Methods of Research in Vedas

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SUMMARY

Essentially methods of research are same as in modern sciences, but are more complete in context of Vedas. However, most research in modern era as by British rulers whose only aim was to destroy Vedic cultures as declared in all books and Boden Chair in Oxford in 1831. Thus, they try to find contradictions and fallacy instead of general rule of harmony. In science, research starts with a hypothesis which generalizes our experience and tests it by experiment and form a mathematical model. In case of error, we correct the model and again test it by experiments. In Vedic 'research' reverse model is followed. Firstly, all texts of Vedas, Purāṇas and other related texts of science are assumed to be false and without reading details, their interpretations start to suit a particular conclusion that these are false or foolish and imported by invading Aryans. Indian method also seeks harmony at much higher level. Then it is combination of Vidyā and Avidyā. Avidyā is classification in 5 stages. Then, the knowledge is united with harmony called Vidyā. Avidyā is generally thought lack of knowledge, but it is Aaparā-vidya (= collection of separate classes). These are also called Jñāna and Vijñāna (science). There are different schemes of classification in Brahma-sūtra, Bhāgavata, Vedas, Upaniṣad etc described here.

(1) Destruction of vedic culture by british rule-(1) mass burning of books/universities

Systematic burning of libraries by all invaders starting with Alexander attack on libraries of world-Alexandria in Ezypt, Takshashila in India. This became intense after Islamic attack on Sindh in 712 AD. Most libraries of Nalanda, Ujjain etc were completely burnt. During British period, most manuscripts in private possessions were burnt. A single missionary burnt 6000 books on Ayurveda in Kerala. Many manuscripts were taken away to libraries in Berlin and Oxford and published with help of Indian scholars but their names were omitted and names of Weber, Maxmuller etc only was kept.

(2) Destruction by false translations

It was declared purpose of Boden Chair set up at Oxford in 1831 to uproot the Vedic culture so that Christianity and British rule can control India permanently. This has been clearly indicated purpose of all authors Muir, Macdonnel, Weber, Roth, Maxmuller etc in preface of their books. Prior to that, Oriental Institutes at Kolkata and at Pune had the same purpose. William Jones and Pargiter deliberately obliterated references to all kings who started any calendar so that India history can be shown as later copy of Ezyptian and Greek civilizations.

(3) Persecution of Indian authors

Indian institute of Historical research was started only to start a criminal case against Indian History written by Sundarlal. The case continued from 1920 to 1982 till death of author, but none of the Marxist authors in British tradition could find any fault in his book. However, any comment on baseless works of these authors starts furor on intellectual freedom.

(4) Destruction of calendar and scientific knowledge

It was openly declared that there was no scientific tradition in India and any reference to that is opposed and authors are humiliated as backward. Even persons having done highest research in modern science tend to forget basic minimum knowledge of primary students. E.g. J V Narlikar and Rastogi write in their history of astronomy that eclipse was calculated by priests in India by sacrifice of goats. They do not know meaning of priest, scientist, yajña or method of measurement and calculation. When I asked them to repeat this experiment, they started abusing. Even in Vedic literature, Śruti was translated to mean that there was no script in that era. Without script or language, there cannot be 288 varieties of sounds in vedic texts, nor there can be measurement of 7 lokas in space.

(5) Contradiction between texts

Indian method of learning is continuity and harmony of different branches of learning. It is subject oriented, men are only incidental. This can be called Aditi = continuous space, creation, people etc (Ṛgveda 1/189/10). Opposite is Diti = to cut. This is Asura tradition in which each Prophet declares all others sects as false and discards all earlier prophets. Deva tradition supports each other's yajña-

यज्ञेन यज्ञमयजन्त देवास्तानि धर्माणि प्रथमान्यासन् ।

ते ह नाकं महिमानः सचन्त यत्र पूर्वे साध्याः सन्ति देवाः ॥ (पुरुष-सूक्त, यजुर्वेद ३१/१६)

In that tradition Britishers opposed every Indian text or interpreted in derogatory manner after false show of praise. Those who fought were also trapped in same game. For 200 years people were busy only in proving that there was a script in Vedic period and forgot many varieties of varṇa, akṣara, śabda, pada, vākya (letter, syllables, words, clause. Sentence). Then there was dispute between Vedic and non Vedic Jain-Bauddha, Veda-purāṇa, and finally between Mantra-Brāhmaṇ a parts of Veda itself. This has completely destroyed the knowledge.

(6) Destruction of chronology:

Calendar making kings and calendars are denied and frequent attempts are being made by semi-literates to correct Indian calendar. In whole world history such illiterates were nowhere born who could not start their calendar. So called Rashtriya Shaka Samvat is neither of the three-not used by anybody in country, neither Shaka nor samvat. Members of National Committee on Calendar Reforms in 1957 didn't know meaning of two types of calendars-Shaka & Samvat. This should be based on texts of astronomy, but even dates of astronomers like Varāhamihira are calculated in Śālivāhana shaka which started 89 years after his death.

2. MODERN MEANING OF SCIENCE AND METHODS

Science is a systematic and logical approach to discovering how things in the universe work. It is also the body of knowledge accumulated through the discoveries about all the things in the universe.

