Kāraka Analysis of Saṅkṣepa Rāmāyaṇam

Dissertation submitted to the University of Hyderabad in partial fulfilment of the requirement for the award of the degree of

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in

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Ву

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Declaration

I, Monali Das hereby declare that the work embodied in this dissertation entitled Kāraka Analysis of Saṅkṣepa Rāmāyaṇam is carried out by me under the supervision of Dr. Amba P. Kulkarni, Department of Sanskrit Studies, University of Hyderabad, Hyderabad. I also declare that it has not been submitted previously for any degree in part or in full to this university or any other university or institution.

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Certificate

This is to certify that this dissertation entitled "Kāraka Analysis of Saṅkṣepa Rāmāyaṇam" is a record of bonafide work done by Monali Das a research scholar for the degree of Master of Philosophy in Shabdabodha Systems and Language Technologies in the Department of Sanskrit Studies, School of Humanities, University of Hyderabad under my guidance and supervision.

The dissertation has not been submitted previously in part or in full to this or any other University or Institution for the award of any degree or diploma.

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Mohan G. Ramanan Dean School of Humanities University of Hyderabad To my parents, who supported me, helped me and inspired me at every stage in my life...

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Contents

1	Intr	oductio	n		1
2	Intr	oductio	n to Saṅk	sṣepa Rāmāyaṇam	3
	2.1	Sańkșe	epa Rāmāy	r <mark>aṇam</mark>	3
		2.1.1	Rāmāyar	nam in brief	3
		2.1.2	Saṅkṣepa	a Rāmāyaṇam in brief	4
3	Kāra	ıka Ana	llysis		7
	3.1	Introd	uction		7
	3.2	Kāraka	ım in brief	f	8
		3.2.1	Further (Classification by Bhartrhari	13
	3.3	Kāraka	n Tagset Pr	roposal (2009)	13
		3.3.1	Inter-ser	ntential Relations	14
			3.3.1.1	Relations denoted by non-finite verbs	14
			3.3.1.2	Relations denoted by link words	15
		3.3.2	Intra-ser	ntential Relations	16
			3.3.2.1	Kāraka Relations	17
			3.3.2.2	Non-kāraka Relations	20

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4	Kāraka Analysis of Saṅkṣepa Rāmāyaṇam			
	4.1	Repres	entation	23
	4.2	Statisti	ical Analysis of The Text	25
		4.2.1	Frequency Analysis of Relations	25
		4.2.2	Need of New Relations	27
	4.3	Sannid	hi Checking in Saṅkṣepa Rāmāyaṇam	35
5	Devi	ations f	from Pāṇini's Rules	38
6	Cone	clusion		45
A	Exar	nples aı	nd Analysis of The Text	46
Bil	Bibliography 9			

List of Figures

3.1	Divisions of karma	13
4.1	Sentence by hand	24
4.2	Same sentence by graphviz	25
4.3	Ananatarakālīna kriyādyotakam	28
4.4	Viśeṣaṇam	28
4.5	Upamānam and Upamāna dyotakam	29
4.6	Anuyogī, Pratiyogī and Nitya sambandhaḥ	29
4.7	Vākya karma and Vākya karma dyotakam	30
4.8	Antarbhāvita sahārthaḥ	30
4.9	Samānadharma	31
4.10	Avadhāraṇam	31
4.11	Viṣayaḥ	32
4.12	Karma samānādhikaraṇam and Samānādhikaraṇa dyotakam	32
4.13	Vidheyakartā	33
4.14	Kāraṇa dyotakam and Kāraṇa kriyā	34
4.15	Upapada vibhakti sambandhah and Sahādi sambandhah	34

LIST OF FIGURES

4.1	6 Vākyasamuccitaḥ	35
5.1	Deviation Ktvā1	39
5.2	Deviation Ktvā2	39
5.3	Deviation Sampradānam	40
5.4	Deviation Karaṇam	41
5.5	Deviation Apādānam1	42
5.6	Deviation Apādānam2	43
5.7	Deviation Adhikarnam	44

List of Abbreviations

अष्टा. अष्टाध्यायी

वा.प. वाक्यपदीयम्

वेणी.. वेणीसंहारम्

सं.रा. सङ्क्षेपरामायणम्

Chapter 1

Introduction

The main goal of our work is to develop a tagging scheme for annotating a Sanskrit text, at the kāraka level. The Indian Grammatical Tradition is rich in language analysis resources for demonstrating how the theory can lead to an application.

With the advent of computers and its use for natural language processing, several parsers for various languages are being developed. Pāṇini's grammar provides a good framework for developing dependency parsers. Various efforts in this direction have been started. For example, Shailaja [2009], Huet [2008], Jha et al. [2008], Kulkarni et al. [2010] have undertaken the tasks of developing automatic parsers for Sanskrit.

In order to develop a parser, one needs a tagging scheme to specify various kinds of relations. Prof. Ramakrishnamacharyulu [2009] has proposed a tagging scheme for Sanskrit. Before developing a parser based on this tagging scheme, we decided to use the scheme to tag a selected text manually. Since this was our first effort towards tagging to gain confidence, we were in search of a text that has simple constructions as far as possible. We selected <code>Saṅkṣepa Rāmāyaṇam</code> published by Rastriya Sanskrit Samsthan. This text has first 100 ślokas from the mahākāvya <code>Rāmāyaṇa</code>, a simple text with simple constructions. Another reason to choose this text was the availability of this text with a detailed analysis and अन्वय, published by Rastriya Sanskrit Samsthan as a study material for learners of Sanskrit.

Next chapter gives a brief introduction of the text Sankṣepa Rāmāyaṇam chosen for kāraka analysis. Third chapter contains a brief summary of kāraka theory, fol-

lowed by the tagging scheme used by us. In the fourth chapter we will see the kāraka analysis of Sanskrit text Saṅkṣepa Rāmāyaṇam, method of tagging, frequency analysis of occurred relations, necessity of some new relations while tagging the text. While analyzing the text we found some deviates from Pāṇinian rules; that we will be discussing in the fifth chapter. Then the concluding chapter is followed by an appendix which contains all the examples of the text Saṅkṣepa Rāmāyaṇam and their kāraka analysis.

Chapter 2

Introduction to Sanksepa Rāmāyanam

2.1 Sańksepa Rāmāyaṇam

Sankṣepa Rāmāyaṇam contains the gist of Vālmīki Rāmāyaṇa.

2.1.1 Rāmāyaṇam in brief

Rāmāyaṇa is a compound formed by two words *Rāma* and *Ayana*. Ayana means path. The path of Rāma is so uplifting that in its own interest humanity needs to follow it. It represents the victory of good over bad. By placing before the people the narrative of Sri Rāma, Vālmīki has shown them the path they need to follow if they have to survive and prosper. Maharshi Vālmīki is the foremost of the poets. He is the author of the great Indian epic Rāmāyaṇa. He is a Hindu sage, who lived around the beginning of the first millennium B. C. This is the most unique, ancient and glorious epic in the world and known as *ādikavyam*. Also it has a special place in Indian culture and Sanskrit literature. It is written in many languages by many writers. Some of them are - *Krittibāsi Rāmāyaṇa*¹, *The Rāmacharitamānas*², *Balarāmadās Rāmāyaṇa*³, *Adhyātma Rāmāyaṇa Kilippāṭṭu*⁴.

Rāmāyaṇa is composed in the verses of ślokas, it contains 24,000 verses which have

¹By a Bengali poet Krittibās Ojhā in 15th century.

²By Goswāmi Tulasi Dās in 16th century. This is very popular in North India.

³By an Oriya poet Balarāma Dās in 16th century.

⁴By Tunchatt Ezhuttachan in 16th century.

been grouped into 500 chapters or sargas which are divided into seven Kāṇḍas. The language is Sanskrit and the verses are written in 32-syllable meter called अनुष्टुप् छन्द⁵.

The seven kāṇḍas are - (i) Bāla Kāṇḍa (ii) Ayodhyā Kāṇḍa (iii) Araṇya Kāṇḍa (iv) Kiṣkindhā Kāṇḍa (v) Sundarā Kāṇḍa (vi) Yuddha Kāṇḍa (vii) Uttarā Kāṇḍa.

According to some historians, Bāla kāṇḍa and Uttarā kāṇḍa are the later additions⁶ but Bāla kāṇḍa is considered to be an original part except some injected stories.

2.1.2 Sańkṣepa Rāmāyaṇam in brief

The Rāmāyaṇa gets repeated stage by stage in all seven kāṇḍas of the epic. Though Vālmīki was himself quite conversant with the story of Srī Rāma, he wanted to get it through an āchārya. When the mythical divine preceptor Nārada came to the hermitage of sage Vālmīki in order to enlighten him then the poet posed the question 'who was an ideal man'? The answer came from Nārada in the form of Saṅkṣepa Rāmāyaṇam which formed the foundation on which the magnificent 24,000 verse edifice was built by Vālmīki. In fact, Nārada having chosen Vālmīki as the competent person to write the epic, was wondering how to request him to take up the work. So, he felt profoundly relieved and happy when the poet himself came out with the question. Vālmīki who received Nārada with due respect and honour, posed a question. The question was "who is the ideal and virtuous person in this world?". Then Nārada answers the question without a moment's hesitation, "many and rare are the qualities that you have mentioned, O sage! but listen, I will tell you of a man I know who unites in himself all these qualities".

```
को न्वस्मिन् साम्प्रतं लोके गुणवान् कश्च वीर्यवान्
धर्मज्ञश्च कृतज्ञश्च सत्यवाक्यो दृढव्रतः॥ (सं. रा. २)
चारित्रेण च को युक्तः सर्वभूतेषु को हितः
विद्वान् कः कः समर्थश्च कश्चैकप्रियदर्शनः॥ (सं. रा. ३)
```

श्लोके षष्ठं गुरु ज्ञेयं सर्वत्र लघु पञ्चमम्। द्विचतुष्पादयोः ह्रस्वं सप्तमं दीर्घमन्ययोः॥

⁵अनुष्टुप् छन्दसः लक्षणम् -

⁶Goldman, Robert P., The Rāmāyaṇa of Vālmīki: An Epic of Ancient India, p.15-16

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आत्मवान् को जितक्रोधो द्युतिमान् कोऽनसूयकः
कस्य बिभ्यति देवाश्च जातरोषस्य संयुगे॥ (सं. रा. ४)
```

The Sańkṣepa Rāmāyaṇam is actually the first part of the first kāṇḍa named Bāla kāṇḍa of Vālmīki's Rāmāyaṇa. In the first chapter of Bāla kāṇḍa the gist of Rāmāyaṇa is imbibed. Saṅkṣepa Rāmāyaṇam is also known as Bāla Rāmāyaṇam, Mini Rāmāyaṇa, Mūla Rāmāyaṇam. Govindarāja, in his commentary, "The Rāmāyaṇa Bhuṣaṇa" named this portion as Saṅkṣepa Rāmāyaṇam and this name was mostly followed by all.

The book named Saṅkṣepa Rāmāyaṇam is published by Rāṣtrīya Saṃskṛt Saṃsthāna, New Delhi, first published in the year of 2002. This book has its own style and pattern of explanation. For example, each of the verses is given with पदच्छेद, पदपरिचय followed by अन्वय or prose order for every verses. The पदपरिचय or पदविश्लेषणम् or identification of each word includes explanation of सन्धि, समास or compounds, तद्धित or secondary suffixes, कृदन्त or primary suffixes. The अन्वय process includes कारक आकाङ्क्षा to identify the words, the mutual relationship between words. Explanation of words in three languages viz. English, Hindi, Sanskrit helps to understand the meaning as whole.

We have chosen this text because

- (a) its language is simple.
- (b) the sentence construction is simple.
- (c) the book by Rastriya Sanskrit Samsthan gives the detailed analysis and अन्वय of each (or group) of ślokas.

In Vālmiki's Rāmāyaṇa, there are certain usages which are deviations from Pāṇini's grammar. This denotes not only grammatical irregularities, but also metrical versification and sandhi irregularities. Such usages have been accepted as ārṣa prayogas. Rāmāyaṇa is useful to scholars in more than one ways. The greatest utility of it however lies in its wealth of forms and expressions which serve as an index to the correct idiom. Rāmāyaṇa, as is true of other Sanskrit texts, preserves most faithfully the old usage. He mentioned the importance of reading Rāmāyaṇa in the following verse.

