

# Development of Web-Based Dictionary for the Technical Terms of Sankhya-Yoga Philosophy

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**Abstract:** The oldest scripture in Sanskrit literature is Veda. There have been two methods to convey the meaning of the Vedas in the form of *brāhmaṇa*, *upaniṣad* etc. and philosophy (*darśana*). Six philosophical texts were written to understand Vedic knowledge by logic. All philosophies prove the original Vedic wisdom by logic. Each philosophy has its own subject matter. The word *darśana* is derived from the verb root 'dṛś', which means to look well or to consider mystery topic. Traditions of Indian philosophy are generally classified as either Orthodox or Heterodox – *āstika* or *nāstika* – depending on whether they accept the authority of the Vedas and whether they accept the theories of *brahman* and *ātman*. The Orthodox schools generally include *nyāya*, *vaiśeṣika*, *sāṃkhya*, *yoga*, *mīmāṃsā* and *vedānta*, and the common heterodox schools are *jaina*, *buddhist* and *cārvāka*. Orthodox philosophy is a mature result of churning of Indian philosophical and religious ideas that emerged from the thought of thousands of years and became popular under the name of Hindu philosophy. *jaina*, *buddhist* and *cārvāka* are counted as a heterodox philosophy. Before reading the further texts we need to understand used technical terms in these philosophical texts. This paper present a methods to develop online system to recognize and analyze technical terms of *sāṃkhya-yoga* philosophy (SYP). Through this research, knowledge content will be available online by analyzing the technical terms of SYP. This will help scholars who want to understand SYP.

**IndexTerms - Sāṃkhya Yoga Philosophy, Technical terms, Technical terms in Sāṃkhya Yoga philosophy etc.**

## I. INTRODUCTION

Philosophy enquires into the nature of the universe in which we live, the nature of the human soul and its destiny and the nature of God or the absolute, and their relation to one another. It is the art of thinking of all things logically, systematically and persistently. Philosophy has three parts: (i) Epistemology, (ii) Ontology and (iii) Axiology (Perrett, 2001; Phillips, 2013 and Sharma, 1982). Epistemology is the theory of knowledge (Lemos, 2007). Ontology is the theory of reality (Carroll, 2010) and Axiology is the theory of values. In Indian literature, philosophy has been denominated as *darśana*. The term *darśana* is derived from the root *dṛś* which means 'vision' and also the 'instrument of vision'. The term also refers to six orthodox schools of Hindu philosophy and their literature on spirituality and soteriology (Klostermaier, 2007). It stands for the direct, immediate and intuitive vision of reality, the actual perception of truth and also includes the means which lead to this realization. Indian philosophy is intensely spiritual and has always emphasized the need for practical realization of truth. It signifies a natural and a necessary urge in human beings to know themselves and the world in which they live and move and have their being. Philosophy has a very close relationship with human life, because no side of life can be outside the perimeter of philosophy. Since the beginning of the Universe, when human started to think since the same time his some experience began to take permanent shape, those same-shaped experiences changed into philosophy by the wide period of time. The schools of Indian philosophy are divided into two broad classes - *āstika* (Orthodox) and *nāstika* (heterodox) (Bowker, 1997; Doniger, 2014 and Nicholson, 2013). In Indian philosophy the terms *āstika* and *nāstika* are used in different senses by different thinkers. In common usage *āstika* means one who believes in the existence of God or the Absolute and *nāstika* means one who does not believe in the existence of God or the Absolute. In the View of the philosophers, the *āstika* is one who believes in the validity of the Vedas and the *nāstika* is one who does not believe in the validity of the Vedas. Thus *āstika* means Orthodox school and *nāstika* means heterodox school. *Nyāya*, *Vaiśeṣika*, *Sāṃkhya*, *Yoga*, *Mīmāṃsā* and *Vedānta* are the six Orthodox schools whereas *Cārvāka*, *Bauddha* and *Jaina* are the three heterodox systems (Bowker, 1997; Doniger, 2014 and Nicholson, 2013).

There were two attempts has been taken to understand and explain the Vedic knowledge. First philosophy and other *brāhmaṇa* and *Upaniṣadas*. *Sāṃkhya* is one of the six *āstika* schools of Hindu philosophy founded by Kapila (Jacobsen, 2005). It is a systematic account of the process of cosmic evolution. It shows that all derived things in this world are produced from two realities, Prakṛti and Puruṣa which are considered as the ultimate realities. It is most related to the Yoga school of Hinduism, and it was influential on other schools of Indian philosophy (Bilimoria et al, 2007). Main text of the *Sāṃkhya darśana* is *Sāṃkhya darśana*. It is divided into six

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chapters and 451 *sūtras* (Keith, 1984). The first *sūtra* of *sāṃkhya* is: *atha trividhaduḥkhātyantavivṛttiratyantapurūṣārtha* (Musalagaonakar, 1987).