The scientific method has four steps

1. Observation and description of a phenomenon or group of phenomena.
2. Formulation of a hypothesis to explain the phenomena. In physics, the hypothesis often takes the form of a causal mechanism or a mathematical relation.
3. Use of the hypothesis to predict the existence of other phenomena, or to predict quantitatively the results of new observations.
4. Performance of experimental tests of the predictions by several independent experimenters and properly performed experiments.

3. STRUCTURE OF KNOWLEDGE IN VEDAS-(1) COMBINATION OF VIDYĀ-AVIDYĀ

This is also called Jñān-vijñāna. Vidyā is unification or interlink of knowledge. Avidyā (Aparā-Vidyā = other forms) is classification at different levels. This is also definition of science as classified knowledge. Some quotes are-

ज्ञानं तेऽहं स विज्ञानमिदं वक्ष्यामशेषतः। यज्ज्ञात्वा नेह भूयोऽन्यज्ज्ञातव्यमवशिष्यते॥ (गीता ७/२)

=I (Bhagavān) am telling you (Arjuna) complete Jñāna with Vijñāna after knowing which nothing remains to be known.

इदं तु ते गुह्यतमं प्रवक्ष्याम्यनसूयवे। ज्ञानं विज्ञान-सहितं यज्ज्ञात्वा मोक्ष्यसेऽशुभात्॥ (गीता ९/१) = I am telling you most basic Jñāna with Vijñāna by knowing which you will be free of all adversity.

मोक्षे धीर्ज्ञानमन्यत्र विज्ञानं शिल्पशास्त्रयोः। (अमरकोष १/४/६)

= Intellect in Mokṣa (unification) is Jñāna, Technology is Vijñāna.

ॐ ब्रह्मा देवानां प्रथमं सम्बभूव विश्वस्य कर्ता भुवनस्य गोप्ता।

स ब्रह्मविद्यां सर्वविद्या-प्रतिष्ठामथर्वाय ज्येष्ठ-पुत्राय प्राह॥१॥

अथर्वणे यं प्रवदेत ब्रह्माथर्वा तां पुरोवाचाङ्गिरे ब्रह्मविद्याम्।

स भारद्वाजाय सत्यवहाय प्राह भारद्वाजोऽङ्गिरसे परावराम्।२॥

शौनको ह वै महाशालोऽङ्गिरसं विधिवदुपसन्नः पप्रच्छ। कस्मिन्नु भगवो विज्ञाते सर्वमिदं विज्ञानं भवतीति॥३॥

तस्मै होवाच-द्वे विद्ये वेदितव्ये इति ह स्म यद् ब्रह्मविदो वदन्ति परा चैवापरा च॥४॥

तत्रापरा ऋग्वेदो यजुर्वेदः सामवेदोऽथर्ववेदः शिक्षा कल्पो व्याकरणं निरुक्तं छन्दो ज्योतिषमिति। अथ परा यया तदक्षरमधिगम्यते॥५॥ (मुण्डकोपनिषद् १/१)

= Brahmā was first among Devas and founder of world order who taught Brahma-vidyā as foundation of all knowledge to his eldest son Atharvā (1). This was passed on by Atharvā to Angi, then to Bharadvāja Satyavahā and then to Angirā (2). Śaunaka in his Mahā-śālā (Supreme institute) formally asked Angirā-What is to be learnt after which all this becomes Vijñāna? (3) He (Angirā) told-Knowers of Brahma tell two types of Vidyā (learning)-Parā and Aparā. (4) There, Aparā branches into Ṛk, Yaju, Sāma, Atharva Vedas and Śikṣā, Kalpa, Vyākaraṇa, Nirukta, Chhanda, Jyotiṣa. From Parā, Akṣara (unity) is realized.

अन्धं तमः प्रविशन्ति येऽविद्यामुपासते। ततो भूय इव ते तमो य उ विद्यायाँ रताः॥९॥

अन्यदेवाहुर्विद्ययाऽन्यदाहुरविद्यया। इति शुश्रुम धीराणां ये नस्तद्विचचक्षिरे॥१०॥

विद्यां चाविद्यां च यस्तद्वेदोभयं सह। अविद्यया मृत्युं तीर्त्वा विद्ययामृतमश्नुते॥११॥

(ईशावास्योपनिषद् ९-११, वाजसनेयि संहिता ४०/१३-१५, काण्व संहिता ४०/९-११)

= Those who learn Avidya only, go into dark (unaware of other branches). Persons learning Vidyā only, remain in greater darkness as they don't know any branch (9). Some tell; it is by Vidyā, some say by Avidyā-thus we have heard from Dhīra who have delved into this (10). We need both together; by Avidya, we cross Mṛ tyu (remain alive), by Vidyā, we realize Amṛ ta (eternal). (11).