```
पठन् द्विजो वागृषभत्वमीयात् स्यात् क्षत्रियो भूमिपतित्वमीयात् ।
वणिग्जनः पण्यफलत्वमीयाज्जनः च शुद्रोऽपि महत्वमीयात्।। (सं. रा. १००)
```

Rāmāyaṇa is not only a story but it contains philosophical and devotional elements. Saṅkṣepa Rāmāyaṇa is none other than gist of full Rāmāyaṇa. It is part of Bāla kāṇda, as mentioned earlier.

Chapter 3

Kāraka Analysis

3.1 Introduction

Pāṇini does not merely deal with analysis of words, but in fact provides a structure for the analysis of a sentence. Pāṇini's grammar is algebraic where a finite set of rules generates an infinite number of words and sentences. The concept of kāraka is at the center of complete analysis. Pāṇini's system of knowledge representation is based on the kāraka theory. The kāraka are relations that mediate mappings from semantic relations to phonological representations in terms of case endings. The kāraka rules are applied with the governing (adhikāra) sūtra anabhihite, if it is not expressed. Two of the kārakas kartṛ and karman can be expressed by verbal endings, whereas some other kārakas can also be expressed by primary and secondary suffixes. The Indian grammarians and commentators know the dichotomy between vibhakti and kāraka.

A sentence may be constituted of one or more words. A sentence is a structural as well as semantic unit. Basic structure of a sentence is state-able in terms of kāraka relations as conceived and defined by Pāṇini where a verbal stem is the hub of structure. A complex sentence is thus by implication a construction where two or more verbal stems occur stated explicitly or implicitly. A complex sentence has multiple structures. Or we can analyze them into two or more simple sentences. Relations between them are expressed either syntactically or semantically.

Pāṇini's grammar introduces an intermediate layer- syntactico-semantic layer of

kārakas which act as a bridge between the vibhaktis and the semantic relations. The vibhaktis thus are the syntactic representations of the semantic relations. Pāṇini used only six kārakas viz. kartā, karman, karaṇam, sampradānam, apādānam, adhikaraṇam to represent a gamut of semantic relations between a verb and a noun. In addition he mentions about several relations that show the relation of a sub-ordinate verb with the main verb such as pūrvakālīnatva, samakālīnatva etc. The relations between noun and noun are mainly covered under the śeṣa with exceptions being handled as karmapravacanīya etc. Later grammarians like, Bhartṛhari sub-classified some of the kāraka relations further. For example, karma is sub-classified further as, vikārya karma, nirvartya karma, udāsīna karma, prāpya karma, karma-kartā, ōpaśleṣika, vēṣayika etc.

A very good summary of various syntactico-semantic relations considered and discussed in various books on śābdabodha theories of different schools have been consolidated by Prof. Ramakrishnamacharyulu [2009]. The tagging scheme proposed here is the starting point for our work. In what follows we give a brief account of kārakas in order to recapitulate the concepts behind them followed by the tagging scheme proposed by Prof. Ramakrishnamacharyulu [2009].

3.2 Kārakam in brief

Kāraka is a technical term of Pāṇini. It signifies a particular type of semantic relationship between nominal and verbal stems. Pāṇini offers no definitions. The nominal participants of an action carried out in a sentence are called *kāraka*. Verb is main in a sentence. Pāṇini introduces kārakas probably with an *adhikāra sūtra* viz, কাरके (अष्टा. 9.8.२३).

Pānini identifies six kārakas viz.

- 1. कर्त्र-कारकम्
- 2. कर्म-कारकम्
- 3. करण-कारकम्
- 4. सम्प्रदान-कारकम्

5. अपादान-कारकम्

6. अधिकरण-कारकम्

- Kartṛ kārakam: Of all nominal participants in an action denoted by a sentence, the one which is most independent is known as Kartā ¹. One who is independent in performing the activity, typically the activity intended by the speaker. For example, in देवदत्तः पचित, देवदत्तः is the kartā. But in case of काष्टः पचित, काष्टः is the kartā since it is independent in the performing of the activity of supplying the necessary fuel. The meaning of पचित thus in this case involves only the act of supplying necessary fuel, while in case of देवदत्तः पचित, the action involves taking of rice in a pot, washing it, pouring water, supplying fuel etc. till the rice is cooked.
- Karma kārakam: The locus of the result of action is called Karma kārakam². A kāraka which the kartā wishes the most is termed as karma. For example, in बालकः विद्यालयं गच्छति, consider the act of going to school by a boy. In this situation, the boy is independent to carry out the activity of going and the most desirable thing for him is to reach the school and hence school is the karma. This is the general definition for karma. In addition to this Pāṇini treats the exceptions to the general rule as follows,
 - तथायुक्तं चानीप्सितम् (अष्टा. १.४.५०): If that which is not intended to be the most affected by the act, becomes, however, similarly connected with the action, it also called *Karma*. For example, ओदनं बुभुक्षुः विषं भुङ्क्तं।
 - अकथितं च (अष्टा. १.४.५१): That kāraka which is not spoken of as coming under any one of the special relations of ablation, is also called *Karma*. For example, बलिं याचते वसुधां।
 - हृक्रोरन्यतरस्याम् (अष्टा. १.४.५३) : The agent of the verb in its non-causal form, in the case of हृ 'to lose' and कृ 'to make', is optionally called Karma

¹स्वतन्त्रः कर्ता, (अष्टा. १.४.५४), क्रियायां स्वातन्त्र्र्येण विवक्षितः अर्थः कर्तृसंज्ञकः स्यात् इति सुत्रार्थः, कस्मिन् स्वतन्त्रः? क्रियासिद्धौ स्वतन्त्रः

²कर्त्त्रीप्सिततमं कर्म, (अष्टा. १.४.४९), कर्तुः क्रियया आप्तुं इष्टतमं कारकं कर्म संज्ञं स्यात्

- when these verbs are causal. For example, हारयति/कारयति वा भृत्यं/भृत्येन वा कटम्।
- अधिशीङ्स्थासां कर्म (अष्टा. १.४.४६): That which is the site of the verbs शी 'to lie down', स्था 'to stand', आस् 'to sit', when preceded by the preposition अधि is, called *Karma kārakam*. For example, अधितिष्ठति/अधिशेते/अध्यास्ते वा वैकुण्ठं हरि:।
- अभिनिविशश्च (अष्टा. १.४.४७): That which is the site of the verb अभिनिविश् 'to enter', is also called *Karma kārakam*. For example, अभिनिविशते स्नमार्गम्।
- उपान्वध्याङ्वसः (अष्टा. १.४.४८) : That which is the site of the verb वस् 'to dwell', when preceded by उप, अनु, अधि, आङ्, is also called *Karma kārakam*. For example, उपवसति/अनुवसति/अधिवसति/आवसति वा वैकुण्ठं हरिः।
- Karaṇa kārakam : Karaṇa kārakam is the instrument with which an action is carried out or the factor that is most effective to do an action. Immediately after which the action is produced is known as Karaṇa kārakam³. The main instrument used in carrying out the action is karaṇam. For example, कुञ्चिकया तालम् उद्घाटयित, here to open the lock key is main instrument so here key is karaṇa. The exceptional cases are handled by the following sūtras,
 - दिवः कर्म च (अष्टा. १.४.४३) : That which is especially auxiliary in the accomplishment of the action, of the verb दिव् 'to play' is called Karma, as well as Karaṇam. For example, अक्षैः अक्षान् वा दीव्यति।
- Sampradāna kārakam: That which the kartā wants to connect with the object through the action of giving is called Sampradānam⁴. By considering this rule, the rule applies to persons who perform the role of receivers in the context of giving, they should be in sampradānam. For example, राजा विप्राय गां ददाति. Through the action of giving here king wants to connect with the vipra. So vipra is sampradānam. Pāṇini handles the exceptions as follows,

³साधकतमं करणम्, (अष्टा. १.४.४२), क्रियासिद्धौ प्रकृष्टोपकारकं कारकं करणसंज्ञं स्यात्

⁴कर्मणा यमभिप्रैति स सम्प्रदानं, (अष्टा. १.४.३२), दानस्य कर्मणा यमभिप्रैति स सम्प्रदान संज्ञः स्यात्

- रुच्यर्थानां प्रीयमाणः (अष्टा. १.४.३३): In the case of verbs having the signification of the root रुच् 'to like', the person or thing that is pleased or satisfied, is called Sampradānam. For example, हरये रोचते भिक्तः।
- श्लाघह्नुङ्स्थाशपां ज्ञीप्स्यमानः (अष्टा. १.४.३४): In the case of verb श्लाघ् 'to praise', ह्नु 'to take away', स्था 'to stand', शप् 'to curse', the person whom it is intended to inform of or persuade by, those actions, is called Sampradānam. For example, गोपी स्मरात् कृष्णाय श्लाघते/ह्नुते/तिष्ठते/शपते वा।
- धारेरुत्तमर्णः (अष्टा. १.४.३५): In case of the verb धारि 'to owe', the creditor is called Sampradānam. For example, भक्ताय धारयति मोक्षं हरिः।
- स्पृहेरीप्सितः (अष्टा. १.४.३६): In the case of the verb स्पृह् 'to desire', the thing desired is called Sampradānam. For example, पुष्पेभ्यः स्पृहयति ।
- क्रुधदुहेर्ष्यासूयार्थानां यं प्रति कोपः (अष्टा. १.४.३७): In the case of the verbs having the sense of क्रुध् 'to be angry', दूह् 'to injure', ईर्ष्य 'to envy', असूया 'to detract', the person against whom the feeling of anger, is directed is called Sampradānam. For example, हरये क्रुध्यति/दूह्यति/ईर्ष्यति/असूयति वा।
- राधीक्ष्योर्यस्य विप्रश्नः (अष्टा. १.४.३९): In case of the verbs राध् 'to propitiate', ईक्ष्य 'to look to', the person about whose good or bad fortune questions are asked is called Sampradānam. For example, कृष्णाय राध्यति/ईक्ष्यते वा।
- प्रत्याङ्भ्यां श्रुवः पूर्वस्य कर्ता (अष्टा. १.४.४०) : In the case of the verb श्रु preceded by the prepositions प्रति and आङ्, and meaning 'to promise', the person to whom promise is made is called Sampradānam. For example, विप्राय गां प्रतिशृणोति/आशृणोति वा।
- परिक्रयणे संप्रदानमन्यतरस्याम् (अष्टा. १.४.४४): In the case of hiring on wages, that which is especially auxiliary in the accomplishment of the action of the verb परिक्री 'employing on stipulated wages', is optionally called Sampradānam. For example, शताय/शतेन परिक्रीतः।
- **Apādāna kārakam**: The point of separation is called *Apādānam*. So apādānam is separation from a stationary nominal participant⁵. For example, पर्वतात्

⁵ध्रुवमपायेऽपादानम्, (अष्टा. १.४.२४), अपायो विश्लेषः, तस्मिन् साध्ये ध्रुवमवधिभूतं कारकमपादानं स्यात्

शिलाखण्डः पतित. Here for the separation of the stone pieces from the hill, so hill is apādānam. Following are the sūtras Pāṇini uses to handle various cases of apādānam such as,

- भीत्रार्थानां भयहेतुः (अष्टा. १.४.२५): In the case of words implying 'fear' and 'protection from danger', that from which the danger or fear proceeds is called Apādānam. For example, चोराद्विभेति।
- पराजेरसोढः (अष्टा. १.४.२६),: In the case of the verb पराजि, 'to be tired or weary
 of', that becomes unbearable, is called Apādānam. For example, अध्ययनात्
 पराजयते।
- वारणार्थानामीप्सितः (अष्टा. १.४.२७): In the case of verbs having the sense of 'preventing' the desired object from which one is prevented or warred off, is called Apādānam. For example, यवेभ्यो गां वारयति।
- अन्तर्झी येनादर्शनमिच्छति (अष्टा. १.४.२८): When concealment is indicated, the person whose sight one wishes to avoid is called Apādānam. For example, मातुर्निलीयते कृष्णः।
- आख्यातोपयोगे (अष्टा. १.४.२९) : The noun denoting the teacher is called Apādānam, in relation to the action signifying formal teaching. For example, उपाध्यायादधीते ।
- जनिकर्त्तुः प्रकृतिः (अष्टा. १.४.३०) : The prime cause of the agent of the verb जन् 'to born' is called Apādānam. For example, ब्रह्मणः प्रजाः प्रजायन्ते ।
- भुवः प्रभवः (अष्टा. १.४.३१): The source of the agent of the verb भू 'to become' is called Apādānam. For example, हिमवतो गङ्गा प्रभवति।
- Adhikaraṇa kārakam: The real locus of action is the kartā, but the kartā and the object must exist on something before the action can be done, that something is called as Adhikaraṇam. So adhikaraṇam is the location of kartā or karma⁶. A kāraka which serves as locus is termed as adhikaraṇam. It is of three types, (i) अभिव्यापक: : For example, तिलेषु तैलम्। (ii) वैषयिक: : For example, मोक्षे इच्छा अस्ति। (iii) औपश्लेषीक: : For example, स्थाल्यां पचित।

⁶आधारोऽधिकरणम्, (अष्टा. १.४.४५), कर्तृकर्मद्वारा तन्निष्ठक्रियाया आधारः कारकमधिकरणसंज्ञः स्यात्

3.2.1 Further Classification by Bhartrhari

The karma 'that which is most desired to be attained' is of 2 types, and again it is classified as shown in the diagram below,

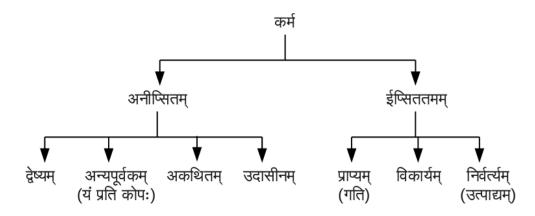


Figure 3.1: Divisions of karma

This classification is described in Vākya Padīyam as,

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निर्वत्त्र्यञ्च विकार्यञ्च प्राप्यञ्चेति त्रिधा मतम्।
तच्चेप्सिततमं कर्म चतुर्द्धाऽन्यत्तु कल्पितम्।।
औदासीन्येन यत् प्राप्यं यच्च कर्त्तुरनीप्सितमम्।
संज्ञान्तरैरनाख्यातं यद्यच्चाप्यन्यपूर्वकम्।। (वा.प. ३.७.४७-५१)
```

The karma is of 2 types *īpsitatama* and *anīpsitam*. Again *īpsitatama* is divided into three parts, such as, *nirvartya* तण्डुलान् ओदनं पचित, *vikārya*, its further classified into *vivartaḥ* and *pariṇāmaḥ* सुवर्णम् कुण्डलं करोति, here सुवर्णम् is the vivarta karma, and in case of दुग्धं दिध करोति, here दिध is the pariṇāmaḥ karma, *prāpyam* ग्रामं गच्छति. Again anīpsitam divided into four types viz, *udāsīnam* ग्रामं गच्छन् तृणं स्पृशित, *dveṣyam* ओदनं भुञ्जानो विषं भुङ्क्ते, *sañjāntarēranākhyātam* गोपः गां दोग्धि पयः, *anyapūrvakam* क्रूरम् अभिक्रध्यित ।

3.3 Kāraka Tagset Proposal (2009)

The manually annotated corpora has become an essential resource for analysis of language texts using computers. In order to facilitate the tagging and bring in standard-

ization *Prof.* Ramakrishnamacharyulu proposed a tag-set. This tag-set has two types of tags.

- **a.** Tags to mark the relations between two sentences (inter-sentential).
- **b.** Tags to mark the relations between words in a sentence (intra-sentential).

 We produce below the tag-set proposed by Prof. Ramakrishnamacharyulu [2009].

3.3.1 Inter-sentential Relations

The ākānkṣā between two sentences can be understood through the *link words and non-finite verbs*. These may be further classified as,

- (i) Relations denoted by non-finite verbs.
- (ii) Relations denoted by link words.

3.3.1.1 Relations denoted by non-finite verbs

- 1. पूर्वकालीनत्वम् : Ktvā is a non-finite verb. It denotes an activity which precedes the activity denoted by the main verb. The ktvā ending verb is related to main verb by the relation of पूर्वकालीनत्वम्. For example, रामः दुग्धं पीत्वा शालां गच्छति।
- 2. प्रयोजनम् : Tumun is also a non-finite verbal suffix. It denotes the purpose of the main activity. For example, अहं प्रतिदिनं योगशास्त्रं पिठतुं विद्यालयं गच्छामि. Here the relation between the two activities- activity of studying and activity of going is that of the purpose and is marked through the verbal suffix तुमुन्.
- 3. समकालीनत्वम् : Śatṛ and Śānac are also non-finite verbal suffix. They are used to denote the simultaneity of two activities. For example, बालकः जलं पिबन् गच्छति. Here sitting and reading both activities are occurring at the same time, so kartā is also same.
- 4. भावलक्षणसप्तमी: According to Pāṇinīya sūtra यस्य च भावेन भावलक्षणम् (अष्टा. २.३.३७), bhāva means kriyā and lakṣaṇa means feature or indication. Sūtra's meaning is, if there is an indication towards another activity from one kartṛniṣṭha or karmaniṣṭha activity then that kartṛniṣṭha or karmaniṣṭha activity and the kartā

and karma of that activity also should be in saptamī vibhakti. For example, कपिषु लङ्कां गृहीतवत्सु रामः अयोध्यां न्यवर्तत्। भावलक्षणसप्तमी can be divided into अनन्तरकालिकत्वम्, समकालीनत्वम् and पूर्वकालीनत्वम्.

- For example, रामे वनं गते दशरथः स्वः गतः. The relation between गते and गतः is of अनन्तरकालिकत्वम्.
- For example, रामे वनं गच्छति सीता अनुसरति. The relation between गच्छति and अनुसरति is समकालीनत्वम्.
- Time of the main activity before the starting of the sub ordinate activity is पूर्वकालीनत्वम्. For example, गोषु धोक्ष्यमाणाषु गतः. The relation between धोक्ष्यमाणाषु and गतः is पूर्वकालीनत्वम्.

3.3.1.2 Relations denoted by link words

1. समानकालीनत्वम् :

• Yadā/Tadā or Yasmin kāle/Tasmin kāle : Yadā or yasmin kāle in the subordinate sentence typically in the beginning of the main sentence. For example, यदा मेघः वर्षति तदा मयूरः नृत्यित ।

2. प्रतिबन्धः :

When one sentence express a condition for the second sentence to be activated the relation is termed as प्रतिबन्धः.

- Yadi/Tarhi : *Yadi* in the beginning of a subordinate sentence and *tarhi* in the main sentence. For example, यदि त्वम् आगमिष्यसि तर्हि अहम् अपि आगमिष्यमि ।
- Cet : For example, त्वम् वदसि चेत अहम् कर्तुं प्रयासं करोमि ।
- Tarhi eva: For example, भवान् वदति तर्हि एव अहम् एतत् कार्यं करोमि।

3. कारणसत्वेऽपि कार्याभावः, कारणाभावेऽपि कार्योत्पत्तिः:

• Yadyapi-tathāpi: For example, यद्यपि अयं बहु प्रयासं कृतवान् तथापि परीक्षा तु अनुत्तीर्णा। • Athāpi or Evamapi : For example, परीक्षायाम् अहम् अनुत्तीर्णः अथापि पुनर्लिखिष्ये ।

4. हेतुहेतुमद्भावः :

• Yataḥ/Tataḥ, Yasmāt/Tasmāt : For example, यतः अयं समये नागतः ततः प्रवेश परीक्षायां नानुमतः।

5. अनन्तरकालीनत्वम् :

• For example, प्रथमम् अहम् शृणोमि अथ लिखामि।

समुच्चयः :

• Means Conjunction. For example, भिक्षाम् अट अपिच गामानय।

7. समानाधिकरणत्वम् :

Means Co-location.

• Yatra or Tatra, Yasmin or Tasmin : For example, यत्र नार्यस्तु पूज्यन्ते रमन्ते तत्र देवताः।

८. असाफल्यं :

• Means non-fulfilment of expected activity. For example, गजेन्द्रः तीव्र प्रयत्नम् अकरोत् किन्तु नक्रग्रहात् न मुक्तः ।

3.3.2 Intra-sentential Relations

(of or relating to Constituents within a Sentence)

These relations are triggered by *vibhaktis*. These relations are of two types, one is *kāraka relations* and another is *non-kāraka relations*.

