## Understanding potential of Sanskrit in contemporary world

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## **Abstract**

The legacy of Sanskrit is time-tested and universal in application. It has been relevant to society and advancements from time immemorial. Although it is apparently seen that Sanskrit is just a traditional language, it is a language rich with many insights and advanced sciences making it most relevant at all times. The present paper is an attempt to look in an epitomized form as to how the Sanskrit legacy is embedded with utmost potential in the contemporary world. The aspect of computer science shall be taken up and shown how Sanskrit language, linguistics and logic contribute greatly to the contemporary world. The aspect of holistic learning and values shall also be seen in the present paper and adjudged as to how the potential of Sanskrit is most emergent in the contemporary world.

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The contemporary world offers many challenges to us, not to be undermined in any dimension and relevance. The present generation is in one way in a stage of metamorphosis, a shift of attention from the past legacy to the modern times opening its doors to a new strata of society. In spite of many advantages the contemporary world offers, it may be noted that the present scenario is not without challenges which need to be tackled. If not, degeneration on moral, spiritual and even survival ground may be emerging. In this context, the potential of Sanskrit and the rich treasure-house of knowledge with which it is endowed are worth pursuing.

At the outset, the contemporary times are broadly that of advanced technology and communication, together with a liberal outlook. The modern technological advancement is backed with automation closely linked with the use of meta-languages of machines. In this context, the potential of Sanskrit is enormous. To put it in a nutshell, the technology and automation process involves the machine language of bites and bytes at the basic level<sup>1</sup>. Above this, a middle-level language<sup>2</sup>, and over it a high level language<sup>3</sup>. To understand at the cursory level, a programmer has to instruct the computer or the machine at hand with a language preferably high-level for his convenience. This shall be compiled or interpreted to a middle-level language and finally compiled to machine language of 0 and 1. The potential of Sanskrit in this regard may be seen as most prudent. The Sanskrit language is a natural language with the great advantage of no fixed word order of S-O-V<sup>4</sup>. This makes the Sanskrit language most suited for the programmer. The programmer need not worry about the word order but at the same time is not confusing the machine with wrong instruction. To illustrate with an example, the Sanskrit

<sup>&</sup>lt;sup>1</sup> Designated as 0 and 1

<sup>&</sup>lt;sup>2</sup> Like PASCAL or C

<sup>&</sup>lt;sup>3</sup> Like DOTNET

<sup>&</sup>lt;sup>4</sup> Subject-Order-Verb

language scores an advantage over the English language with no fixed S-O-V order. In English, the sentence:

- 1. "Rama killed Ravana" can be worked out in various combinations, as many as 6 ways. Out of these, the meanings are quite different as follows:
- i. "Rama killed Ravana": the desired meaning
- ii. "killed Rama Ravana": grammatically wrong
- iii. "killed Ravana Rama": grammatically wrong
- iv. "Rama Ravana Killed": grammatically wrong
- v. "Ravana Rama killed": grammatically wrong
- vi. "Ravana killed Rama": most perverted meaning!
- 2. the same example may be seen in Sanskrit as "Ramaha Ravanam Hanti"
- i. "Ramaha Ravanam Hanti": the desired meaning
- ii. "Ramaha Hanti ravanam": the desired meaning
- iii. "Ravanam Ramaha Hanti": the desired meaning
- iv. "Ravanam Hanti Ramaha": the desired meaning
- v. "Hanti Ramaha Ravanam": the desired meaning
- vi. "Hanti Ravanam Ramaha": the desired meaning

Thus, it may be seen that the contemporary programmer may very freely use the Sanskrit language in his codes without losing the desired intent. This advantage given by the Sanskrit language is unparalled in any modern European languages. Moreover, this does not make the Sanskrit usage very tricky to the programmer since the Sanskrit language is a natural language. Hence, it may be seen that the Sanskrit language has the double potential, one as meta-language well-suited for computer programming and an another as a natural language for the programmer. Such a potential shall indeed open new doors to the field of computer science and technology with the Sanskrit language.

Apart from this, the Sanskrit language legacy has an unique system of verbal-cognition's regulation. Whenever a sentence is spoken or even read, the verbal-cognition arises in the mind of the intent hearer. This knowledge is termed as the śābda bodha. Understanding this is very vital in the contemporary world. Linguists, psychologists and technocrats have been working upon the problem of verbal-cognition. For a linguist, the problem is more

theoretical. For a psychologist, it is the understanding of human nature and mind. From the technocrats point of view, it is very vital in bringing about a new generation of machines and computational tools which can understand the natural language. The Sanskrit legacy offers three main vistas in understanding the verbal-cognition. The first is the Nyaya method of postulating the word suffixed with the first case as the nucleus of verbal-cognition.<sup>5</sup> The grammarians forward the theory of the sense of the root as the nucleus.<sup>6</sup> The Mīmāmsā school takes up the Bhāvana as the nucleus. The present paper shall not indulge in a deep discussion of them but it can be noted that such a system has a bright future potential in the contemporary world in bringing the verbal-cognition more close to a formal system.

Moreover, the grammatical intricacies of the Paninian canon has made the Sanskrit language most scientific. The Sūtras of Pānini are aphorisms and serve as even flow-charts for etymology and grammatical structure of the Sanskrit language. These can be understood and pursued in the contemporary world with the perspective of meta-language and algorithms. This makes the potency of the Sanskrit language very scientific in the contemporary world.