(2) Dhī-Yoga-Dhi = intellect, which holds and retains learning. धीङ् आधारे-पाणिनीय धातुपाठ ४/२६)-Dhīṅ = being foundation, to hold. Yoga = joining. Dhi = joining world with mind, understanding. This is third part of Gāyatrī mantra, called foundation of Vedas-

धीयोग-धियो यो नः प्रचोदयात् (गायत्री मन्त्र तृतीय पाद) = Yat (Brahma, यत् तत् पदमनुत्तमम्-विष्णु सहस्रनाम), नः = our, प्रचोदयात् = in-spires. नुद् = outward pressure, चुद् = inner effect.

Explained in Ṛ gveda-यस्माद् ऋते न सिध्यति यज्ञो विपश्चितश्चन। स धीनां योग सिन्वति। (ऋक् १/१८/७)
= Without meditation in Great Being (Brahmaṇ aspati) yajña of learned also is not fulfilled. Brahma inspires intellect (Dhī) by link with him. Here, Yajña is of two types-Jñāna yajña = Continuation of knowledge by chain of Guru-disciple, Svādhyāya Yajña = self study.

आत्मसंयम योगाग्नौ जुह्वति ज्ञानदीपिते। (२७) स्वाध्याय ज्ञानयज्ञाश्च यतयः संशितव्रताः। (२८)-गीता अध्याय ४

Vipaśchit = Person able to see Vikalpa = alternative, learned.
यामिमां पुष्पितां वाचं प्रवदन्त्यविपश्चितः। वेदवादरताः पार्थ नान्यदस्तीति वादिन॥ (गीता, २/४२)

= A-vipaśchit i.e. person able to see alternate thought (fool) give discourse in flowery language (big words without real meaning). Engaged in single Vāda (sect) of Veda, they tell that there is nothing else (na-anyat-asti). Persons telling this are Nāstika (anti to Vedas)

4. Types of Classification- (1) Major types-Bhāgavata purāṇ a tells-
नवैकादश पञ्च त्रीन् भावान् भूतेषु येन वै। ईक्षेताथैकमप्येषु तज्ज्ञानं मम निश्चितम्॥१४॥

एतदेव हि विज्ञानं न तथैकेन येन यत्। स्थित्युत्पत्ति लयान् पश्येद् भावानां त्रिगुणात्मकम्॥१५॥

(भागवत पुराण ११/१९/१४-१५)

= Classification in 9, 11, 5, 3 parts is Vijñāna, seeing their unity from one root source is Jñāna. (9 Dravya in Nyāya-Vaiśeṣ ika, 11 higher elements in Pratyabhijñā darśana, 5 skandha in Bauddha philosophy or Pañchāstikāya in Jain view, 3 Guṇ as in Sānkhya).
Root Atharva veda, opening line tells 3x7 classification of world-
अथर्वा ऋषिः, वाचस्पतिर्देवता। अनुष्टुप् छन्दः।

ये त्रिषप्ताः परियन्ति विश्वा रूपाणि बिभ्रतः। वाचस्पतिर्बला तेषां तन्वो अद्य दधातु मे॥ (अथर्व, शौनक संहिता, १/१)

= These 3 sevens cover the world and take all forms. Vāchaspati (lord of Vāk = field of sun or of galaxy) may place their balas (energy) in me.

This is by puruṣ a (male aspect, creator)-

सप्तास्यासन् परिधयस्त्रिः सप्त समिधः कृताः। देवा यद्यज्ञं तन्वाना अबध्नन् पुरुषं पशुम्। (पुरुष सूक्त, यजुर्वेद ३१/१५)

= Devas tied the great Puruṣ a as paśu in extending the yajña with 7 paridhi (circumference) and 3x7 samidhā (fuel).

Kṛ ṣ ṇ a is worshipped as embodiment of Trisatya (triple truth) and 7 other satyas-

सत्यव्रतं सत्यपरं त्रिसत्यं सत्यस्य योनिं निहितं च सत्ये।

सत्यस्य सत्यं ऋत-सत्यनेत्रं सत्यात्मकं त्वां शरणं प्रपद्ये॥ (भागवत पुराण, १०/२/२६)

(2) Unity of Knowledge-This is called Parā-vidyā (Vidyā) or Jñāna as described above.

यस्तु सर्वाणि भूतान्यात्मन्येवानुपश्यति। सर्वभूतेषु चात्मानं ततो न विजिगुप्सते॥६॥

यस्मिन् सर्वाणि भूतान्यात्मैवाभूद् विजानतः। तत्र को मोहः कः शोकः एकत्वमनुपश्यतः॥७॥

By seeing unity, one is not confused. First we see different persons and objects, later realization (anu = later, Paśyati = sees) is of unity.

स पर्यगात् शुक्रं अकायं अव्रणं अस्नाविरं शुद्धं अपापविद्धम्।

कविः मनीषी परिभूः स्वयम्भूः याथा-तथ्यतो अर्थान् व्यदधात् शाश्वतीभ्यः समाभ्यः॥८॥ (ईशावास्योपनिषद्)

World and its description in words-both are from unique abstract source. Creator of both (World-word) is called Kavi (who presents infinite into small parts-Kavala). Sa = That (creator). Source is-Bright (all pervading), without body (akāya, boundless), without defects (Avraṇ a), without links (Asnāvira), not mixed (śuddha), not partitioned (A-pāpa-viddha). Self born Creator fathomed it (Paryagāt), thought (Manīṣ ī) transformed source into visible world-word by boundary (Paribhū-surrounding thought by approximate words).