3.3.2.1 Kāraka Relations

1. Kartā:

- **Kartā**: That is kartā which is independent in his work. Means स्वतन्त्रः कर्ता. For example, रामः पचति ।
- Anubhavī kartā: Means experiencer. Somebody who is experiencing the activity. For example, सुखम् अनुभवति।
- Amūrtaḥ kartā: Means abstract. That which does not have life but it can be kartā. For example, क्रोधः आगच्छति।
- **Prayojakaḥ kartā**: Means someone who gives inspiration to do the activity. For example, देवदत्तः विष्णुमित्रेण पाचयति।
- **Prayojyaḥ kartā** : Means Causee of the action. For example, देवदत्तः विष्णुमित्रेण पाचयति ।
- Madhyasthaḥ kartā : Means second causer of action. For example, देवदत्तः यज्ञदत्तेन विष्णुमित्रेण पाचयति ।
- Abhiprerakaḥ/Utprerakaḥ: Means cause of temptation. For example,
 मोदकः रोचते।
- Karma-kartṛ: For example, पच्यते ओदनः स्वयमेव।
- Karaṇa-kartṛ: For example, असिः छिनत्ति ।
- Ṣaṣṭhī-kartā. For example, आचार्यस्य अनुशासनम्।

2. Karma:

- Karma: Means that which the agent mostly need to do through main activity. For example, पत्रम् लिखति. Here पत्रम् is the destination which the agent want to do through the main verb. Here sūtra is कर्त्तुरीप्सिततमं कर्मं (अष्टा. १.४.४९).
- **Utpādyam**: Means created. Something created from a raw but it cannot be the raw after change. For example, ओदनं पचति. Raw rice becomes cooked

rice after cooking and also it cannot be again raw rice after cooking. It changed fully its size and all.

- **Vikāryam** : Means raw material. For example, सुवर्णं कुण्डलं करोति. We can make gold ring from the raw gold and also can do raw gold from gold ring. Here gold is raw material so it has कर्मत्वम्.
- Ādhāraḥ: Means the location. For example, वैकुण्ठं अधिशेते. Sūtra is अधिशीङ्स्थासां कर्म (अष्टा. १.४.४६).
- Anīpsitam: Means that not intended. Which is intended by the agent that is karma and that which is not intended that is also karma. For example, ग्रामं गच्छन् तृणं स्पृशति. Sūtra is तथायुक्तं चानीप्सितं (अष्टा. १.४.५०)
- **Akathitam**: Means that which is not expected. Those which are expected they have karma sañjā but those which are not expected they have also कर्मत्वम्. For example, विलं याचते वसुधाम्. Sūtra is अकथितं च (अष्टा. १.४.५१).
- Prayojya-kartā: For example, बालं क्षीरं पाययति।
- Deśaḥ: Means place, country etc. For example, कुरून् स्वपिति।
- Kālaḥ: Means it indicates to time. For example, मासम् आस्ते।
- Bhāvaḥ : Means activity. For example, गोदोहम् आस्ते ।
- Mārgaḥ: Means road measurement. For example, क्रोशम् आस्ते।
- Sampradānam : The recipient. For example, पशुना रुद्रं यजते।
- Gati-karma : For example, रामः ग्रामम् गच्छति ।
- Karaṇam : Instruments for playing. For example, कन्दुकं क्रीडित ।
- Yam prati kopaḥ : For example, क्रूरम् अभिक्रुध्यति ।
- Manya-karma : In disrespect. For example, न त्वां तृणाय/तृणं मन्ये।
- Ṣaṣṭhī-karma : For example, शब्दानाम् अनुशासनम् ।

3. Karanam:

• **Karaṇam** : Means the instrument. That which is the main instrument to do the activity. For example, बालः कुञ्चिकया तालम् उद्घ्टायति।

- Parikrayaṇam: Means money in bonded labour. For example, शतेन परिक्रीणाति. Sūtra is परिक्रयणे सम्प्रदानमन्यतरस्याम् (अष्टा. १.४.४४).
- Karma: For example, पशुना रुद्रं यजते।

4. Sampradānam:

- Svatvāśrayaḥ: Means recipient with ownership. Here the ownership is not returnable and not transferable. For example, भिक्षुकाय धनं ददाति. Sūtra is कर्मणायमभिप्रैति स सम्प्रदानम् (अष्टा. १.४.३२).
- Svīkartā: Means recipient without ownership. For example, देवदत्तः रजकाय वस्त्रं प्रक्षालनाय ददाति ।
- Yam prati kopaḥ saḥ : Means point of anger. With whom we angry. For example, हरये क्रुध्यति. Sūtra is क्रुधद्रुहईर्ष्याअसूयार्थानां यं प्रति कोपः (अष्टा. १.४.३७).
- Yasya vipraśnaḥ: Means enquiry about. For example, कृष्णाय राध्यति. Sūtra is राधीक्ष्योर्यस्य विप्रश्नः (अष्टा. १.४.३९).
- Parikrayaṇam: Means money in bonded labour. Somebody buy a labour in terms of bond for a particular period of time by giving some money. For example, दासः शताय परिक्रीतः. Sūtra is परिक्रयणे संप्रदानमन्यतरस्याम् (अष्टा. १.४.४४).
- **Kriyayā yam abhipretaḥ**: Intended to relate with activity. For example, पत्ये शेते।
- Jñīpsyamānaḥ : Addressed through praise. For example, कृष्णाय श्लाघते ।
- Uttamarṇaḥ : A creditor. For example, देवदत्ताय शतं धारयति।
- Īpsitam : Desired. For example, पुष्पेभ्यः स्पृहयति ।
- Prīyamāṇaḥ: Location of desire. For example, देवदत्ताय रोचते मोदकः।

5. Apādānam:

• **Apādānam** : Means point of separation. For example, पर्वतात् शिलाखण्डः पतित. Sūtra is ध्रुवमपायेऽपादानम् (अष्टा. १.४.२४).

- Bhaya-hetuḥ: Means cause of fear. For example, नकुलात् सर्पः विभेति. Sūtra is भीत्रार्थानां भयहेतुः (अष्टा. १.४.२५).
- Yasmāt vāraṇam : Means point for obstruction. For example, अन्धं कूपात् वारयति. Sūtra is वारणार्थानामीप्सितः (अष्टा. १.४.२७).
- **Prabhavaḥ** : Means place of first appearance. For example, हिमवतो गङ्गा प्रभवति. Sūtra is भुवः प्रभवः (अष्टा. १.४.३१).
- Parājayaḥ: Means defeat from activity. For example, क्रीडात् पराजयते. Sūtra is पराजेरसोढः (अष्टा. १.४.२६).
- Ākhyāta upayoge : Teacher. For example, छात्रः उपाध्यायात् अधीते ।
- Yasya/yasyā adarśanam īṣṭam saḥ/sā: The person intended not to be seen. For example, मातुः निलीयते कृष्णः।
- Prakṛtiḥ: Raw material. For example, मृदः घटः जायते।

6. Adhikaranam:

- Kālaḥ: Means time. It says something happened at a particular time. For example, कृतयुगे सर्वे सुखिनः आसन्।
- Deśaḥ : Means place. For example, रामः अयोध्यायां आसीत्।
- Viṣayaḥ: Means some subject or matter. For example, मोक्षे इच्छा अस्ति।
- Samayasya avadhiḥ: Means time duration. For example, ग्रीष्मकालीनः विरामः जुन् मासतः अगष्टमास-पर्यन्तं।
- Antarāla deśaḥ : Means place in between two or more places. For example, तिरुपतितः चन्द्रगिरि पर्यन्तम् भवनानि सन्ति ।

3.3.2.2 Non-kāraka Relations

Some non-kāraka relations are,

1. Sambodhanam : To whom we addressed. For example, महर्षे ! अहम् एतत् श्रोतुम् इच्छामि।

- Prasajyapratişedhaḥ: Means uncompounded negation. For example, रामः पितुः निर्देशात् राज्यं न ऐच्छत्।
- 3. Sāmyam: Means similarity. For example, रामः सोमवत् प्रियदर्शनः।
- 4. Tādarthya: Means purpose. For example, युद्धाय गच्छति।
- 5. Hetuḥ: Means cause. For example, विद्यार्थी अध्ययनेन विद्यालये वसति।
- 6. Kriyāviśeṣṇam: Means manner adverb. For example, रामः शबर्या सम्यक् पूजितः।
- 7. **Atyanta-sambandhaḥ-kālaḥ**: Means complete relation with time. For example, बालकः गुरुकुले मासम् अधीतः।
- 8. **Kriyā-āvṛttyantarāla samayaḥ**: Time duration between the repetition of the same activity. For example, अद्य भुक्त्वा दिनद्वयात् भोक्ता।
- 9. **Vīpsā** : Repetition. For example, शकुन्तला आश्रमे प्रतिवृक्षं सिञ्चति ।
- 10. **Kriyā-āvṛtti-gaṇanā** : Counting of repetition. For example, बालकः पाठं पञ्चवारं पठित ।
- 11. **Atyanta-sambaddhaḥ-mārgaḥ** : Complete relation with road. For example, पाठः क्रोशं अधीतः।
- 12. **Atyanta-sambandhaḥ-kālaḥ-saphalaḥ**: Complete relation with time with result. For example, बालकेन मासेन अनुवाकः अधीतः।
- 13. **Atyanta-sambandhaḥ-mārgaḥ-saphalaḥ**: Complete relation with road with result. For example, बालकेन क्रोशेन अनुवाकः अधीतः।

Except these relations some other relations are there:

- Ṣaṣṭhī : This is known as ṣaṣṭhī relation. For example, अध्यापकस्य पुस्तकम् छात्राः पठन्ति ।
- Saha-sambandhaḥ: Means associative. For example, पुत्रेण सह पिता गच्छति।
- Vinā: Means non-associative. For example, धनेन विना जीवनं नास्ति।

- Nirdhāraṇam : Means isolating one from a group. For example, नारीणां/नारीषु उत्तमा वधु सीता।
- Ārambha-samaya-māpane : Means starting point of time. For example, कार्तिक्याः आग्रहायणी मासे।
- Ārambha-deśa-māpane : Means starting point of place. For example, तिरुपतितः चन्द्रगिरिः क्रोशे ।
- Lakṣaṇam : The point of direction. For example, रामः ग्रामं प्रति गतः।
- Tādarthya: Purpose. For example, बालकाय मोदकं क्रीणाति।
- Hetuḥ: Cause. For example, श्रमिकः कुठारेण काष्ठं छिन्नति।
- Vibhaktaḥ: Comparison between two. For example, माथुराः पाटलीपुत्रकेभ्यः आढ्यतराः।

Chapter 4

Kāraka Analysis of Sanksepa

Rāmāyaṇam

In the previous chapter we presented a tagging scheme we will be following for analysis of the Sanskrit text Saṅkṣepa Rāmāyaṇam. Saṅkṣepa Rāmāyaṇam is basically a poetry. Since we are working on the prose, we used the अन्वय text of the ślokas which is in prose order for analysis. Instead of using the fine grained tags as described in the previous chapter, we used a *coarse grained* tags avoiding the sub-classifications wherever possible. For example, under kartā, we decided to use only kartā and did not consider its fine grain sub-classifications.

4.1 Representation

We represent the relations by using a directed label graph. The direction of an arrow decides the name of a relation. For example, the relation between रामः and पचित is called कर्ता and is marked with an arrow from पचित ending onto रामः. Look at the diagram,

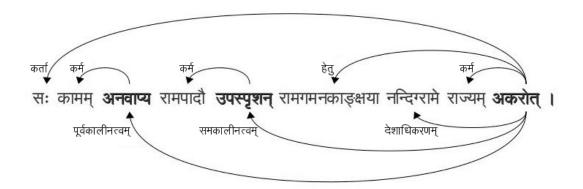


Figure 4.1: Sentence by hand

For computational purposes, we represented this as a plain text as described below. For example,

- 1 सः कर्ता 9
- 2 कामम कर्म 3
- 3 अनवाप्य पूर्वकालीनत्वम् 9
- 4 रामपादौ कर्म 5
- 5 उपस्पृशन् समकालीनत्वम् 9
- 6 रामागमनाकाङ्क्षया हेतु १
- 7 नन्दिग्रामे देशाधिकरणम् 9
- 8 राज्यम् कर्म 9
- 9 अकरोत् मुख्यविशेष्यम् 0

There are three fields in this representation. First field indicates the word number, second field contains the word and the third field marks the relation and to which this word is related, e.g., 1 सः कर्ता 9. It indicates सः is कर्ता of the word with id number 9 i.e. अकरोत्.

By using this method we specify which words relate to whom through the id of words. But it is also difficult for human being to understand or visualize the relations. For the benefit of the readers reading this analysis we present the relations in the form of a graph. A utility called 'graphviz' is used with which machine can convert this representation to a parsed structure as shown below,

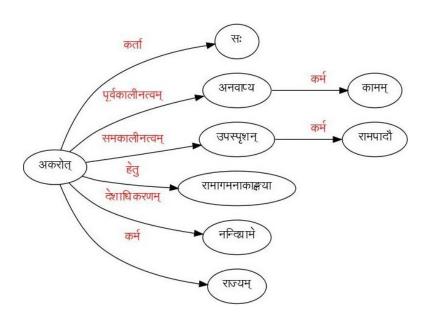


Figure 4.2: Same sentence by graphviz

4.2 Statistical Analysis of The Text

4.2.1 Frequency Analysis of Relations

There are 100 ślokas in Sańkṣepa Rāmāyaṇam. We used the prose text, where the words in ślokas have been rearranged according to the normal order of a prose text. This prose text had several words which were ellipsis of the words in the previous ślokas. These words were added to make the sentence complete. Of the 1176 words, 14 were indeclinable types, 110 kṛdanta verbs and 86 tiñantas, 3 verbs have apādāna expectancy [kṛ (अकरोत्), āp (प्राप्य), muc (प्रमुच्यते)], 4 verbs have sampradāna expectancy [śru (प्रतिशुश्राव), śaṁs (अशंसत्), vid (आवेदितम्), dā (दत्वा)]. While annotating these sentences, we did not go for fine grained distinction among the kārakas as suggested by Prof. Ramakrishnamacharyulu (2009). However we resorted to a coarse grained distinction.

The table below gives a list of relations used and their occurrences in the text.

Number	Relations	Occurrences
1.	viśeṣaṇam	229

Number	Relations	Occurrences
2.	karma	143
3.	kartā	139
4.	mukhyaviśeṣyam	126
5.	samuccayaḥ	120
6.	vākyasamuccitaḥ	57
7.	pūrvakālīnatvam	48
8.	vidheya kartā	29
9.	deśādhikaraṇam	29
10.	avadhāraṇam	27
11.	śeșe șașțhī sambandhaḥ	24
12.	kriyāviśeṣaṇam	23
13.	hetu	22
14.	anantarakālīnakriyādyotakam	15
15.	anantarakālīnakriyā	15
16.	kālādhikaraṇam	12
17.	upapada vibhakti sambandhaḥ	12
18.	upamānam	12
19.	samakālīnatvam	10
20.	sahādi sambandhāḥ	10
21.	prasajyapratiṣedhaḥ	10
22.	karaṇam	9
23.	ṣaṣṭhī karma	8
24.	samānadharma	7
25.	antarbhāvita sahārthaḥ	6
26.	upamānadyotakam	5
27.	sambodhanam	5
28.	viṣayādhikaraṇam	5
29.	nirdhāraṇam	5

Number	Relations	Occurrences
30.	tādarthyam	5
31.	akathitam	5
32.	vākyakarmadyotakam	4
33.	sampradānam	4
34.	sati saptamī	4
35.	vākyakarma	4
36.	prayojanam	4
37.	apādānam	3
38.	kāraṇakriyā	2
39.	ṣaṣṭhī-kartā	1
40.	ṣaṣṭhī	1
41.	viṣaya	1
42.	kāraṇadyotakam	1
43.	nitya sambandhaḥ	1
44.	samānādhikaraṇa dyotakam	1
45.	karma samānādhikaraṇam	1
46.	pratiyogī	1
47.	anuyogī	1

4.2.2 Need of New Relations

While annotating the text, we came across 14 types of new relations. As can be seen from this table, some of the relations such as $vidheyakart\bar{a}$, $v\bar{a}kyakarmadyotakam$, $v\bar{a}kyakarmad$, $k\bar{a}ranakriy\bar{a}$ etc., which are not present in the tagging scheme of Prof. K.V. Ramakrishnamacharyulu (2009). We describe below these relations,

1. **Anantarakālīna-kriyādyotakam**: This relation points to the kriyā which shows that there is another kriyā which happened after some other activity. For example, ततः हेमपिङ्गलः हरिवरः सुग्रीवः अगर्जत्।। (सं. रा. ६८). Here ततः is marked as ananatarakālīnakriyādyotakam.



Figure 4.3: Ananatarakālīna kriyādyotakam

2. **Viśeṣaṇam**: The relation of an adjective with the corresponding substantive is marked by *viśeṣaṇam*. For example, in the sentence तपस्वी वाल्मीकिः तपःस्वाध्यायनिरतं वाग्विदां वरं मुनिपुङ्गवं नारदं परिपप्रच्छ।। (सं. रा. १), तपःस्वाध्यायनिरतं, वरं and मुनिपुङ्गवं are viśeṣaṇas of नारद and तपस्वी is the viśeṣaṇa of वाल्मीकि. A viśeṣaṇa should have the same case endings and gender which the viśeṣa has.