Yoga philosophy is other one of the six major orthodox schools of Hinduism (Jacobsen, 2005 and Phillips, 2013) founded by Patanjali. It is closely related to the Samkhya school of Hinduism. The Yoga school's systematic studies to better oneself physically, mentally and spiritually has influenced all other schools of Indian philosophy (Burley, 2007 and Bilimoria et. al, 2007). The Yoga Sutras of Patanjali is a key text of the Yoga school of Hinduism (Edwin, 2011). It gives an integrated approach in teaching the aspirant to train his body and mind to achieve the goal of existence which is trance or *Samādhi*. Yoga Sutras is divided into four chapters and 194 formulas. *Samādhipāda*, *Sādhanapāda*, *Vibhūtipāda* and *Kaivalyapāda* are the four chapters (Bhattacharya, 1980).

The screenshot shows the user interface of the 'Sankhya-Yoga Technical Word Search System'. The page is titled 'साङ्ख्य-योग पारिभाषिक शब्द सूचना तन्त्र' (Sankhya-Yoga Technical Word Search System). It includes a search box and a dropdown menu for technical terms. The result section displays the following information:

**Result:**  
 पारिभाषिक शब्द : पुरुष  
 लक्षण : असङ्गो रूपं पुरुषः इति ॥१.१५॥  
 लक्षणार्थः : इस प्रकार वह पुरुष संयोग से रहित है।  
 सम्बन्धित वर्णन : साङ्ख्य  
 विश्लेषण : जीवात्मा (आत्मा) को कपिल मुनि कृत सांख्यशास्त्र में पुरुष कहा गया है जोकि चैतन्य तन्त्र है तथा सर्वत्र चैतना बोधक है। सांख्यग्रन्थों में पुरुष शब्द चार प्रसक्त हुआ है। सांख्यदर्शन में पुरुष सामान्य और परमात्म दो प्रकार का है। सामान्यपुरुष के लिए अन्य वर्णनों में 'जीवात्मा' शब्द तथा परमात्मपुरुष के लिए 'परमात्मा' शब्द का प्रयोग प्राप्त होता है। सांख्यदर्शन में पुरुष के लिए नित्य, कैवल्य, मध्यस्थ, द्रष्टा, उदासीन, निर्गुण, असङ्ग आदि अनेक विशेषणों का प्रयोग किया है। इसके अतिरिक्त पुरुष शब्द का प्रयोग वैदिक साहित्य में कई जगह मिलता है। पुरुष शब्द सर्वप्रथम संस्कृत साहित्य में ऋग्वेद के 'साहस्रशीर्षाः पुरुषः...' (१०.१०.१) में प्राप्त होता है जहाँ इसका अर्थ दार्शनिक न होकर चिराद् पुरुष के रूप में है। वेदों में तत्र के लिए पुम् (पुंस, और पुमान्) मूलों का इस्तेमाल मिलता है। इसके अतिरिक्त बृहदारण्यक उपनिषद् में ईश्वर के लिए पुरुष शब्द का प्रयोग मिलता है।

Figure 1: User Interface and Sample of result of the system

## II. OBJECTIVE

The main objective of this paper is to build online system for the analysis of terminology of Sāṃkhya–Yoga philosophy. So that anyone can understand the technical terms using this systems. *Darśana* has been included in the Sanskrit courses of almost all the universities of India. With the help of this system, any student or teacher can easily read and teach the mysterious subject of SYP.

## III. LITERATURE REVIEW

The field of information technology is becoming widespread. For increasing the quality in traditional teaching in the field of education is being supported by the e-learning. People want instant information in the era of the technology through the internet. In the field of computational linguistics related to Sanskrit language, many institutes are working to build such types system for Sanskrit text e.g. online indexing and search system for Sanskrit text. Jawaharlal Nehru University, Indian Institute of Technology, Centre for

Development of Advanced Computing (CDAC), University of Hyderabad and University of Delhi are the main research institutes engaged in this field.

Jawaharlal Nehru University has done few works related to computational linguistics (Sanskrit Centre, JNU) aspect of Sankhya-Yoga philosophy e.g. Dictionary of *saṃkhya*, Yoga & Vedanta (Jain, 2007), *Yoga-sūtraindex* (Gautam, 2009) and Yoga ShabdKosh (Yadav & Upadhyay, 2009). These work are much closed to the proposed work but initial works in this field.

S.N.	Sāṃkhya Terms	Yoga Terms
1	Atyantapuruṣārthaḥ	Akramaḥ
2	Puruṣārthatvam	Akliṣṭāḥ(Vṛṭti Jātiḥ)
3	Puruṣa	Aṇimā
4	PrakṛTi	Aṅgamejayatvam
5	Mūla (PrakṛTi)	Duḥkham
6	Maht, Mana	Daurmanasyam
7	Ahaṅkāra	Tāpaduḥkhatā
8	Pramā, Pramāṇa	Samskāraduḥkhatā
9	Pratyakṣa	Aṅgāni
10	Anumāna	Atītānāgatajñānam