Based on unity, knowledge is of 3 types in Gītā-Sātvika sees unclassified among different objects. Rājasika sees all objects separately. Tāmasika is fixed with one view only and knows very little about that too.

गीता-सर्वभूतेषु येनैकं भावमव्ययमीक्षते। अविभक्तं विभक्तेषु तज्ज्ञानं विद्धि सात्विकम्॥ (१८/२०)

पृथक्त्वेन तु यज्ज्ञानं नानाभावान्पृथग्विधान्। वेत्ति सर्वेषु भूतेषु तज्ज्ञानं विद्धि राजसम्॥ (१८/२१)

यत्तु कृत्स्नवदेकस्मिन्कार्ये सक्तमहैतुकम्। अतत्त्वार्थवदल्पं च तत्तामसमुदाहृतम्॥ (१८/२२)

(3) Aspects of Unity-Rules of science are same for whole universe.
Meaning of words/signs in any language are same for all persons.
All branches of knowledge are interlinked.
All objects are interlinked in some way.
All men have similar anatomy physiology, dependant on each other.
God is same for all-no meaning of conversion.

Correspondence between theory and practical.

Knowledge is by assimilation of different branches and texts as shown in first 4 sūtras of Brahma sūtra- (१) अथातो ब्रह्मजिज्ञासा, (२) जन्माद्यस्य यतः, (३) शास्त्रयोनित्वात्, (४) तत्तु समन्वयात्।

(4) Duality-Duality in Vedānta does not mean 2 Gods. Creator is one, but it is necessary to treat world separately to understand it. Link between source in space and created world on earth is not knowable by methods of science. So, Jain texts have double sets for each-12 Anga and Upānga instead of 6 each in Vedas. Vidyā-avidyā is described above. Some famous pairs are listed below-

(a) Puruṣa-Prakṛti-Puruṣa is Chetanā (who can do Chiti = design), Prakṛti is material source of creation (Mātṛ = mother, matter).

(b) Agni-soma-Agni is concentrated form of matter/energy. Generally concentrated heat (fire) is called Agni. Since blocks of matter were first to be created, it was called Agri (first) which became Agni-स यदस्य सर्वस्य अग्रं असृज्यत तस्माद् अग्रिः, अग्रिः ह वै तं अग्निः इति आचक्षते परोऽक्षम्। (शतपथ ब्राह्मण ६/१/१/११, २/२/४/२) Spread matter/energy is Soma- सत्यं (वै) श्री ज्योतिः सोमः। (शतपथ ब्राह्मण ५/१/२/१०, ५/१/५/२८० ४/१/३/९)

(c) Deva-Devī (Male-female)-Deva is Puruṣa which is limited within a Pura (structure, boundary). Devī is Śrī spread into space like Soma.

(d) Vṛṣā-Yoṣā-Vṛṣā does Varṣā (rains) i.e. radiates matter/energy particles. Yoṣā is field or spread of space which receives radiation.-योषा वै वेदिः वृषा अग्निः। (शतपथ ब्राह्मण १/२/५/१५) समग्रिरिध्यते वृषा (ऋक् ३/२७/१३, शतपथ ब्राह्मण १/४/१/२९) एष वै वृषा हरिः य एष (सूर्यः) तपति। (यजु ३८/२२, शतपथ ब्राह्मण १४/३/१/२६)योषा हि वाक् (शतपथ ब्राह्मण १/४/४/४), योषा वै वेदिः (शतपथ ब्राह्मण १/३/३८), तस्माद् यद् योषा रेतो धत्ते अथ पयो धत्ते। (शतपथ ब्राह्मण ७/१/१/४४)

(e) Sañchara-Pratisañchara-These are terms of Sānkhya indicating two opposite processes of change or creation (motion-reverse motion). These have been called Sambhūti (creation), Asambhūti (destruction) in Īśāvāsyopaniṣad. As there are two (dvi) Niyati (destiny, end result), world is called Dvi-niyati = Duniyā. सञ्चरः प्रतिसञ्चरः (तत्त्व समास ६)। ईशावास्योपनिषद्-

अन्धं तमः प्रविशन्ति येऽसम्भूतिमुपासते। ततो भूय इव ते तमो य उ सम्भूत्याँ रताः॥१२॥

अन्यदेवाहुः सम्भवादन्यदाहुरसमवात्। इति शुश्रुम धीराणां ये नस्तद् विचचक्षिरे॥१३॥

सम्भूतिं च विनाशं च यस्तद् वेदोभयं सह। विनाशेन मृत्युं तीर्त्वा सम्भूत्यामृतमश्नुते॥१४॥

(5) Triples-Gītā has defined many triples. **(a) 3 Guṇas**- All creation is by 3 types of Guṇa of Prakṛti which pervade whole world. Being blind by pride we think self as doer.