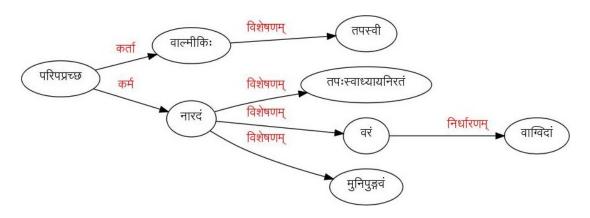


Figure 4.4: Viśesanam

3. **Upamānam, Upamāna dyotakam**: With whom a substantive is compared is known as *upamānam*. The person or thing being compared is *upameyam*. Example, चन्द्रः इव मुखम्. Here मुखम् is being compared with चन्द्रः, so मुखम् is upameyam. And with चन्द्रः it is being compared, so चन्द्रः is upamānam. The word that indicates the upamānam is marked as *upamāna dyotakam*. Such words are तुल्य, सम, सदृश, इव etc. For example, रामः सर्वदा सद्भिः समुद्रः इव अभिगतः भवति।। (सं. रा. १६).

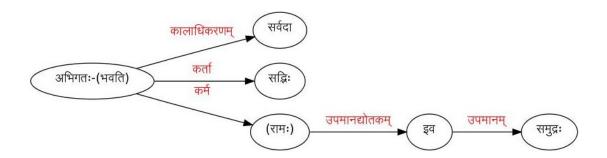


Figure 4.5: Upamānam and Upamāna dyotakam

In this sentence Rāma is being compared with समुद्रः, so समुद्रः is marked as upamānam and इव is the word which marks the comparison, so it is marked as upamāna dyotakam.

4. Anuyogī, Pratiyogī and Nitya sambandhaḥ: In some places like यथा-तथा, यतः-ततः, यदि-तिर्हे, चेत् etc. we marked the relation among them as nitya sambandhaḥ. And objects which are related through these words are marked as anuyogī and pratiyogī. Look at the sentence सीता यथा शशीनं रोहिणी (अनुगता) (तथा) रामम् अनुगता।। (सं. रा. २६-२८). This sentence has two different kartās, but it has only one verb अनुगता. For the purpose of marking the relations explicitly, we repeat this verb and mark the कर्ता and कर्म of this activity separately as सीता, राम in one case and रोहिणी, शशी in another case. The two activities are then linked by nitya sambandhaḥ relation within यथा-तथा. Whose अनुयोगी is सीता, राम and प्रतियोगी is रोहिणी, शशी.

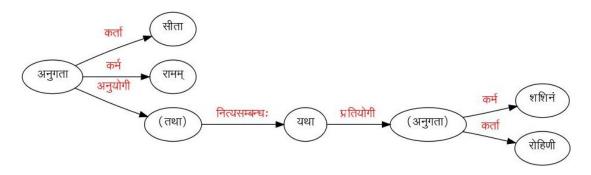


Figure 4.6: Anuyogī, Pratiyogī and Nitya sambandhah

5. Vākya karma and Vākya karma dyotakam : Some verbs such as कथ may take complete sentence as a karma. For example look at this sentence, राघव ! धर्मिनपुणां धर्मचारिणीं श्रमणां शबरीम् अभिगच्छ इति सः कबन्धः अस्य कथयामास।। (सं. रा. ५६-५७). Complete sentence whose मुख्यविशेष्यम् is अभिगच्छ is the karma of कथयामास, so अभिगच्छ is marked as vākya karma and this relation is indicated by इति. So इति is marked as vākya karma dyotakam.

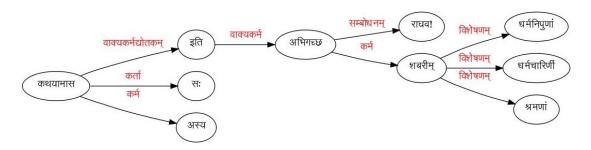


Figure 4.7: Vākya karma and Vākya karma dyotakam

6. Antarbhāvita sahārthaḥ: Consider the sentence तैः युक्तः नरः श्रूयताम्।। (सं. रा. ७). When tṛtīyā vibhakti is used in the presence of युज् धातु, it stands for the meaning of सह. Though there is no rules by Pāṇini regarding this, वृध्दो यूना तल्लक्षणश्चेदेव विशेषः - (अष्टा. १.२.६५) is considered to be a ज्ञापक for this and relation between तैः and युक्तः in this example interpreted as antarbhāvita sahārthaḥ.



Figure 4.8: Antarbhāvita sahārthah

7. Samānadharma: In case of comparisons, there must be some property which we compare two objects. That property of comparison is marked as samānadharma. For example, गाम्भीर्य सः समुद्रः इव धेर्येण हिमवान् इव, वीर्ये विष्णुना सदृशः च अस्ति।। (सं. रा. १७-१९), in this sentence through गम्भीरता, धेर्य, and वीर्य there is a comparison between समुद्रः and रामः, हिमवान् and रामः, विष्णु and रामः. Here the object of comparison between समुद्रः and रामः is गम्भीरता. So the similarity in

between समुद्रः and रामः is गम्भीरता. Meaning is 'how sea is deep likewise rāma is also very profound by his character'. So there is a similarity between sea's and rāma's character. So we marked the relation as samāna dharma.

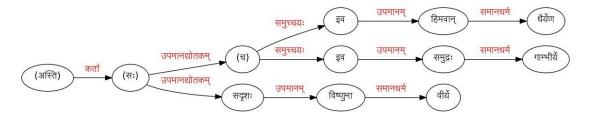


Figure 4.9: Samānadharma

8. **Avadhāraṇam**: Words which show the emphasis are marked as *avadhāraṇam*. e.g., तत्र एव वसता तेन जनस्थानिवासिनी कामरूपिणी राक्षसी शूर्पणखा विरूपिता।। (सं. रा. ४६). Here एव is emphasizing on तत्र, so एव is marked as avadhāraṇam.

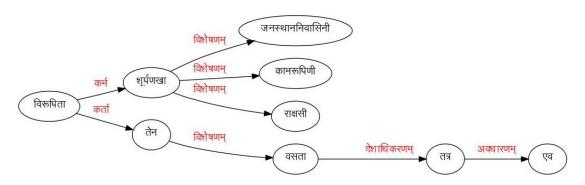


Figure 4.10: Avadhāraṇam

9. Viṣayaḥ: Generally the activities denoted by तुमुन्, are directly related with the main activity. But there are other usages of तुमुन् as well. e.g., Pāṇini's sūtra पर्याप्तिवचनेष्वलमर्थेषु तुमुन् (अष्टा० ३.४.६६), is used in the case of words indicating सामर्थ्य. This सामर्थ्य has always an expectancy of some activity, generally denoted by a verb ending in तुमुन्. Example, त्वं च एवंविधं नरं ज्ञातुं समर्थः असि।। (सं. रा. ५), So in this sentence we marked ज्ञातुं as the matter of समर्थ, and the relation name itself is विषय.

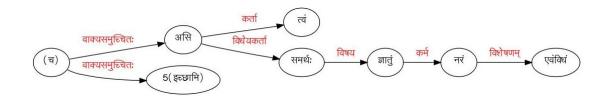


Figure 4.11: Vişayah

10. Karma samānādhikaraṇam and Samānādhikaraṇa dyotakam : त्वम् एव राजा धर्मज्ञः असि इति वचः रामम् अब्रवीत्।। (सं. रा. ३५-३६). In this sentence the main clause is रामम् इति वचः अब्रवीत् and इति refers to त्वम् एव राजा धर्मज्ञः. Thus the word वचः refers to the sentence त्वम् एव राजा धर्मज्ञः through the द्योतक word इति. We marked this relation as shown below.



Figure 4.12: Karma samānādhikaraṇam and Samānādhikaraṇa dyotakam

11. Vidheyakartā: The predicative adjective is marked as a vidheyakartā. When something is predicated of a noun, it is predicative adjective. In Sanskrit the predicative adjectives also show case-number-gender agreement with the noun. The verbs employed in case of sentences involving the predicative adjectives are अस्, भू and विद. It is also possible that these verbs are absent in the sentence as in the case of अश्वः श्वेतः. In such cases we do the अध्याहारः and mark the missing verb in parenthesis and then show the relation through this verb. In the example, सः रामः बुद्धिमान् नीतिमान् वाग्मी श्रीमान् शत्रुनिबर्हणः विपुलांसः महाबाहुः कम्बुग्रीवः महाहनुः च अस्ति।। (सं. रा. १). Rāma is višeṣya and all others are vidheyakartā.

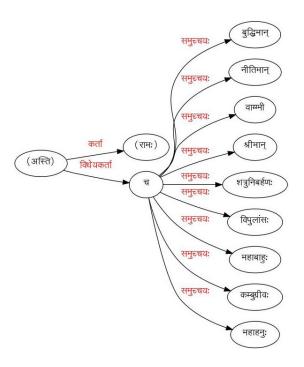


Figure 4.13: Vidheyakartā

12. Kāraṇa dyotakam and Kāraṇa kriyā: It means that relation which indicates the cause. Look at the example, अहम् एतत् श्रोतुम् इच्छामि, हि मे परं कौतूहलम् अस्ति।। (सं. रा. ५). In this sentence icchāmi is the main verb. Meaning of this sentence is 'I want to hear this, because I have great excitement to hear this'. Somebody wants to listen because he is excited, here excitement is the cause and is indicated by 'hi'. Kāraṇa kriyā means verb of the cause. Here अस्ति is the main verb of the cause, so it is Kāraṇa kriyā. And that one which indicates the Kāraṇa kriyātva is known as kāraṇa dyotakam. Here 'hi' is the द्योतक of Kāraṇa kriyā, so it is marked as Kāraṇa dyotakam.

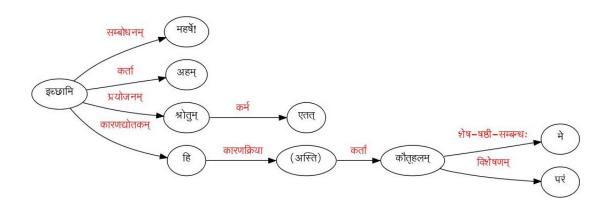


Figure 4.14: Kāraṇa dyotakam and Kāraṇa kriyā

13. Upapada vibhakti sambandhaḥ and Sahādi sambandhaḥ: When following some words the vibhakti gets changed then it is known as Upapadavibhaktiḥ. For example, वनचरै: सह वने वसतः तस्य रामस्य समीपं सर्वे ऋषयः असुररक्षसां वधाय अभ्यागमन्।। (सं. रा. ४३-४४). Here वनचर has tṛtīyā vibhakti because of सह. So it is marked as upapada-vibhakti-Sambandhaḥ. In those contexts when सहितः, सह occurs those are marked as sahādi-sambandhaḥ. In this sentence here सह is the sambandha which relates वनचरैः with वसतः रामस्य. So सह is marked as sahādi-sambandhah.

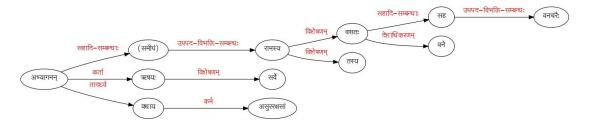


Figure 4.15: Upapada vibhakti sambandhah and Sahādi sambandhah

14. **Vākyasamuccitaḥ**: There is one relation in our tagging scheme as *samuccayaḥ*, it relates two or more noun constituents only. But at the time of tagging we faced such sentences where two or more sentences are related with each other. So we have to tag them also. So we tagged those relation name as *vākyasamuccitaḥ*. It relates two or more sentences. For example, क: आत्मवान् अस्ति, क:

जितक्रोध: द्युतिमान् अनसूयक: च अस्ति, संयुगे जातरोषस्य कस्य देवा: च बिभ्यति?।। (सं. रा. ४). In this sentence three verbs are there and they are joining through ca. So we marked all those three verbs as Vākyasamuccitaḥ.

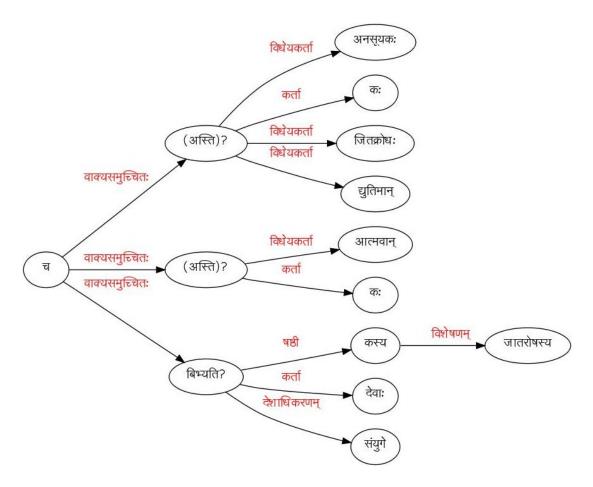


Figure 4.16: Vākyasamuccitah

4.3 Sannidhi Checking in Sanksepa Rāmāyanam

Before a sentence uttered, it is present in the mind of the speaker in some mental image of its own. That image needs to be linearized when it is to be uttered or written down. When the image is being linearized words have to be used and proper suffixes needs to be attached to words so that the interrelations between the words are clear. The word ordering of words in a sentence is very important. Indian Grammatical tradition mentions four factors that are essential in the proper functioning of sentences

and without the fulfilment of these four conditions a sentence cannot express the intended meaning. Those conditions are, आकाङ्क्षा, योग्यता, सिन्निधि, तात्पर्यज्ञानं. Among these factors *Sannidhi* is an important factor for words to be used within the limits of an appropriate time and space. The awareness of the togetherness of the words in a sentence is *sannidhi*. Sannidhi means proximity. This is an aspect of sequencing. If the duration of their use is prolonged, then words no longer have the capacity to give the desire meaning. Therefore, continuity of time and space is essential for a sentence to convey meaning. Now this is clear that the word uttered with a long gap do not lead to any cognition.

Here, we try to extend the concept of sannidhi to the main sentence and the subordinate clause within it. Our hypothesis is,

In a prose order, all the kārakas related to the verb in the sub-ordinate clause are always together, forming an island, and none of the kārakas of other verbs interfere in between.

To make the point clear, consider a sentence -

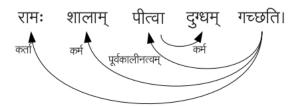
• रामः दुग्धम् पीत्वा शालाम् गच्छति ।

This sentence has two verbs viz. gacchati and pītvā. The expectancies of gacchati are rāmaḥ and śālām, and that of pītvā is dugdham, and we see that they are island within an island. In other words, if we draw arrows from the verbs to the kārakas, there are no cross-linkings.



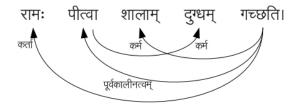
Now look at the following sentences. Though Sanskrit is a free-word-order language, the following sentence with exchange of the karmas is not acceptable.

• रामः शालाम् पीत्वा दुग्धम् गच्छति ।

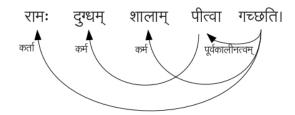


Equally unacceptable prose orders are

• रामः पीत्वा शालाम् दुग्धम् गच्छति ।



• रामः दुग्धम् शालाम् पीत्वा गच्छति।



which involve crossing of links expressing the relations.

We checked all the sentences in the Sankṣepa Rāmāyaṇam, and found that none of these sentences show any evidence of such crossing of links.

This strengthens our hypothesis that sannidhi may be interpreted as having the arguments close to the verb, without any intervention of arguments from other verbs. Of course, this hypothesis is restricted to the prose only.

Chapter 5

Deviations from Pāṇini's Rules

It is known that some of the constructions in Saṅkṣepa Rāmāyaṇam are ārṣa prayogas, i.e., they do not follow the Pāṇinian grammar, but are accepted because these are the usages by ṛṣis. We discuss below all those examples that deviate from Pāṇini's rules.

- Sentence: गुहेन लक्ष्मणेन सीतया सिहतः रामः वनेन वनं गत्वा बहूदकाः नदीः तीर्त्वा
 भरद्वाजस्य शासनात् चित्रकूटमनुप्राप्य वने रम्यम् आवसथं कृत्वा देवगन्धर्वसङ्काशाः ते
 त्रयः रममाणाः सुखं न्यवसन्।। (सं. रा. ३०-३२).
 - Problem: Meaning of this sentence is "With guha lakṣmaṇa sītā and rāma going from forest to forest and crossing streams containing deep water, he reached chitrakūṭa according to the instructions of bharadvāja and then they made a beautiful cottage and they sojourned there happily like gods and gandharvas". In this sentence, न्यवसन् is the main verb which is in plural, 3rd person and ते is the कर्ता of न्यवसन्. The sub-ordinate verbs गत्वा, तीत्वां, कृत्वा are modifiers of the main verb न्यवसन्. There are two problems with this sentence: By the rule समानकर्तृकयोः पूर्वकाले (अष्टा. ३.४.२१), the कर्ता of the sub-ordinate verb गत्वा is same as that of the main verb न्यवसन्. The कर्ता of गत्वा, is रामः. गुह, सीता and लक्ष्मण, are connected to गत्वा through रामः by सहितः. Thus all of these are सह कर्ताs. कर्ता of न्यवसन् is ते त्रयः. In case of पूर्वकालीन क्रिया, since the कर्ता of the two actions is involved is same it is mentioned only once. However here we have a case where the कर्ता of the two actions is different and hence mentioned separately.