The script of the Sanskrit language adds to the potential. The script, whether it is devanagari or others, have a co-relation with the phonetics. Whatever that is written is readout exactly as the same and whatever that is enunciated is written as it is. Thus, the problem of "spelling" is avoided. This feature of the Sanskrit language gives it a potential to be the most useful in developing he speech-to-text technology and vice-versa. Since the speech and the text with script are completely correlated, it makes the Sanskrit language most ideal for the contemporary technology.

Mathematics and geometry are two other fields which offers challenging turns in the contemporary world. The Sanskrit legacy is not lacking behind in these areas too. Whether one agrees to the sutras of bharati tirtha as vedic or not, it gives ample scope for new methods in the field of mathematics. Kenneth Williams usage of the sutra mathematics in Lancashire and advantage of Nikhila sutra in multiplying large numbers may be noted. The delay time is significantly less in calculations. Apart from this, it is highly useful in computing Fast Fourier

<sup>&</sup>lt;sup>5</sup> Prathamantha-mukhya-visheshyaka-shabda-bodha <sup>6</sup> Dhatu-artha-mukhya-visheshyaka-shabda-bodha

<sup>&</sup>lt;sup>7</sup> Bhavana-mukhya-visheshyaka-shabda-bodha

transform.<sup>8</sup> In the field of geometry, the potential of Sanskrit sulba sutras is immense. Related to the sacrifices and the fire-alter, the sulba sutras are texts dwelling deep on the science of practical geometry in the construction of altars. To make a very brief note, the sulba sutras contain the theory of pythagoros in both the theorem form and the pythagoros triples. Transforming a square into a circle and the circle into a square was well-known to the sulba sutras. The numeral system and the square roots were known to the sulba sutras. Thus, the sulba sutras offer great potential for research in geometry in the contemporary world. To kindle further interest, the following sulba sutras may be referred:

- 1. Apastamba
- 2. Baudhayana
- 3. Manava
- 4. Katyayana
- 5. Maitrayaniya (somewhat similar to Manava text)
- 6. Varaha (in manuscript)
- 7. Vadhula (in manuscript)
- 8. Hiranyakeshin (similar to Apastamba Shulba Sutras)<sup>9</sup>

The field of medicine is another need-of-the-hour in the contemporary times as well. The Sanskrit legacy has the magnificent system of Ayurveda to offer to the contemporary world. The caraka samhita and the sushruta samhita, together with the treatise of vagbhatta is being researched deeply in the contemporary world. The 8 branches of Ayurveda are worth noting:

- Internal medicine (*Kāya-cikitsā*)
- Pediatrics (Kaumārabhrtyam)
- Surgery (Śalya-cikitsā)
- Eye and ENT (Śālākya tantra)
- Bhūta vidyā has been called psychiatry<sup>10</sup>
- Toxicology (Agadatantram)
- Prevention of diseases and improving immunity and rejuvenation (rasayana)
- Aphrodisiacs and improving health of progeny (Vajikaranam)<sup>11</sup>

<sup>&</sup>lt;sup>8</sup> An algorithm to calculate discrete Fourier transform <sup>9</sup> Courtesy Wikepedia

Note my paper "correspondence to mental disorders in caraka's unmade nidanam and modern psychistry" presented in All-India Ayurveda seminar in Hyderbad, 2010

Apart from all these technical potential of Sanskrit in the contemporary world, several social aspects are worth noting. The environmental pollution is a serious threat to our planet. The culture of the Sanskrit legacy lays great importance on the importance of flora and fauna. The tree is looked upon as an embodiment of the tri-murthy. The mental tension of the modern times have a solution in the Dhyana of the rishis. Several western scientists like Persinger, M.A, Castillo, R. J and others have paid tributes to the Indian system of Dhyana as stress-buster. The contemporary world is on the verge of losing culture in this state of materialism. The Sanskrit legacy has the great potential with iconic representations of Ramayana and Mahabharata in restoring our cultural balance. Ethical degeneration can be prevented with examples like Hanuman, Yudhisthira and Harishchandra. Even in the field of education, several examples like Svetaketu, Upamanyu, and Naciketa for their steadfast nature and the mode of education offers great potential in the contemporary world. The falling family system needs to learn from the Sanskrit legacy of Sita and Savitri. The Darshanas of Sanskrit offer the scientific religion for the contemporary world. In this age of globalization, Sanskrit is much needed for global outlook and universal brotherhood (vasudhaiva kutumbakam).

The stresses of competition and fear of failure are lurking in the contemporary world. The Bhagavad Gita offers solution to the problem. All we have to do to get rid of the problem is to work with all sincerity and leave the results to the almighty power. 12 This significantly reduces all the stress in the contemporary world. The psychological conflicts too are reduced by the philosophy of the Gita. With awareness that the all-mighty is omni-potent, omni-present and omniscient, the social evils like corruption are nullified with the fear of the sarvataha-cakshu. The Sanskrit legacy has the potential for national integration as well. The Sanskrit language with an equivocal grammar and usage can serve to minimize linguistic and regional differences. It may be concluded in this brief paper that the potential of Sanskrit in the contemporary world is immense and unlimited in scope. It is high-time that we look upon and pursue the course of Sanskrit legacy and make way for a better world.

**END** 

<sup>&</sup>lt;sup>11</sup> Courtesy Wikepedia<sup>12</sup> Karmanaiva adhikaraste ma phaleshu kadachana