गीता-प्रकृतेः क्रियमाणानि गुणैः कर्माणि सर्वशः। अहंकार विमूढात्मा कर्ताऽहमिति मन्यते। (३/२७)

त्रिभिर्गुणमयैर्भावैरेभिः सर्वमिदं जगत्। मोहितं नाभिजानाति मामेभ्यः परमव्ययम्॥ (७/१३)

All Vedas are classification of 3 Guṇ as, we have to merge them for knowledge-

त्रैगुण्य विषया वेदा निस्त्रैगुण्यो भवार्जुन। (२/४५)

(b) 3 triples of Karma-First Karma is to be defined. Brahma is whole Universe. Karma is motion-inner invisible motion is kṛ ṣ ṇ a, outer visible is śukla. When applied force is unable to move an object. It is Akarma. Useful product by action in cycle is called Yajña. As per different Guṇ a, 3 types are-Sattva is Jñāna (knowledge), Rajas is Kartā (Doer) and Tamas is Karma (Action). Three aspects (Samgraha) of Karma are-Karaṇ a (Instrument, means), Karma (Action), Karttā (Doer). By perception (Chodanā) it is of 3 types-Jñāna (Knowledge), Jñeya (Knowable), Parijñātā (round about, approximate knowledge). This is similar to concepts of General Theory of relativity. Out of total knowledge content of world, only limited part is knowable. Knowable universe is Tapah Loka (Visible Universe) from which light can reach us theoretically. Within that also, perception is limited by limits of our sense organs or even instruments. Finally, the perception depends upon observer-his place, traits and ability. Process of observation changes the object slightly and even the observer changes with time. Due to all limitations, knowledge is approximate only.

ज्ञानं ज्ञेयं परिज्ञाता त्रिविधा कर्मचोदना। करणं कर्म कर्तेति त्रिविधः कर्मसंग्रहः॥ (१८/१८)

ज्ञानं कर्म च कर्ता च त्रिधैव गुणभेदतः। प्रोच्यते गुणसंख्याने यथावच्छृणु तान्यपि॥ (१८/१९)

(c) 3 Proofs-Pratyakṣ a (apparent, as seen), Anumāna (reasoning), Āgama or Śabda (compiled knowledge in books, Veda). Nyāya philosophy counts Upamāna (comparison) which is part of Anumāna (logic) only. All the evidence by observation and logic is to be assimilated by Veda which is its Vedatā (universality).

३ प्रमाण-प्रत्यक्षानुमानागमाः प्रमाणानि (योगसूत्र १/१/७)

प्रत्यक्षानुमानोपमानशब्दाः प्रमाणानि (न्याय दर्शन १/१/३)

प्रत्यक्षेणानुमित्या वा यस्तूपायो न बुध्यते। एनं विदन्ति वेदेन तस्माद् वेदस्य वेदता॥ (सायण-वेदादि भाष्य भूमिका)

(6) 4 fold-All beings are classified as 4 types of Puruṣ a-(a) Kṣ ara decays continually with time. (b) Akṣ ara- is functional identity which is hidden (Kūṭ astha) and remains permanent despite continuous change and decay. (c) Avyaya-Despite changes, total system remains the same. Loss at one place is gain for other part. This is explained by 5 laws of conservation in Physics. (d) Parātpara-As ultimate source, there is no distinction. So, it cannot be described.

द्वाविमौ पुरुषौ लोके क्षरश्चाक्षरएव च। क्षरः सर्वाणि भूतानि, कूटस्थोऽक्षर उच्यते॥१५॥

उत्तमः पुरुषस्त्वन्यः परमात्मेत्युदाहृतः। यो लोकत्रयमाविश्य बिभर्त्यव्यय ईश्वरः॥१६॥ (गीता अध्याय १५)

For these 4 types, there are 4 aspects of Kāla (Time) whose definitions can be summarized as perception of change. (a) Time of Kṣ ara aspect is Nitya-kāla which always decays the beings. Since old state never comes back once it is gone, Nitya-kālais also called Death (Mṛ tyu). (b) Janya (creative)-this is measured by cycles of Yajña. Natural cycles are day-night, month, year. In general, all creation cycles are called Day-night (Ahah-rātri) or Darśa-pūrṇ amāsa (new-full

moon). (c) Akṣaya kāla indicates state of system or world, e.g. the expression-Times are not good. (d) Parātpara-Very small, very large are beyond perception.

नित्य काल-कालोऽस्मि लोकक्षयकृत् प्रवृद्धः (११/३२) जन्य काल-कालः कलयतामहम् (१०/३०)

अक्षय काल-अहमेवाक्षयः कालो धाताऽहं विश्वतोमुखः। (१०/३३)

सूर्य सिद्धान्त (१/१०)-लोकानामन्तकृत् कालः कालोऽन्यः कलनात्मकः।

परात्पर काल-सत एव पदार्थस्य स्वरूपावस्थितस्य यत्। कैवल्यं परममहानविशेषो निरन्तरः॥२॥

एवं कालोऽप्यनुमितः सौक्ष्म्ये स्थौल्ये स सत्तम। संस्थानभुक्त्या भगवानव्यक्तो व्यक्तभुग्विभुः॥३॥ (भागवत ३/११)

There are 4 steps of perception and 4 vedas with 4 meanings of verb-Vid. First, there should be a form, then some information of that should come from that by motion, then perception by mind, then understanding with help of earlier learning.