Just to make the point clear, the sentence रामः दुग्धं पीत्वा शालाम् अगच्छत् is correct while, रामः दुग्धं पीत्वा सः शालाम् अगच्छत् sounds odd, सः is not needed. Further from the word ते त्रयः is not clear which of the three among the four persons viz, गुह, सीता, लक्ष्मण and राम is inferred. It is only the context which helps us to resolve the anaphora.

• Solution: One way to analyse this is to divide it into two parts, गुहेन लक्ष्मणेन सीतया सिहतः रामः वनेन वनं गत्वा बहूदकाः नदीः तीर्त्वा भरद्वाजस्य शासनात् चित्रकूटमनुप्राप्य वने रम्यम् आवसथं अकरोत् and देवगन्धर्वसङ्काशाः ते त्रयः रममाणाः सुखं न्यवसन्. So I divided the sentence into two. To fulfil the ākāṅṣā of the first sentence I added the verb अकरोत्. The analysis of first sentence is,

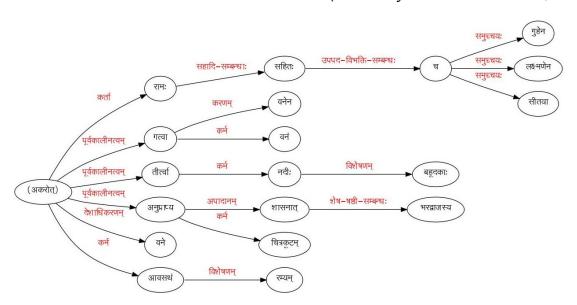


Figure 5.1: Deviation Ktvā1

And the second sentence is,

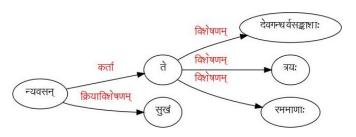


Figure 5.2: Deviation Ktvā2

- 2. Sentence: सः तेषां ऋषीणां राक्षसानां वधं प्रतिशुश्राव।। (सं. रा. ४३-४४).
 - **Problem**: प्रत्याङ्भ्यां श्रुवः पूर्वस्य कर्ता (अष्टा. १.४.४०), this sūtra says that, where śru dhātu is preceded by prati and ān upasargas and also there is a meaning of giving promise towards somebody in that case to whom promise is given that person will be in sampradānam. Likewise, here śru is preceded by प्रति upasarga. Here rāma promises to sages but sages are in ṣaṣṭhī, but they should have been in sampradānam, like, तेभ्यः ऋषिभ्यः, but here it is सः तेषां ऋषीणां.
 - Solution: There are two interpretations possible. (1) This is a clear example of वक्तृविवक्षा. Since वक्ता is not interested in highlighting the सम्प्रदानत्व in the ऋषी's, sixth case is used. (2) Another explanation is there is an ellipsis of कृते and, thus sixth case in presence of कृदन्त can be justified. Following the first possibility we interpret the sixth case in the meaning of सम्प्रदान.

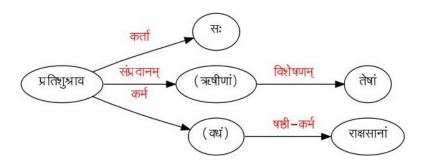


Figure 5.3: Deviation Sampradanam

- Sentence: दशरथः हितैः युक्तं ज्यैष्ठगुणैः युक्तं रामं यौवराज्येन संयोक्तुम् ऐच्छत्।।
 (सं. रा. १९-२१).
 - **Problem**: The tṛtīyā vibhakti used in हितै:, ज्येष्ठगुणै: and यौवराज्येन needs justification. What is the relation of यौवराज्येन with संयोक्तुम्? It is neither करणम् nor हेतु. Here adhikaraṇa is suitable in this place, because through pāṇinīya sūtra आधारोऽधिकरणम् (अष्टा. १.४.४५), a kāraka which serves as locus is termed as adhikaraṇam. Meaning is "he wishes to see Rāma in the place of emperor".

• Solution : In aṣṭādhyāyī Pāṇini used these types of sentences as examples but he did not mention any sūtras for this. For example, वृध्दो यूना तल्लक्षणश्चेदेव विशेषः - (अष्टा. १.२.६५). From this we come to know that if there is no use of the word सह directly then also tṛtīyā is used. Otherwise we have to infer the presence of a word सह or synonymous words of सह like समं, साकम् etc. Without using सह, Pāṇini applied tṛtīyā in original sentence वृध्दो यूना -(अष्टा. १.२.६५). In this sentence, यौवराज्येन संयोक्तुम्, हितैः युक्तं, ज्यैष्ठ गुणैः युक्तं means यौवराज्येन सह संयोक्तुम्, हितैः सह युक्तं, ज्यैष्ठ गुणैः सह युक्तं Because of this hidden सह only there is a third case in यौवराज्येन . So we marked the relation as सहार्थ. Many more examples of use of tṛtīyā vibhakti with युज् धातु were found in this text. For example, तैः युक्तः नरः श्रूयताम्, कः च चारित्रेण युक्तः अस्ति. In these cases also we can see the underlying sense of सह. In all such cases we marked the relation as सहार्थ.

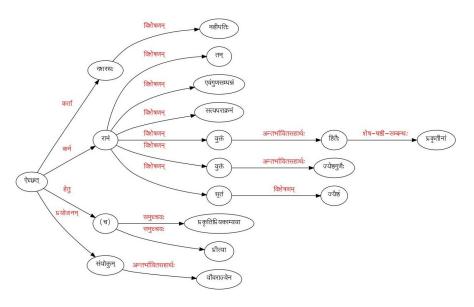


Figure 5.4: Deviation Karanam

- 4. Sentence: संयुगे जातरोषस्य कस्य देवाः बिभ्यति?।। (सं. रा. ४)
 - **Problem**: In this sentence जातरोषस्य कस्य should have been जातरोषात् कस्मात्, because in भीत्रार्थानां भयहेतुः (अष्टा . १.४.२५), Pāṇini explained that when there is a case of fear, the point of fear or who causes the fear, on that

point of fear the kāraka will be apādānam. But here it appeared as ṣaṣṭī. So how to show the relation? Shall we mark it as ṣaṣṭhī simply by looking the usage, or can we mark it as apādānam by knowing the internal meaning?

• **Solution**: After discussions it is decided that these types of usages of cases may be marked as ṣaṣṭhī. This is an example where apādāna is being expressed by ṣaṣṭhī. This is a very clear example of विवक्षातः कारकाणि भवन्ति.

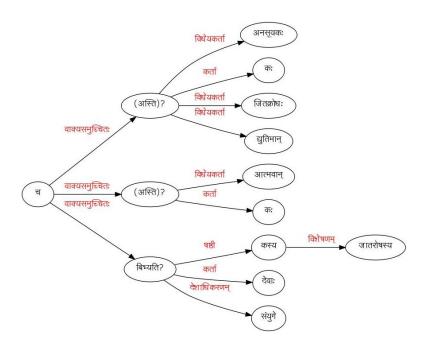


Figure 5.5: Deviation Apādānam1

- 5. Sentence: गुहेन लक्ष्मणेन सीतया सिहतः रामः वनेन वनं गत्वा।। (सं. रा. ३०-३२).
 - **Problem**: Here वनेन वनं गत्वा may be interpreted as vanāt vanam gatvā. i.e. from one jungle to another. Then shall we mark the relation as apādānam or karaṇam? We do not find any sūtras for this exception.
 - Solution: But after some discussions and analyzing of some texts we come to know that " Tṛtīyā is being used for the direction which indicates the particular place ". Example, " कतमेन दिग्भागेनगतः स जाल्मः " (वेणी. १)¹.

 $^{^{\}rm 1}{\rm Sanskrit}$ Rachana - The Students' Guide to Sanskrit Composition

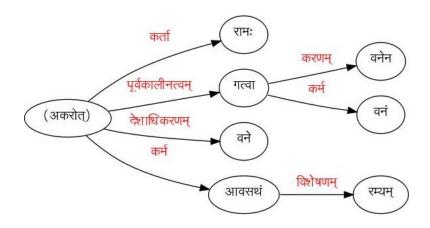


Figure 5.6: Deviation Apādānam2

- 6. Sentence : गाम्भीर्ये सः समुद्रः इव धैर्येण हिमवान् इव,वीर्ये विष्णुना सदृशः च अस्ति । (सं. रा. १७-१९).
 - **Problem**: Here in the case of धेर्येण हिमवान इव , क्षमया पृथिवीसम. What does the tṛtīyā vibhakti specify? What is the sūtra, through which we can mark the relation?
 - Solution: In this sentence through गम्भीरता, धेर्य, and वीर्य there is a comparison between हिमवान् and रामः, समुद्रः and रामः, विष्णु and रामः. Here the object of comparison between समुद्रः and रामः is गम्भीरता. Samudra is the upamāna and rāma is upameya, and the similarity in between them is गम्भीरता. Meaning is 'how sea is deep likewise rāma is also very profound by his character'. So there is a similarity between sea's and rāma's character. So we marked the relation as samāna dharma. Again there is a comparison between rāma and samudra, so rāma is upamānam and samudra is upameyam, and इव is the उपमान द्योतकम्. Through इव only we know that समुद्रः is the उपमान of rāma. The word गाम्भीर्य, धेर्यण and वीर्य indicates the समानधर्म. Now the question is how to account for the tṛtīyā vibhakti? In the sense of the viṣaya of comparison, seventh case would have been preferred.

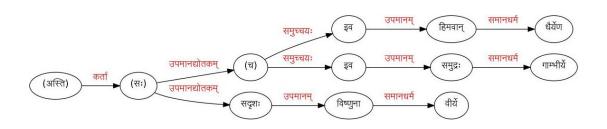


Figure 5.7: Deviation Adhikarṇam

Thus we see that though, from the tagging point of view we have resolved all the cases, still at conceptual level there are problems which need to be addressed. Because of the time constraint, searching the literature and commentaries on various issues raised here could not be done.

Chapter 6

Conclusion

In order to put the kāraka tagging scheme to test in detail, we have taken one hundred ślokas of Saṅkṣepa Rāmāyaṇam in the form of <code>anvaya</code>, as the specimen of analysis. This resulted in the generation of certain unexpected new relations, some of which do not follow any prescribed grammatical rules, and thus needed interpretation, and some of which are āṛṣaprayogas. Identifying common kāraka relations such as Kartā, Karma etc. was an easy task.

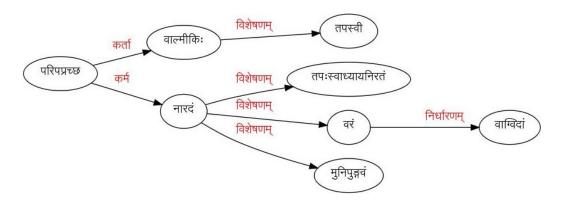
This was overall a challenging exercise. If we want to make the best use of our \hat{Sab} dabodha theories, it is necessary to analyze critically many such texts and develop the tagging scheme as complete as possible in order to handle variety of Sanskrit texts. The manually analyzed text, definitely will serve as a benchmark for developing automatic analyzers.

Appendix A

Examples and Analysis of The Text

- One śloka can comprise of more than one grammatical sentences as constituents. For example, the sloka "को न्वस्मिन् साम्प्रतं लोके गुणवान् कश्च वीर्यवान्। धर्मज्ञश्च कृतज्ञश्च सत्यवाक्यो दृढवृत:॥" (सं. रा. २) contains three short sentences. (See diagram A2, A2.1, A2.2). As the schema tag grammatically structured sentences, all the constituent sentences are split and tagged independently.
- These constistuent sentences might be related to one another like, "2(अस्ति)" of diagram A2.1 is related to "(अस्ति)" of diagram A2.
- Words like "अस्ति" are added at elliptical points to satisfy expectancies and thus to form a structured sentence. Such words are given in parantheses.

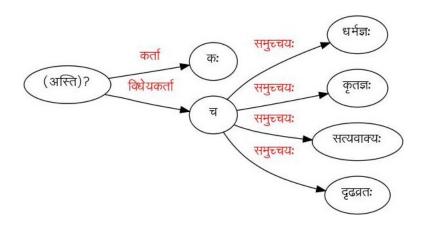
A1: तपस्वी वाल्मीकिः तपःस्वाध्यायनिरतं वाग्विदां वरं मुनिपुङ्गवं नारदं परिपप्रच्छ॥१॥



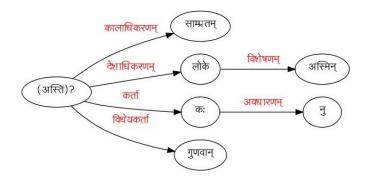
A2.1: कः च वीर्यवान् (अस्ति)?



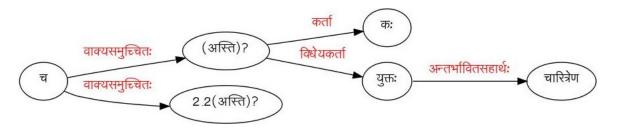
A2.2: कः धर्मज्ञः कृतज्ञः सत्यवाक्यः दृढव्रतः च (अस्ति)?॥२॥



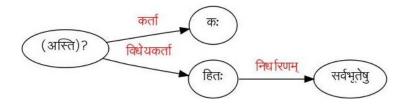
A2: साम्प्रतम् अस्मिन् लोके कः नु गुणवान् (अस्ति)?



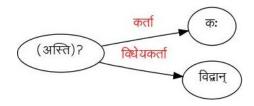
A3:कः च चारित्रेण युक्तः (अस्ति)?



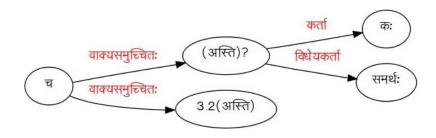
A3.1: कः सर्वभूतेषु हितः (अस्ति)?



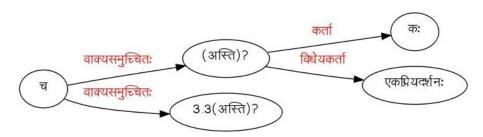
A3.2: कः विद्वान् (अस्ति)?



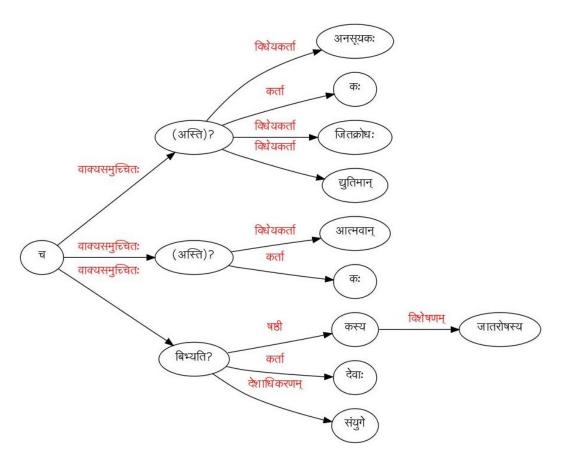
A3.3: कः च समर्थः (अस्ति)?