Table 1: Sample of the Technical Terms of SYP

In the field of SYP University of Delhi has also done lots of works. A research work done by (Shrivastav, 1979) is divided into parts and parts are divided into 17 subpart (*pariccheda*). Main ethics, historical discussions of *Sāṃkhya*, discussions of Yoga, and reflection of Axiology reflected in the principles of *Sāṃkhya* are discussed in this thesis. Research done by (Talvar, 1992) has divided into six chapters and theoretically discuss about the process of universe, *sādhana*, practice *dharma* and ultimate goal. Few other work e.g (Arya, 1978) is done in the Delhi University. Department of Sanskrit, University of Delhi has also started the work in the field of Computational linguistics since 2014 by Chandra. Few web based systems are developed. Swagatam (Chandra et al, 2017, Chandra et al, 2017) for teaching and learning Sanskrit Grammar in Higher education based on University of Delhi BA and MA Sanskrit syllabus. It includes Taddhita (Sakshi & Chandra, 2015; Sakshi & Chandra, 2017 and Sakshi & Chandra, 2016) and Sanadyanta Analyzer (Kumar & Chandra, 2016a; Kumar & Chandra, 2016b), Sanskrit Meter Information System (Meena, 2016), Vedic Literature Search (Kumar, 2016), Pauranic Search System (Chandra & Anju, 2017) and Verb Formation System (Kumar & Chandra, 2016) etc. are the main works in the field.

Based on above survey of research works, it is clear that there is no research has been done yet related to web based system for analysis of the philosophical terms. However the *koṣas* (dictionaries) of the each schools of the philosophy are available (Tripathi, 1974; Shastri, 1928; Tripathi, 1994; Das, 2009 and Swami et al, 2015).



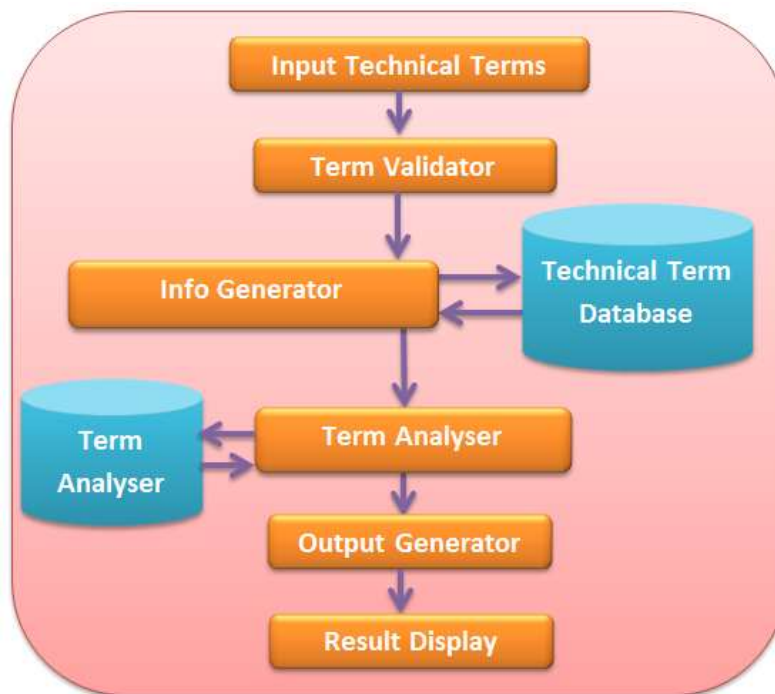


Figure 2: Methodology

#### IV. MATERIALS & METHOD

For the computational analysis of the technical terms of the SYP, data will be mainly created by forming the basis of the *Sāmkhya-sūtra* (Sharma, 1964) and *Sāmkhyakārikā* (Shastri, 2004), *Yogasūtra* (Shrivastava, 2011), *Vyāsbhāṣya* (Aranya et al, 2000), *Bhojavṛtti* (Arya, 2010) and *Yogavārtika* (Mishra, 1981). Therefore, the above said texts are used as primary materials of the research. Generally example based methods of the computational linguistics and software engineering is used for analysis, and interpretation mechanism of terminology. Following steps will be taken to create a web based system:

1. Collection of the Technical terms from the original texts of SYP (Sample of the technical terms is shown in Table 1).
2. Digitization of the collected terms with analysis.
3. A database of the technical terms of the SYP will be prepared for the online system.

Research methodology and web based system can be understood with the help of figure 1.

#### V. RESULT & DISCUSSIONS

As a result, an analytical description of the technical terms of the SYP will be presented through this system. Which will produce whole information of any technical terms belongs to the SYP. Through this anyone will be able to avail understand the SYP basic terms instance through internet anytime and anywhere. User Interface and Sample of result of the system are shown in Figure 2.

#### VI. FUTURE DIRECTIONS

This system is designed for the technical terms of SYP accepts input in Devanagari Unicode text only and prints result in same format. Based on this system the technical terms of the school of Indian philosophy can be developed easily. System can be easily developed using same methodology in other languages like English, Sanskrit, Bengali, Tamil, and Telugu etc.

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