Veda   Nature   Meaning of Vid   Dhātupāṭha
Ṛk   Form   To exist   विद् सत्तायाम् (४/६०)
Yajur   Motion   To gain विद्लृ लाभौ (६/१४१)
Sāma   Field   To know विद् ज्ञाने (२/५७)
Atharva Foundation To Understand विद् चेतनाख्यान निवासेषु (१०/१७७) विद् विचारणे (७/१३)

ऋग्भ्यो जातां सर्वशो मूर्तिमाहुः, सर्वा गतिर्यजुषी हैव शश्वत्।

सर्वं तेजो सामरूप्यं ह शश्वत्, सर्वं हेदं ब्रह्मणा हैव सृष्टम् ॥ (तैत्तिरीय ब्राह्मण ३/१२/८/१)

(7) 5 steps of science-These are 5 steps of Avidyā which is generally taken as lack of knowledge. That too is correct as there are many errors and limits of perception. As Aparā Vidyā or Vijñāna also, these are 5 steps of any science, which is more systematic than any modern analysis. 5 sources of knowledge are indicated in Tattva-samāsa of Sānkhya-

तत्त्व समास-(८) पञ्चाभिबुद्धयः (९) पञ्च दृग्योनयः (१०) पञ्चवायवः (११) पञ्च कर्मात्मानः (१२) पञ्चपर्वा अविद्या।

Abhibuddhi is action (Vṛtti) of Buddhi (intellect) defined in Yoga-sūtra (1/2)- योगश्चित्तवृत्तिनिरोधः 5 traits of Buddhi can be Kliṣṭa (sorrow) or Akliṣṭa-वृत्तयः पञ्चतय्यः क्लिष्टाक्लिष्टाः (१/५)

These are of 5 types-प्रमाण विपर्यय विकल्प निद्रा स्मृतयः। (१/६)

(a) Pramāṇa is 3 types-Pratyakṣa (observation), Anumāna (Inference), Āgama (Veda)- प्रत्यक्षानुमानागमाः प्रमाणानि (१/७)

(b) Viparyaya is assumption based on error-विपर्ययोमिथ्याज्ञानमतद्रूपप्रतिष्ठितम्। (१/८)

(c) Vikalpa is words without meaning- शब्दज्ञानानुपाती वस्तुशून्यो विकल्पः। (१/९)

(d) Nidrā (sleep) is absence of thought and knowledge-अभावप्रत्ययालम्बना वृत्तिनिद्रा (१/१०)

(e) Smṛti (memory) is recalling earlier experience-अनुभूत विषयासम्प्रमोषः स्मृतिः (१/११)

These are by 5 Dṛg-yoni = sense organs. Knowledge reaches them by 5 motions (Vāyu). This is put to use by 5 organs of work (Karmātmā)

Kleṣa (sorrow) are 5 steps of Avidyā (lack of knowledge)-Avidyā, Asmitā (pride), Rāga (attachment), Dveṣa (repulsion), Abhiniveṣa (fixation with single thought)-

अविद्यास्मितारागद्वेषाभिनिवेशाः क्लेषाः। (२/३)

For Avidyā as steps of classified knowledge (science), these mean-

Avidyā = classification, Asmitā = Identity of each class

Rāga = Similarity within class, Dveṣa = Difference with other class

Abhiniveśa = Arriving at a rule.

(8) 6 Darśana-There are 6 ways of looking at whole picture called Darśana (seeing). Corresponding to that, there are 6 Darśa-vāk (visible sound, script). These arise from 10 dimensions of perception called 10 Mahāvidyā. Out of these, first 5 describe mechanical universe described by Physics. Thus, 5 basic units of measurement (5 Mā Chhandas) are needed in Physics. Mechanical dimensions are-Rekhā = Line (motion of Vindu of 0 dimension), Pṛṣṭha (surface, by motion of line), Stoma (volume, space), Dravya (matter, curvature of space-time in Relativity), Kāla (Nitya). Next 5 dimensions are stages of Chetanā (which can do chiti = arrangement). Puruṣa = Formation of individual Pura (body or structure), Ṛṣi (Rassi in Hindi = string, link between bodies), Nāga or Vṛtra (within curved boundary), Randhra (defect, causing new creation), Ānanda (Rasa = homogeneous source of world). Number of elements in each dimension or letters in script is given in Ṛgveda-

गौरीर्मिमाय सलिलानि तक्षत्येकपदी द्विपदी सा चतुष्पदी। अष्टापदी नवपदी बभूवुषी सहस्राक्षरा परमे व्योमन्॥

(ऋग्वेद १/१६४/४१, अथर्व ९/१०/२१, १३/१/४२, तैत्तिरीय ब्राह्मण २/४/६/११, तैत्तिरीय आरण्यक १/९/४, निरुक्त ११/४०)

= Ultimate source of world is Gaurī. This is 3 steps of thought in mind also. By its action, it splits the uniform Salila (water) in 1, 2, 4, 8, 9 parts and has 1000 letters in ultimate sky.