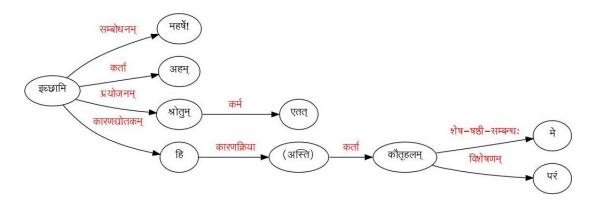
A3.4: कः च एकप्रियदर्शनः (अस्ति)॥३॥

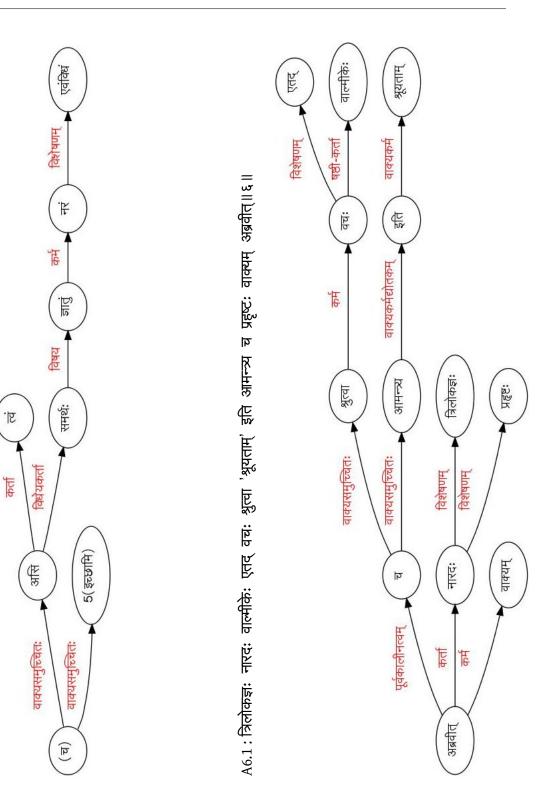


A4 : कः आत्मवान् (अस्ति)? कः जितक्रोधः द्युतिमान् अनसूयकः (अस्ति)? संयुगे जातरोषस्य कस्य देवाः च बिभ्यति ?॥४॥



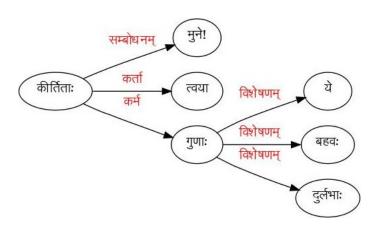
A5: महर्षे ! अहम् एतत् श्रोतुम् इच्छामि, हि मे परं कौतूहलम् (अस्ति)।



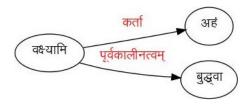


A5.1 : त्वं (च) एवंविधं नरं ज्ञातुं समर्थः असि॥५॥

A7 : मुने ! त्वया ये बहवः दुर्लभाः गुणाः कीर्तिताः



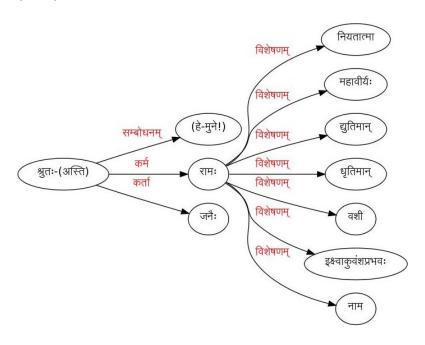
A7.1: अहं बुद्धवा वक्ष्यामि॥७॥



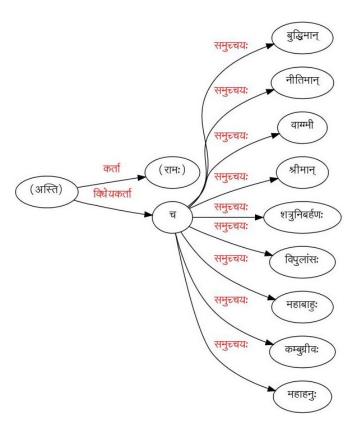
A7.2: तैः युक्तः नरः श्रूयताम्।



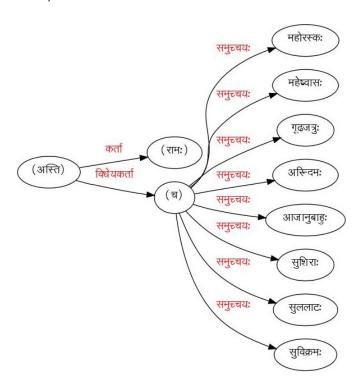
A8: (हे मुने !) नियतात्मा महावीर्यः द्युतिमान् धृतिमान् वशी इक्ष्वाकुवंशप्रभवः रामः नाम जनैः श्रुतः (अस्ति)॥८॥



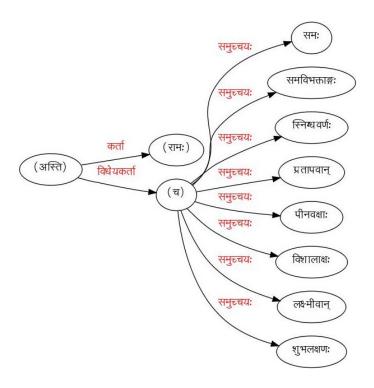
A9 : (रामः) बुद्धिमान् नीतिमान् वाग्ग्मी श्रीमान् शत्रुनिबर्हणः विपुलांसः महाबाहुः कम्बुग्रीवः महाहनुः च (अस्ति)॥१॥



A10 : (रामः) महोरस्कः महेष्वासः गूढजत्रुः अरिन्दमः आजानुबाहुः सुशिराः सुललाटः सुविक्रमः (च अस्ति)॥१०॥



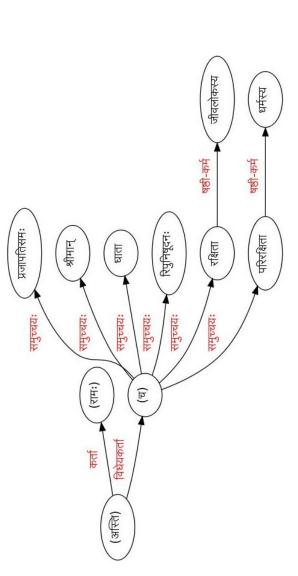
A11: (रामः) समः समविभक्ताङ्गः स्निग्धवर्णः प्रतापवान् पीनवक्षाः विशालाक्षः लक्ष्मीवान् शुभलक्षणः (च अस्ति)॥११॥



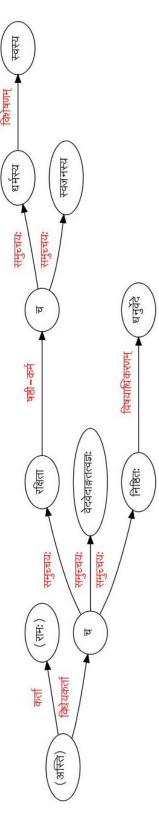
प्रजाना A12 : (रामः) धर्मज्ञः सत्यञ्जधः प्रजानां हिते च रतः यशस्वी ज्ञानसम्पन्नः शुचिः वश्यः समाधिमान् च (अस्ति)॥१२॥ शेष-षष्ठी-सम्बन्धः हिते विषयाधि करणम् समाधिमान् ज्ञानसम्पन्नः सत्यसम्धः यशस्वी धर्मज्ञ: शुविः व्हय: रतः समुच्चय: समुच्चय: समुच्चय: समुच्चय: समुच्चय: समुच्चय: समुच्चय: समुच्चय: (रामः) व व विधेयकर्ता विधेयकर्ता कर्ता (अस्ति)

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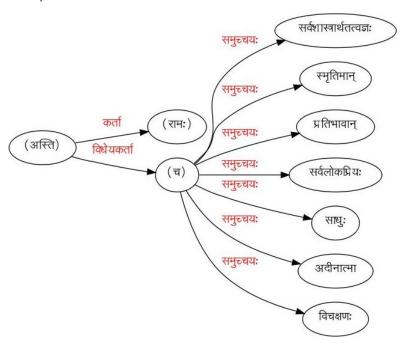
A13 : (रामः) प्रजापतिसमः श्रीमान् धाता रिपुनिषूदनः जीवलोकस्य रक्षिता धर्मस्य (च) परिरक्षिता (अस्ति)॥१३॥



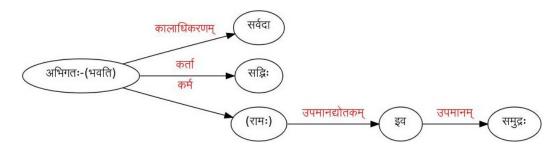
A14 : (रामः) स्वस्य धर्मस्य स्वजनस्य च रक्षिता वेदवेदाङ्गतत्वज्ञः धनुवेदे च निष्ठितः (अस्ति)॥१४॥



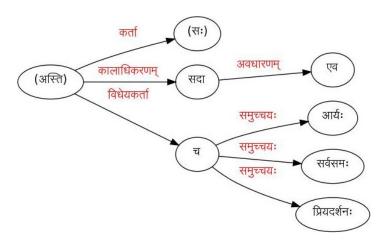
A15 : (रामः) सर्वशास्त्रार्थतत्वज्ञः स्मृतिमान् प्रतिभावान् सर्वलोकप्रियः साधुः अदीनात्मा विचक्षणः (च अस्ति)॥१५॥



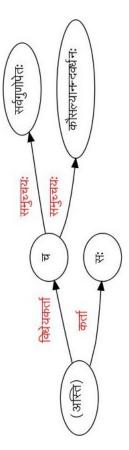
A16: (रामः) सर्वदा सद्भिः समुद्रः इव अभिगतः (भवति)।



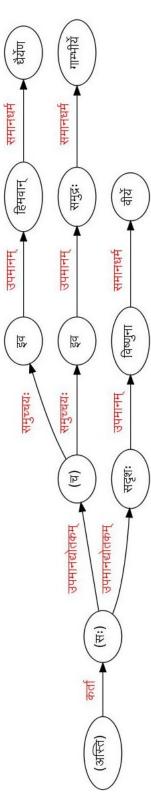
A16.1 : (सः) आर्यः सर्वसमः सदा एव प्रियदर्शनः च (अस्ति)॥१६॥



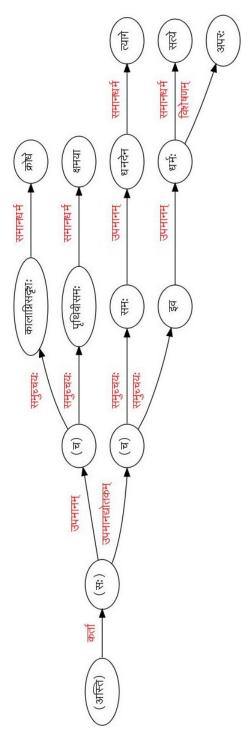
A17-19,1 : सर्वगुणोपेतः सः कौसल्यानन्दवर्धनः च (अस्ति) ।



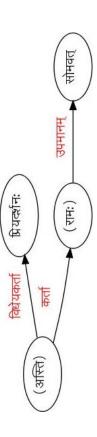
A17-19.2 : गाम्भीर्ये (सः) समुद्रः इव, धैर्येण हिमवान् इव, वीर्ये विष्णुना सदृशः (च अस्ति)।



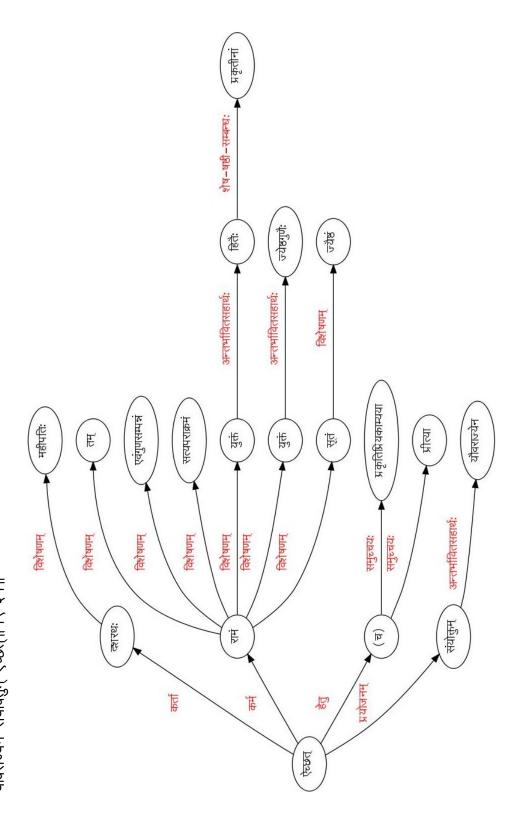
A17-19.3 : (सः) क्रोधे कालाग्निसदृशः, क्षमया पृथिवीसमः (च), त्यागे धनदेन समः सत्ये अपरः धर्मः इव (च अस्ति)॥१७-१९॥



A17-19.4 : (रामः) सोमवत् प्रियदर्शनः (अस्ति)।



A19-21 : महीपतिः दशरथः तम् एवंगुणसम्पन्नं सत्यपराक्रमं प्रकृतीनां हितैः युक्तं ज्येष्ठगुणैः युक्तं ज्येष्ठं सुतं रामं प्रकृतिप्रियकाम्यया प्रीत्या (च) यौवराज्येन संयोक्तुम् ऐच्छत्॥१९-२१॥



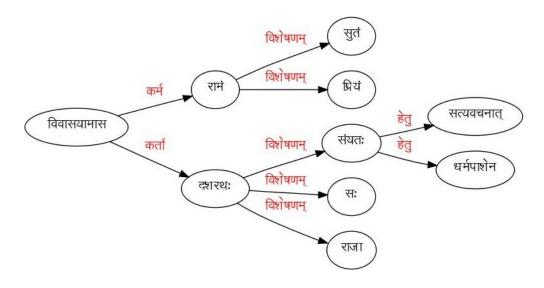
शेष-षष्ठी-सम्बन्धः अभिषेकसम्मारान् भाय द्म 덱 विशेषणम् विशेषणम् विशेषणम् कर्म दृष्ट्वा कैकेयी बरम् Œ. कर्ता 20(ऐच्छत्)

भरतस्य

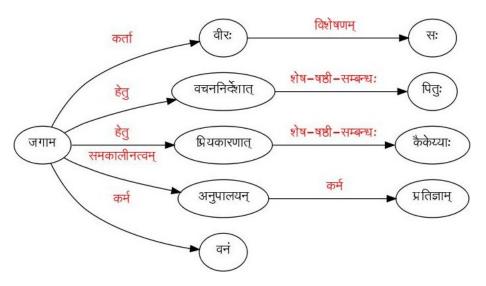
अभिषेचनं

A21-22 : अथ तस्य अभिषेकसम्भारान् दृष्ट्वा पूर्वंदत्तवरा भार्या देवी कैकेयी रामस्य विवासनं भरतस्य अभिषेचनं च एनं वरम् अयाचत॥२१-२२॥

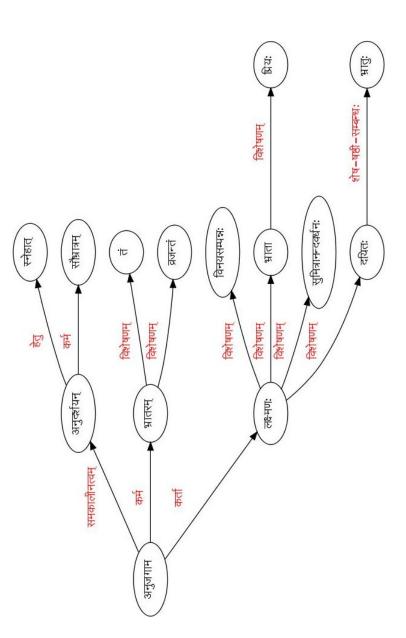
A23 : सत्यवचनात् धर्मपाशेन संयतः सः राजा दशरथः प्रियं सुतं रामं विवासयामास॥२३॥



A24 : सः वीरः पितुः वचननिर्देशात् कैकेय्याः प्रियकारणात् प्रतिज्ञाम् अनुपालयन् वनं जगाम॥२४॥

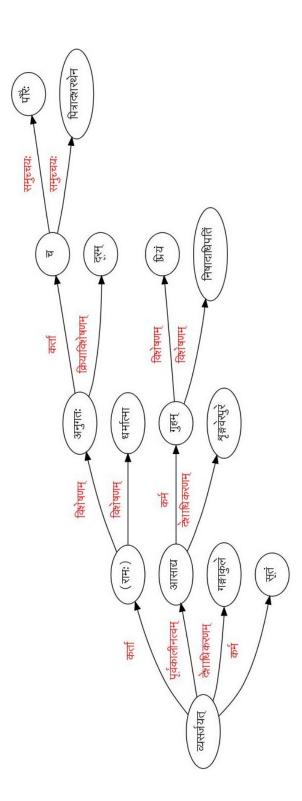


A25-26 : विनयसम्पन्नः सुमित्रानन्दवर्धनः भ्रातुः दयितः प्रियः भ्राता लक्ष्मणः स्नेहात् सौभ्रात्रम् अनुदर्शयन् तं व्रजन्तं भ्रातरम् अनुजगाम ॥२५-२६॥

