.

6. VALIDATION STRATEGIES

Samhitā-s and other authentic texts of Āyurveda have advocated evidence-based approach to the creation of theoretical knowledge and clinical practice. Therefore, strategies of

experiential validation are central to Āyurvedic knowledge and practice. Proof of knowledge accepted by Āyurvedic *ācārya*-s is four-fold viz., *pramāṇa* viz., *pratyakṣa* (direct sensory perception), *anumāna* (inference), *yukti* (experimental reasoning) and *āptopadēśa* (testimony of the Veda or the final knowledge). The pattern of classification and recognition of the proof of knowledge followed by various schools of thought as seen in the Āyurvedic texts is shown below:

Table 2. Proof of Knowledge followed by Various School of Thoughts

Schools of thought	No. of Pramānas	Pramāna-s accepted
Cārvaka	1	P
Vaiśeṣika	2	P,A
Bauddha	2	P,A
Sāṃkhya	3	P,A,S
Nyāya	4	P,A,S,U
Caraka (Ayu)	4	P,A,S,Y
Suśruta (Ayu)	4	P,A,S,U
Prabhākara		
Mīmāṃsa	5	P,A,S,U,Ar
Bhāṭṭā		
Mimāṃsā	6	P,A,S,U,Ar,Ab
Vēdāntā	6	P,A,S,U,Ar,Ab
Paurānika	8	P,A,S,U,Ar,Ab,Sa,Ai
Tāntrika	9	P,A,S,U,Ar,Ab,Sa,Ai,C

P-Pratyakṣa (direct), **A-Anumāna** (inference), **S-Śabda / āptopadesa** (testimony), **U-Upamāna** (comparison), **Y-Yukti** (empirical), **Ar-Arthāpatti** (implied knowledge), **Ab-Abhāva** (absence), **Sa-Sambhava** (incidence), **Ai-Aitihya** (event), **C-Cheṣṭa** (presentations)

Samhitā-s of both Caraka and Suśruta advocate evidence-based approach to clinical practice. Caraka warns that the drug whose name, form and properties are not known or the drug which though known is not properly used will cause ill effects: (*CS.Sū.1:125*). He also states that, the proper nomenclature, identification and knowledge on its application are the prerequisites for updating the pharmacopoeia. India has a rich

repository of medicinal plants and it is estimated around 6500 species (FRLHT database) and Āyurveda has incorporated more than 1500 species. This nomenclature information was been further updated with additional synonyms given to plant names by the authors of lexicons or *nighaṇṭu*-s in later periods. The source of such knowledge was obtained through (*CS.Sū.1:120*) goatherds, cowherds, and other foresters who are acquainted with names and forms of medicinal plants. The ethno-medical information of medicinal plants is being updated to pharmacopoeia based on “*rasa-pañcaka*” studies carried out by experts. The term *rasa-pañcaka* stands for the pharmacological action of drugs based on Āyurvedic parameters like *Rasa*, *guṇa*, *vīrya*, *vipāka* and *prabhāva*. These parameters are sufficient for an Āyurvedist to understand the action and efficacy of medicinal plants at an *in vivo* level.

Great importance is attached to the Āyurvedic tradition of assessing the safety and efficacy of a medicinal substance in a realistic manner: “*mriyante māṅṣikāḥ prāśya kākāḥ kṣāma svaro bhavet*”. The *Aṣṭāṅga Hrdayam* recommends testing of the toxicity by administering substances to animals. Caraka states that even if the identity of a drug is known and if it is used improperly it may cause ill effects:

“*prayōgo samayēt vyādhim yō anyam anyam udīrayēt,*

nāsau viśuddha śuddhastu samayēt yō na kōpayēt”.

CS.Ni.8:23

A typical definition of a good drug or treatment is not that which achieves its intended target by curing the disease but one that does not cause unintended side effects by creating another disease (*CS.Ni.8:23*). A safe intervention depends upon various factors like condition of the patient, stage of the disease or prognosis of the diseases and other psychosomatic factors during and after at the time of intervention.

Āyurvedic domain of knowledge has potentials to contribute towards 1) *Prakṛti*: genetic classification of human beings and personalized medicine for better health and well-being 2) Disease diagnosis and treatment methods which include *ṣaḍ-kriyakā* (six stages of diseases progression) 3) *Rasāyana* interventions for managing chronic diseases and rejuvenation 4) Role of metals and mineral based medicine (nanoparticle and metallo-proteins) in management of health and diseases 5) Surgical interventions and allied approaches 6) *Pañcakarma* (five purificatory measures) for health and diseases 7) Knowledge of chronobiology which links up with systemic functions and environmental, geographical and seasonal changes. 8) Customized drug design 9) Āyurvedic nutraceuticals for healthy life.

7. THEORY (*SIDDHĀNTA*)

Caraka defines a *siddhānta* (theory) as follows:

*siddhāntam nāma yaḥ parīkṣakair
bahuvidham parīkṣya /*

*hētubhiḥca sādhitvā sthāpayatē nirṇayaḥ
sa siddhāntaḥ //*

CS. Vi.8

The word *siddhānta* is a confirmed judgmental conclusion based on a hypothesis tested using various ways and means with sufficient results. This method is almost equal to that of hypothetico-deductive reasoning, which is central to modern scientific knowledge production. In Ayurveda no *siddhānta* is considered complete and unchanging, which is another basic attribute of scientific approach. There are four types of *siddhānta*-s mentioned in traditional Indian texts of knowledge as listed below: 1) *Sarvatantra siddhānta*, (the theory that is accepted by all *śāstrā*-s) as exemplified by the theory of five fundamental elements (*pañcamahābhūta*), accepted by all in connection with structure of a material; 2) *Pratitantra*

siddhānta (the theory that is not there in any other *śāstrā*-s) exemplified by the theory of the origins of six tastes (*ṣaḍ-rasa*), unique to Āyurvedic works, which explains *dhātu pariṇāma* (transformation of body tissues in a sequential order) in Āyurvedic texts; 3) *Adhikaraṇa siddhānta* (the theory that seeks relation to other theories proved elsewhere) exemplified by the theory of *karma*, which appears in Āyurveda in relation to the definition of *puruṣa* (man), *jani* (birth) and *mṛtyu* (death); 4) *Abhyupagama siddhānta* (unproven and not fully tested theories) exemplified by the theory of topics unknown and undecided;

8. HOLISTIC KNOWLEDGE

Ācāryā-s of Āyurveda consider the world as their great teacher. Suśruta insists on the importance of a philosophical approach and a comprehensive view of the phenomenal world that consists of the inherent nature (*svabhāva*), the supreme consciousness (*īśvara*), the time (*kāla*), the accidental (*yadṛcchā*), the destiny (*niyati*), and the transformation (*pariṇāma*) as the fundamentals of the phenomenal world (SS.1: 8). This implies that mere analytical approach alone will not do to comprehend nature. The knowledge of the whole cannot be acquired from the knowledge of its parts.

*jñānāvayavēna kṛtsnē jñēyē
vijñānamutpadyatē.....*

*ēvamavayavēna jñānasya kṛtsnē jñēyē
jñānamabhimanyamānāḥ pariskhalanti*

CS.Vi.7.4

The knowledge of the whole of the knowable will not come about by knowing merely a limb of it (CS.Vi.7.4). This also means that the whole is more than the sum of its parts. This is true of any of organic wholes that have been defined as systems, the behaviour of which is not determined by that of their individual elements. The individual parts are themselves determined by the intrinsic nature of the whole. There are many such examples in Āyurveda. It is more

evident while explaining the genetic makeup of a person (*prakṛti*), action of compound formulations (*yoga*) and administration of medicine. Caraka, the legendary physician explains “*yōgamāsām tu yō vidyāt dēśakālōpapāditam, puruṣam puruṣam vīkṣya sa jñēyō bhiṣaguttamaiḥ.*” He was very insightful about administering medicines in accordance with their region and the *kāla* and *prakṛti* of each person individually. These imply the consideration of the habitation and the mode of procurement of medicinal plants. Caraka says that the action of a compound formulation varies from the action of its ingredients, i.e., the activity of a whole cannot be fully explained in terms of the activity of the ingredients. The argument is that one should examine the synergic effect of the substance as a whole for better understanding as made explicit in: “*tada yuktē hi samudāyē samudāya prabhava tatvamēva upalabhya dravya vikāra tatvam avyavasyēt*” (CS.Vi.3.12).

9. CONCLUSION

Holistic approach is fundamental to the methodological aspects of the generation of Ayurvedic knowledge. ‘Man as a whole’ is the approach of Āyurveda: “*puruṣōyam lōkasammitā.*” It insists on the primacy of human relationship with the environment. There is need for a unified theory of health and its investigation premises: “*ēṣā parīkṣa nāsti anyathā sarvam parīkṣyatē*” (CS.Sū.11-26). This constitutes the guiding principle of investigation about Ayurvedic knowledge. Its methodology of knowledge generation distinct for the primacy of empirical knowledge (*padārtha-jñāna*), dialectical procedure (*vādamārga*), logical structure (*tantra-yukti*), and theory (*siddhānta*) is drawn from

different schools of Indian thoughts especially the *Nyāya*, *Sāṃkhya* and *Vaiśeṣika* systems. This eclectic approach is integrated by the strong conviction about the ultimate ontological unity between the knower and the known or the subject and the object.

BIBLIOGRAPHY

- Balasubramanian, A.V. *Concept of Health and Disease*, LSPSS-CIKS, Chennai, 1993.
- Caraka Saṃhitā* of Caraka, Shree Gulabkunverba Ayurvedic Society, Jamnagar, 1949.
- Caraka Saṃhitā* of Caraka, Edited and translated by P.V. Sharma, Vol I,II, Chaukambha Orientalia Publications, Varanasi, 1998.
- Kannan, K.S. *The Theoretical Foundations of Ayurveda* (2014), IAIM-FRLHT, Foundation for Revitalisation of Local Health Traditions, Bangalore. 2011.
- Krishnamurthi, K.H. *A Source-book of Indian Medicine*, D.K. Publishers, New Delhi, 1991.
- Manohar, Ram. Evidence and Clinical Research for Ayurveda from India, *European Journal of Integrative Medicine*, Vol. 2.4 (2010): 170-171.
- Mishra, Y.C. *Padārtha Vijñana*. Chaukhambha Sanskrit Bhawan, Varanasi, 2005.
- Nagel, Ernest. *The Structure of Science*, Macmillan India, New Delhi, 1979.
- Radhakrishnan, S. *The Principal Upanishads*, Harper Collins publishers, India, New Delhi, 1994.
- Shankar, Darshan and Unnikrishnan, P.M. *Challenging Indian Medical Heritage*, CEE & Foundation books Pvt. Ltd., 2004.
- Suśruta Saṃhitā* of Suśruta, Edited and translated by P.V. Sharma, 2001 (with English translation of text and Dalhana’s commentary along with critical notes) Vol I,II,III, Haridas Ayurveda series-9, Chaukambha Visvabharati publications, Varanasi.