Elements in Darśana or number of letters in scripts are-

(a) Sānkhya-$(1 + 4)^2$ = 25 letters in Roman script. X is extra.

(b) Śaiva $(2 + 4)^2$ = 36 letters in Tamil, Arabic, Latin, Russian, Gurumukhi (35 + ॐ).

(c) Marut $(1+2+4)^2$ = 49 letters in Devanāgarī.

(d) Kalā = 8^2 letters in Brāhmī script.

(e) Vijñāna-Vāk of Vedas= $(8+9)^2$ = 289. Vowels = 36x3, Consonants = 36x5, ॐ.

(f) Thousand letters $(10^3\text{-}10^4)$ in China beyond Tibet (Triviṣṭap = space).

(9) 7 Samsthā-Three sevens are indicated in first verse of Veda (Atharva).

यास्सप्त संस्था या एवैताः सप्त होत्राः प्राचीर्वषट्कुर्वन्ति ता एव ताः। (जैमिनीय ब्राह्मण उपनिषद्१/२१/४)

छन्दांसि वाऽअस्य सप्त धाम प्रियाणि। सप्त योनीरिति चितिरेतदाह। (शतपथब्राह्मण९/२/३/४४, यजु१७/७९)

7 Samsthā (system) are parallel to 7 lokas in space, on earth or within human body. Worlds of space, earth, human body are called ādhidaivika, ādhibhautika, ādhyātmika.

अध्यात्ममधिभूतमधिदैवं च (तत्त्व समास ७)

किं तद्ब्रह्म किमध्यात्मं किं कर्म पुरुषोत्तम। अधिभूतं च किं प्रोक्तमधिदैवं किमुच्यते॥१॥

अक्षरं ब्रह्म परमं स्वभावोऽध्यात्म उच्यते। भूत भावोद्भवकरो विसर्गः कर्म संज्ञितः॥३॥

अधिभूतं क्षरो भावः पुरुषस्याधिदैवतम्। (गीता, अध्याय ८)

Within ādhibhautika (on earth) there can be 5 divisions, making 7 samsthā-(a) script, (b) subject of science, (c) geographical, (d) historical, Nipāta = current usage, (e) arbitrary names, new terms, (f) internal world, (g) cosmic system.

Examples-(a) 7 elements of state make complete political theory. Modern capitalist and Marxist theories admit only 4-Land, Population, Government, Sovereignty. Indian theories count all 7 hence they are complete-(1) Janapada-land, (2) Mitra or Suhṛ d-friendly population, (3) Amātya-Government, (4) Svāmī-King, here sovereignty is of 8 types, not absolute. (5) Durga-Natural protection and army, (6) Kośa-surplus revenue, (7) Daṇ ḍ a –legal system (Purohita = moral justification, constitution).

स्वाम्यमात्य सुहृत् कोश राष्ट्र दुर्ग बलानि च। सप्ताङ्गमुच्यते राज्यं तत्र मूर्द्धा नृपः स्मृतः॥ (शुक्रनीति १/६१)

स्वाम्यमात्यौ पुरं राज्यं कोश दण्डौ सुहृत्तथा ।

सप्त प्रकृतयो ह्येताः सप्ताङ्गं राज्यमुच्यते ॥ (मनुस्मृति ९/२९४)

कौटिल्य अर्थशास्त्र, प्रकरण ९६ (६/१/१)-प्रकृतिसम्पदः

स्वाम्यमात्यजनपददुर्गकोशदण्डमित्राणि प्रकृतयः।

(b) Āyurveda-3 Prakṛ ti (doṣ a) and 7 Dhātu-

वायुः पित्तं कफश्चोक्तः शरीरो दोषसंग्रहः॥ (चरक संहिता १/५७, वाग्भट सूत्रस्थान १/६)

रसासृग्मांसमेदोऽस्थिमज्जाशुक्राणि धातवः (महाभारत ३/२१३/१०, वाग्भट सूत्र स्थान १/१३)

5. Science of Veda-(1) Triple worlds- (a) Link of worlds-Vedas are true simultaneously in 3 world systems image of each other-(a) Cosmic = ādhidaivika, (b) Physical on earth = ādhibhautika, (c) Within human body = ādhyātmika. This unification or link between 3 worlds is logical, but has not been perceived by experiments of science. Possibly, it is necessary for independent existence of 3 worlds that they remain separated by Māyā so much that their link cannot be seen. Thus, Mantras of Veda have at least 3 different sets of meaning for these worlds.