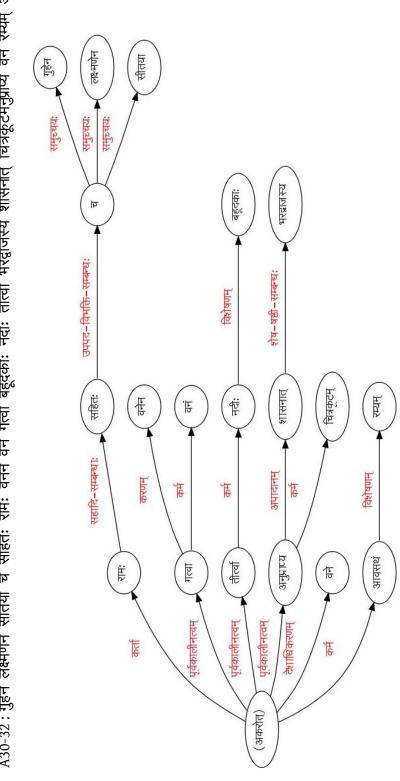


A26-28 : जनकस्य कुले जाता देवमाया इव निर्मिता रामस्य दयिता नित्यं प्राणसमा हिता भार्या सर्वलक्षणसम्पन्ना नारीणाम् उत्तमा वधूः जनकस्य नारीणाम् शशिनं रोहिजी देवमाया नित्यं शेष-षष्ठी-सम्बन्धः विशेषणम् उपमानम् कर्म कर्ता (अनुगता) प्राणसमा रामस्य उत्तमा किले इंद शेष-षष्ठी-सम्बन्धः उपमानद्योतकम् देशाधिकरणम् विशेषणम् प्रतियोगी उपमानम् सीता अपि यथा शशिनं रोहिणी (अनुगता) (तथा) रामम् अनुगता॥२६-२८॥ सर्वलक्षणसम्पन्ना निर्मिता दथिता जापा हिता यथा अपि भायी वहाः नित्यसम्बन्ध: अवधारणम् विशेषणम् विशेषणम् विशेषणम् विशेषणम् विशेषणम् विशेषणम् विशेषणम् रामम् (तथा) सीता अनुयोगी कर्ता कर्म अनुगता

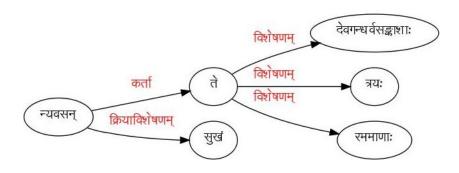
A28-29 : पौरैः पित्रादशरथेन च दूरम् अनुगतः धर्मात्मा (रामः) शृद्भवेरपुरे निषादाधिपतिं प्रियं गुहम् आसाद्य गङ्गाकुले सूतं व्यसर्जयत्॥२८-२९॥



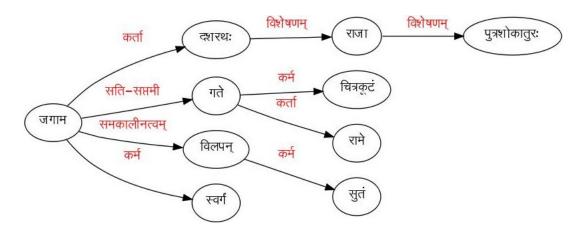
A30-32 : गुहेन लक्ष्मणेन सीतया च सहितः रामः वनेन वनं गत्वा बहूदकाः नदीः तीत्वां भरद्वाजस्य शासनात् चित्रकूटमनुप्राप्य वने रम्यम् आवसधं (अकरोत्) ।



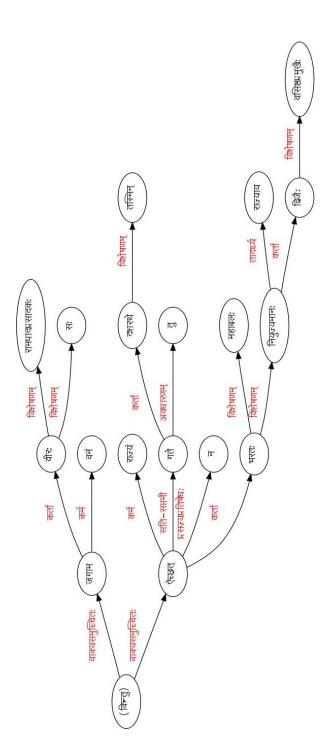
A30-32.1 : देवगन्धर्वसङ्काशाः ते त्रयः रममाणाः सुखं न्यवसन्॥३०-३२॥



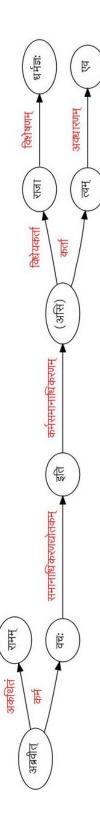
A32-33: रामे चित्रकूटं गते पुत्रशोकातुरः राजा दशरथः सुतं विलपन् स्वर्गं जगाम॥३२-३३॥



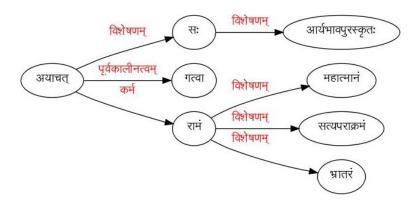
A33-34 : तस्मिन् दशरथे गते तु वसिष्ठप्रमुखैः द्विजैः राज्याय नियुज्यमानः महाबलः भरतः राज्यं न ऐच्छत् (किन्तु) रामपादप्रसादकः सः वीरः वनं जगाम॥३३-३४॥



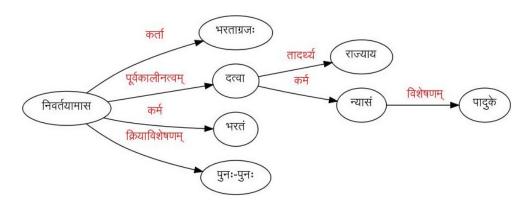
A35-36: त्वम् एव राजा धर्मज्ञः (असि) इति वचः रामम् अब्रवीत्॥३५-३६॥



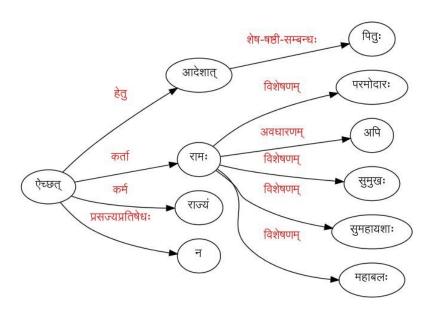
A35-36.1 : आर्यभावपुरस्कृतः सः गत्वा महात्मानं सत्यपराक्रमं भ्रातरं रामम् अयाचत्।



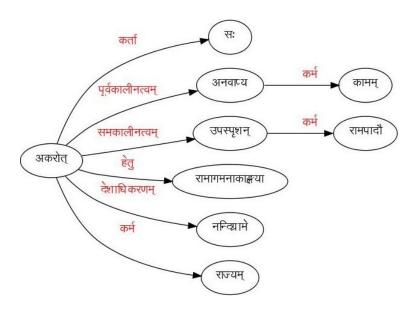
A36-38.1 : भरताग्रजः राज्याय पादुके न्यासं दत्वा भरतं पुनः पुनः निवर्तयामास॥३६-३८॥



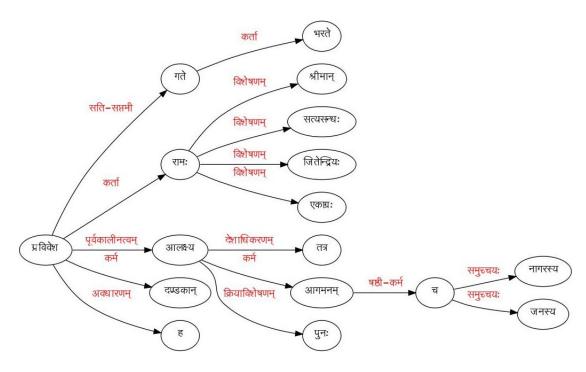
A36-38: परमोदारः सुमुखः सुमहायशाः महाबलः रामः अपि पितुः आदेशात् राज्यं न ऐच्छत्।



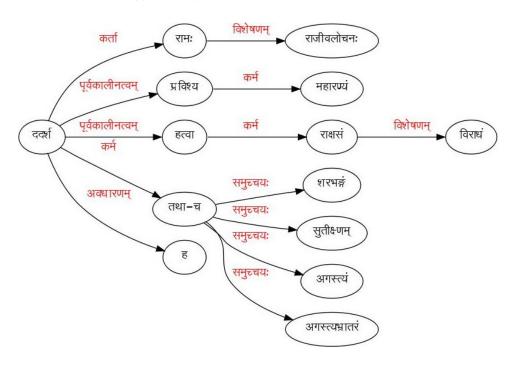
A38-39 : सः कामम् अनवाप्य रामपादौ उपस्पृशन् रामागमनकाङ्क्षया निन्दग्रामे राज्यम् अकरोत् ॥ ३ ι - ३९ ॥



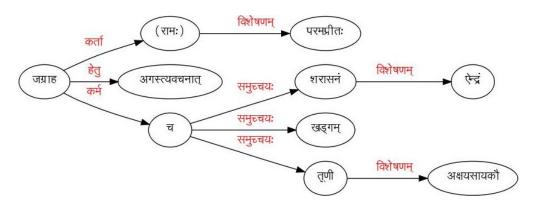
A39-40 : भरते गते श्रीमान् सत्यस्रधः जितेन्द्रियः एकाग्रः रामः नागरस्य जनस्य च तत्र आगमनम् पुनः आलक्ष्य दण्डकान् प्रविवेश ह॥३९-४०॥



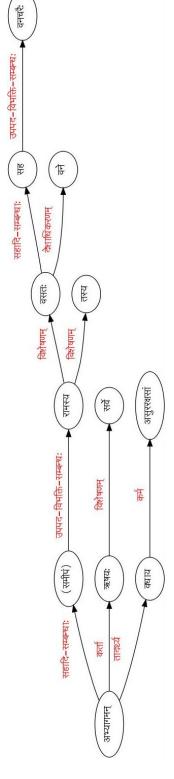
A41-42: राजीवलोचनः रामः महारण्यं प्रविश्य विराधं राक्षसं हत्वा शरभङ्गं सुतीक्ष्णम् अगस्त्यं तथा-च अगस्त्यभ्रातरं ददर्श ह॥४१-४२॥



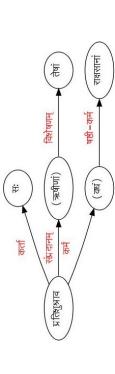
A42-43 : परमप्रीतः (रामः) अगस्त्यवचनात् ऐन्द्रं शरासनं खड्गम् अक्षयसायकौ तूणी च जग्राह॥४२-४३॥



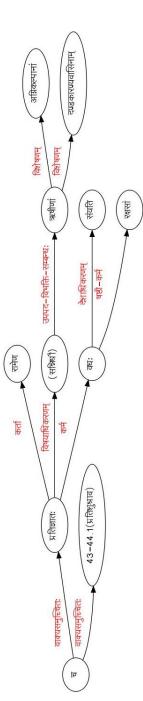
A43-44 : वनचरै: सह वने वसतः तस्य रामस्य (समीपं) सर्वे ऋषयः असुररक्षसां वधाय अभ्यागमन्।



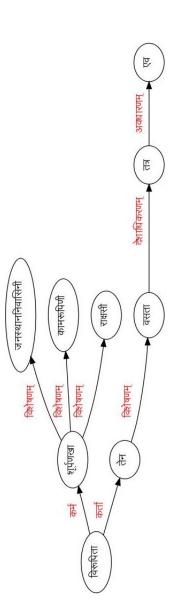
A43-44.1 : सः तेषां (ऋषीणां) राक्षसानां (वधं) प्रतिशुश्राव॥४३-४४॥



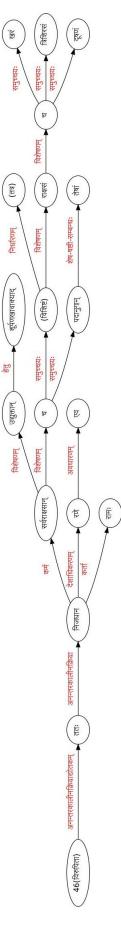
A45 : रामेण च अग्निकल्पानां दण्डकारण्यवासिनाम् ऋषीणां (सन्निधौ) संयति रक्षसां वधः प्रतिज्ञातः॥४५॥



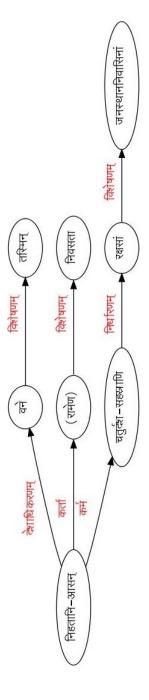
A46 : तत्र एव वसता तेन जनस्थाननिवासिनी कामरूपिणी राक्षसी शूर्पणखा विरूपिता॥४६॥



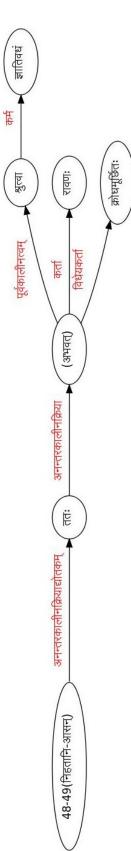
A47-48 : ततः शूर्पणखावाक्याद् उद्युक्तान् सर्वराक्षसान् (तत्र विशिष्टं) खरं त्रिशिरसं दूषणं च राक्षसं तेषां पदानुगान् च रणे एव रामः निजघान॥ ४७-४८॥



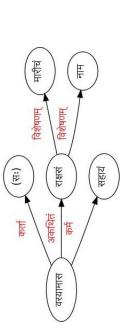
A48-49 : तिस्मन् वने निवसता (रामेण) जनस्थाननिवासिनां रक्षसां चतुर्दश-सहस्राणि निहतानि-आसन्॥४८-४९॥



A49-50 : ततः ज्ञातिवधं श्रुत्वा रावणः क्रोधमूष्ठिंतः (अभवत्) ।

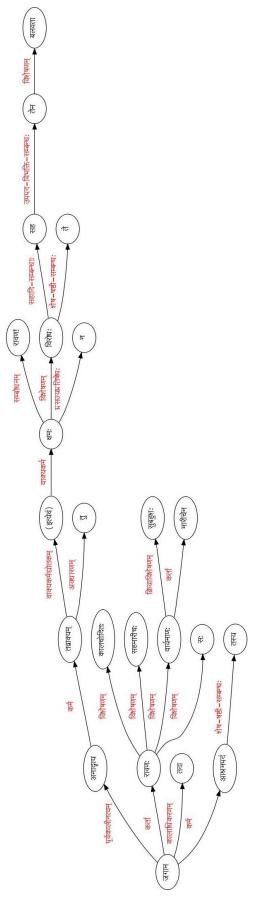


A49-50.1: (स:) मारीचं नाम राक्षसं सहायं वरयामास॥४९-५०॥

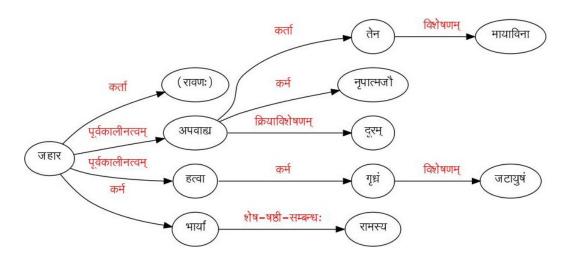


A50-52 : रावण ! बलवता तेन (सह) ते विरोधः न क्षमः (इत्येवं) मारीचेन सुबहुशः वार्यमाणः सः रावणः कालचोदितः तद्वाक्यम् अनादृत्य तदा सहमारीचः

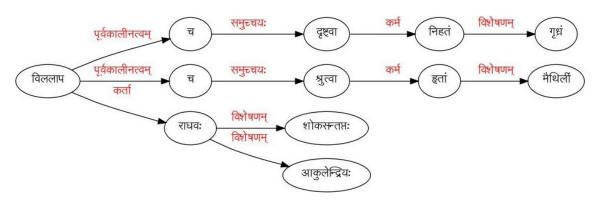
तस्य आश्रमपदं जगाम॥५०-५२॥



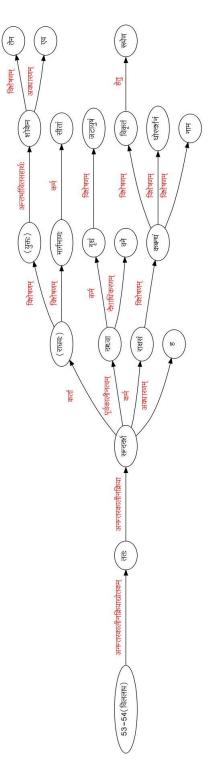
A52-53: (रावणः) तेन मायाविना नृपात्मजौ दूरम् अपवाह्य गृध्रं जटायुषं हत्वा रामस्य भार्यां जहार॥५२-५३॥



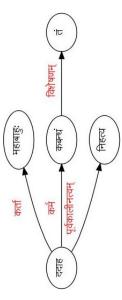
A53-54: गृध्रं च निहतं दृष्ट्वा मैथिलीं च हृतां श्रुत्वा शोकस्नतप्तः आकुलेन्द्रियः राघवः विललाप॥५३-५४॥