(b) Growth of language-There were different systems of scripts in times of different institutes called Mahāśālā of Śaunaka etc. in Vedas, Samiti in Charaka-samhitā, Sangama in Tamil literature. They are not one time meetings as these lasted for many thousand years. These appear to be common in Sanskrit and Tamil tradition as most of scholars were same in same periods. In Vedic tradition, many periods are indicated-Sādhya, Brahmā, Indra, Bharadvāja, Ṛṣ abhadeva, Śaunaka. Possibly, each time shape of letters was revised though the basic structure of script remained the same. Brāhmī script is main used for Vedas with extension of symbols for scientific use. It has 63 or 64 letters as visible universe (Tapah Loka) is $2^{63.5}$ times earth diameter which is called Day-night of Brahmā of 8640 million years. That will be radius of visible universe in light years. 64 letters are related to combination of 8 types of Prakṛ ti (8x8) which is itself combination of 3 Guṇ as ($2^3 = 8$). Start of language was by giving names to each object by Brahmā. This is extended in 3 ways, called Vṛ ddhi-Meaning of Physical words was extended to cosmic and inner worlds. Special definitions for words in each science was introduced. Names

were of discrete nature (countable is Gaṇeśa, Pratyakṣa Brahma), abstract knowledge is Sarasvatī (with Rasa = abstract feeling) and combination is Subrahma (joining of discrete points like dot-matrix printer).

वाग्वै ब्रह्म च सुब्रह्म चेति। (ऐतरेय ब्राह्मण ६/३) वागेव सरस्वती। (शतपथ ब्राह्मण ७/५/१/३१, ऐतरेय ब्राह्मण ३/१)

Place of creation was called Draviḍa (as world also was created of Ap = Water, Drava), growth place was called Karnataka as Veda is śruti (received by sense organs like ear = Karṇa). Region of spread (Mahar) was Maharashtra as stated in Bhāgavata-māhātmya-

अहं भक्तिरिति ख्याता इमौ मे तनयौ मतौ। ज्ञान वैराग्य नामानौ कालयोगेन जर्जरौ॥४५॥

उत्पन्ना द्रविडे साहं वृद्धिं कर्णाटके गता। क्वचित् क्वचित् महाराष्ट्रे गुर्जरे जीर्णतां गता॥४८॥

(पद्म पुराण, उत्तर खण्ड श्रीमद् भागवत माहात्म्य, भक्ति-नारद समागम नाम प्रथमोऽध्यायः)

(2) Definitions-After meaning, there are 2 mores steps in study of science-Definition and Measurement. Definition is found in 2 ways-(a) Defining sentences-There are many short sentences in Gītā, Upaniṣads and vedic texts which give single or more definitions. If we remove the key word, remaining words are definition (ākhyāta). Examples-(1) तन्मे मनः शिवसङ्कल्पमस्तु (यजुर्वेद ३४/१). What is Mana (mind)-It is place of Samkalpa (thoughts). What is Samkalpa-Action of mind. What is Śiva-which results in Samkalpa causing action. (2) सहयज्ञा प्रजा सृष्ट्वा पुरोवाच प्रजापतिः। अनेन प्रसविष्यध्वमेषवोऽस्त्विष्ट कामधुक्॥ (गीता ३/१०)-What is Yajña-Work giving useful product. What is useful-which helps to continue the system and people.
(b) Common meaning-We compile uses of a word in many context and find common meaning. 'Go' word is used with many meanings-radiation, organs, cow, earth. 3 common elements define 'Go'-motion or action, produce, place of production.

(3) Measurements-There are different units of length and time. Modern Physics uses 8 units of length. Vedic text uses only 7 types of Yojana and 7 Yugas, parallel to 7 lokas. Difficulty arises when we assume all units as same. सप्त युञ्जन्ति रथमेकचक्रमेको अश्वो वहति सप्तनामा (ऋक्, १/१६४/२) –अस्यवामीयसूक्त. युजिर् योगे, Yujir verb = to add, This forms yuga and yojana-both unite in 7 ways. Similarly, Astronomy texts Sūrya-siddhānta tells about 9 time units which are related to 9 Sargas (creation cycles) of universe in Purāṇas. Intermediate product is mixture called Varāha (boar, animal of land and water), Megha (cloud)-9 clouds of Bible. Survey of earth and measures of space are universal, so the methods and units are same, though they were preserved in India only. For that, we have to unite Veda (including Brāhmaṇa parts), Purāṇa, astronomy of Vedic and Jain tradition both. Jain astronomy talks about Ātmā Yojana. Yajurveda tells that Sun is Ātmā of world सूर्य आत्मा जगतस्तस्थुषश्च (यजुर्वेद ७/४२). So, diameter of sun is Yojana in context of solar system. Īṣā-daṇḍa of Solar system is stated 18000 Yojana circumference i.e. 3000 yojana radius. योजनानां सहस्राणि भास्करस्य रथो नव। ईषादण्डस्तथैवास्य द्विगुणो मुनिसत्तम॥ (विष्णु पुराण २/८/२). This is defined as energy in motion, called solar wind in context of solar system-ईषे त्वा ऊर्जे त्वा वायवस्थः (यजुर्वेद १/१). Jain astronomy tells Pramāṇa yojana = 500 Ātmā yojana. Yajurveda tells Pramā is Antarikṣa (Intermediate loka). Thus, measure of Maharloka as 1 crore yojana is in units of 500 sundiameters. It looks smaller that Ratha (body) of solar system as 157 lakh yojanas in Purāṇa (Viṣṇu 2/8/3).

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xiii. Sānkhya Siddhānta-by A K Upadhyay-Nag Publishers, Delhi-110007-Includes all texts of Sānkhya with explanation and first 3 chapters give scientific basis & chronology.

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