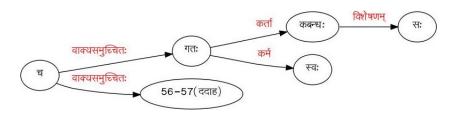
A54-55 : ततः तेन एव शोकेन (युक्तः राघवः) गृध्नं जटायुषं दग्ध्वा वने सीतां मार्गमाणः रूपेण विकृतं घोरदर्शनं कबन्धं नाम राक्षसं स्रददर्श ह॥५४-५५॥



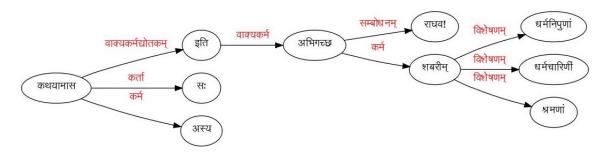
A56-57 : महाबाहुः कबन्धं निहत्य तं ददाह ।



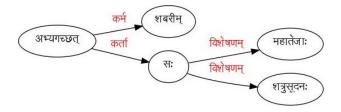
A56-57.1: सः च कबन्धः स्वः गतः।



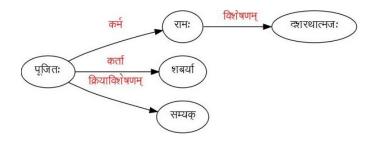
A56-57.2 : राघव ! धर्मनिपुणां धर्मचारिणीं श्रमणां शबरीम् अभिगच्छ इति सः अस्य कथयामास॥५६-५७॥



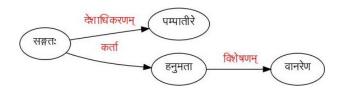
A57-58: सः महातेजाः शत्रुसूदनः शबरीम् अभ्यगच्छत्।



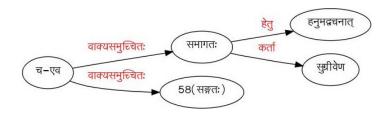
A57-58.1 : दशरथात्मजः रामः शबर्या सम्यक् पूजितः॥५७-५८॥



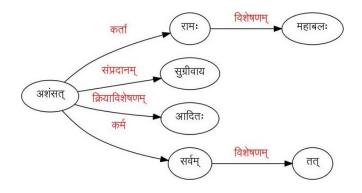
A58 : पम्पातीरे वानरेण हनुमता सङ्गतः॥५ ८॥



A59 : हनुमद्वचनात् च-एव सुग्रीवेण समागतः॥५९॥



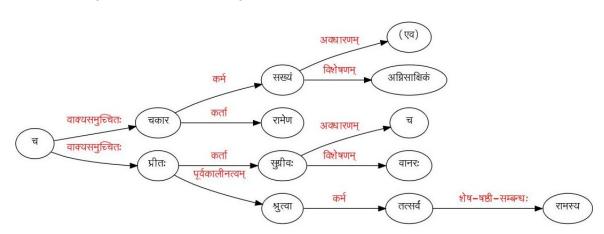
A59.1: महाबलः रामः सुग्रीवाय आदितः तत् सर्वम् अशंसत्॥५९॥



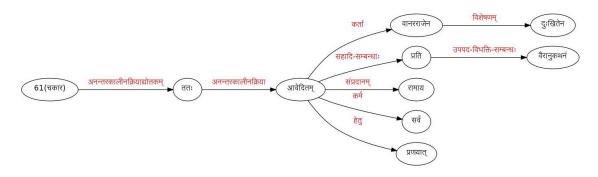
A60 : विशेषतः सीतायाः यथावृत्तम् अशंसत्॥६०॥



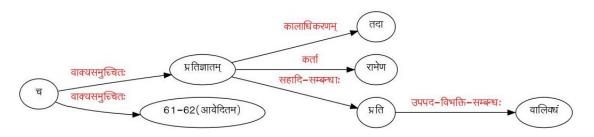
A61 : वानरः सुग्रीवः च रामस्य तत्सर्वं श्रुत्वा प्रीतः च रामेण अग्निसाक्षिकं (एव) सख्यं चकार॥६१॥



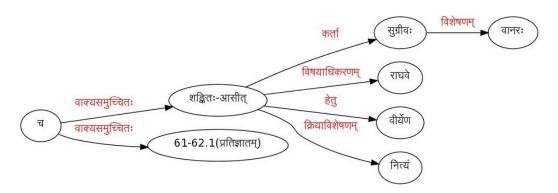
A61-62: ततः दुःखितेन वानरराजेन वैरानुकथनं प्रति रामाय सर्वं प्रणयात् आवेदितम्।



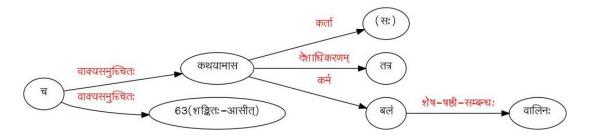
A61-62.1: तदा च रामेण वालिवधं प्रति प्रतिज्ञातम्॥६१- ६२॥



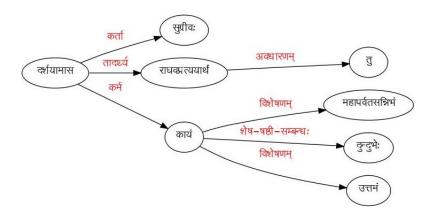
A63: वानरः सुग्रीवः राघवे वीर्येण नित्यं शङ्कितः च आसीत् ।



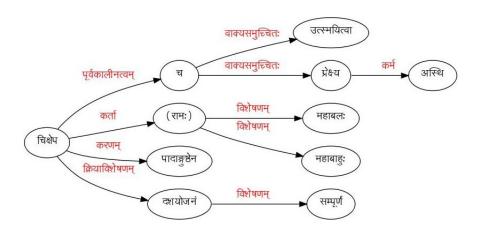
A63.1: (सः) तत्र वालिनः बलं च कथयामास॥६३॥



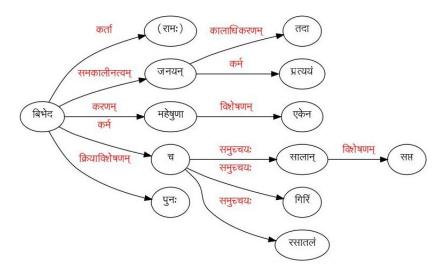
A64: सुग्रीवः राघवप्रत्ययार्थं तु महापर्वतसन्निभं दुन्दुभेः उत्तमं कायं दर्शयामास॥६४॥



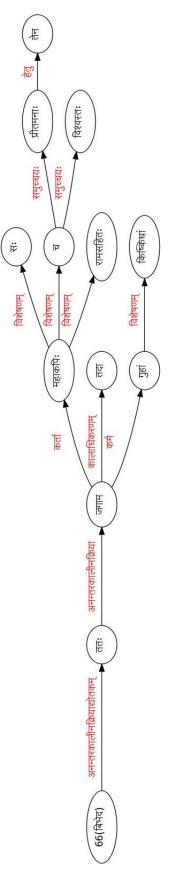
A65: महाबाहुः महाबलः (रामः) अस्थि प्रेक्ष्य उत्स्मयित्वा च पादाङ्गुष्ठेन सम्पूर्णं दशयोजनं चिक्षेप॥६५॥



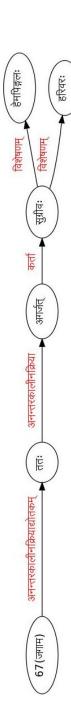
A66: तदा (रामः) प्रत्ययं जनयन् एकेन महेषुणा सप्त सालान् गिरिं रसातलं च पुनः बिभेद॥६६॥



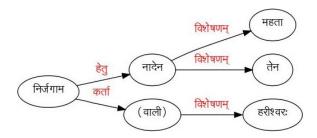
A67 : ततः स महाकपिः तेन प्रीतमनाः विश्वस्तः च तदा रामसहितः किष्किधां गुहां जगाम॥६७॥



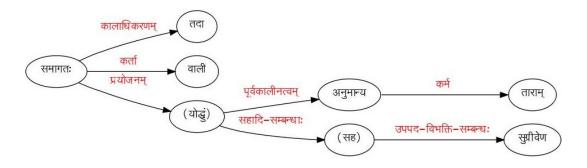
A68: ततः हेमपिङ्गलः हरिवरः सुग्रीवः अगर्जत्



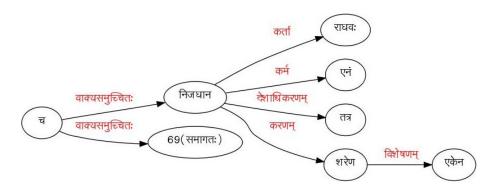
A68.1: तेन महता नादेन हरीश्वरः (वाली) निर्जगाम॥६८॥



A69: तदा वाली ताराम् अनुमान्य सुग्रीवेण (सह) (योद्धुं) समागतः।



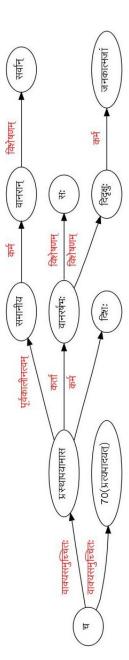
A69.1 : राघवः च एनं तत्र एकेन शरेण निजघान॥६९॥



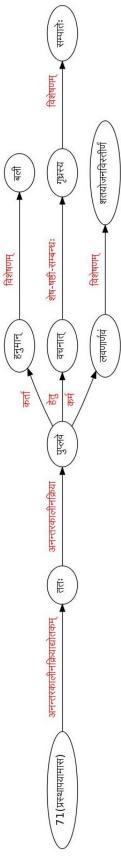
A70: ततः राघवः सुग्रीववचनात् आहवे वालिनं हत्वा तद्राज्ये सुग्रीवम् एव प्रत्यपादयत्॥७०॥



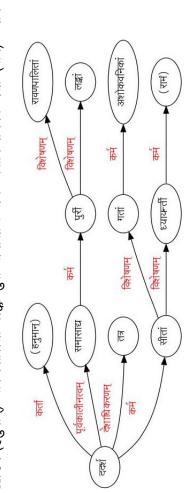
A71 : सः च वानरर्षभः जनकात्मजां दिदृक्षुः सर्वान् वानरान् समानीय दिशः प्रस्थापयामास॥७१॥



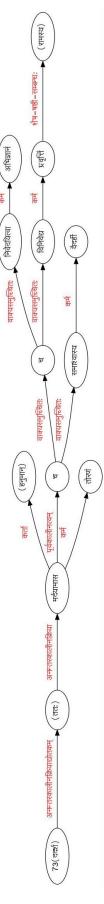
A72 : ततः बली हनुमान् सम्पातेः गृधस्य वचनात् शतयोजनविस्तीणै लवणार्णवं पुप्लवे॥७२॥



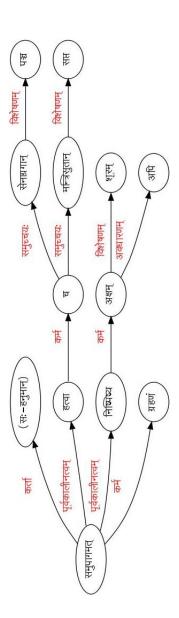
A73 : (हनुमान्) रावणपालितां लङ्कां पुरीं समासाद्य तत्र अशोकवनिकां गतां (रामं) ध्यायन्तीं सीतां ददर्श॥७३॥



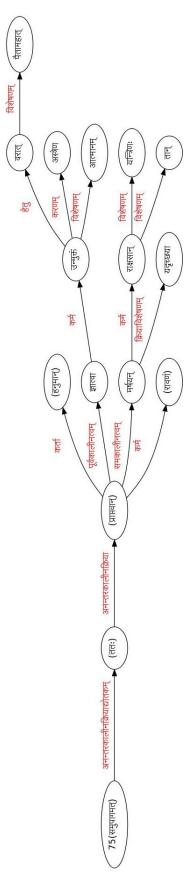
A74: (ततश्च हनुमान्) अभिज्ञानं निवेदयित्वा प्रवृत्तिं (रामस्य) विनिवेद्य च वैदहीं समाश्वास्य च तोरणं मर्दयामास ।७४॥



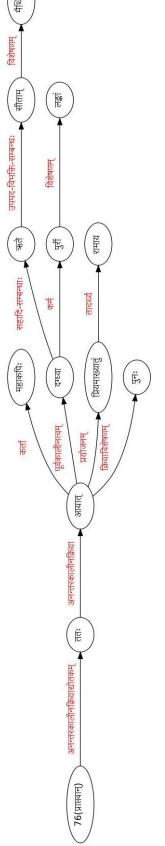
A75: (सः-हनुमान्) पञ्च सेनाग्रगान् सप्त मन्त्रिसुतान् च हत्वा शूरम् अक्षम् अपि निष्पिष्य ग्रहणं समुपागमत्॥७५॥



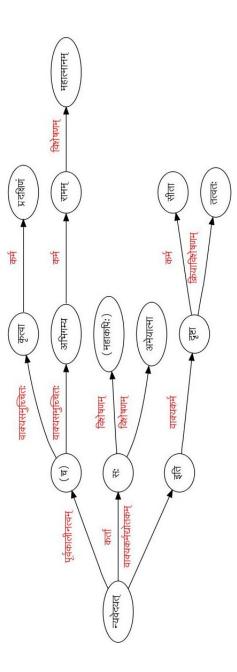
A76 : (हनुमान्) पैतामहात् वरात् अस्त्रेण आत्मानम् उन्मुक्तं ज्ञात्वा यन्त्रिणः तान् राक्षसान् यदृच्छया मर्षयन् (रावणं प्राप्तवान्)॥७६॥



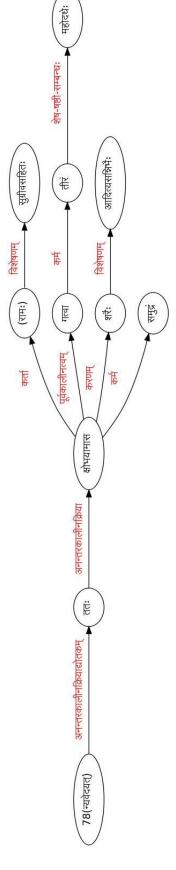
A77 : ततः महाकपिः मैथिलीं सीताम् ऋते लङ्कां पुरीं दग्ध्वा रामाय प्रियमाख्यातुं पुनः आयात्॥७७॥



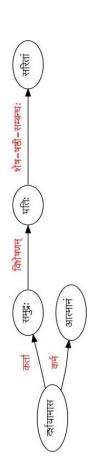
A78 : अमेयात्मा सः (महाकपिः) महात्मानम् रामम् अभिगम्य प्रदक्षिणं (च) कृत्वा सीता तत्त्वतः दृष्टा इति न्यवेदयत्॥७८ ॥



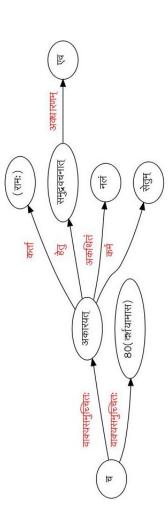
A79 : ततः सुग्रीवसहितः (रामः) महोदधेः तीरं गत्वा आदित्यसत्रिभैः शरैः समुद्रं क्षोभयामास॥७९॥



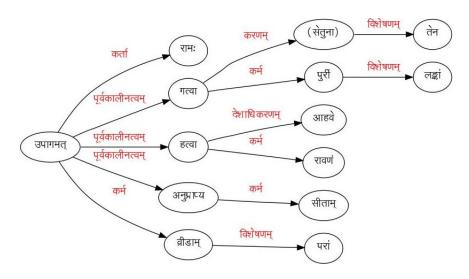
A80 : सरितां पतिः समुद्रः आत्मानं दर्शयामास ।



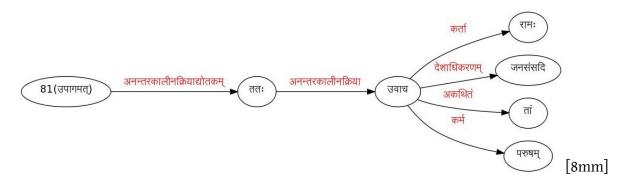
A80.1 : (रामः) समुद्रवचनात् एव च नलं सेतुम् अकारयत्॥८०॥।



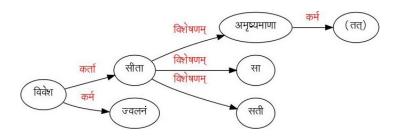
A81: रामः तेन (सेतुना) लङ्कां पुरीं गत्वा आहवे रावणं हत्वा सीताम् अनुप्राप्य परां व्रीडाम् उपागमत्॥ ८९॥



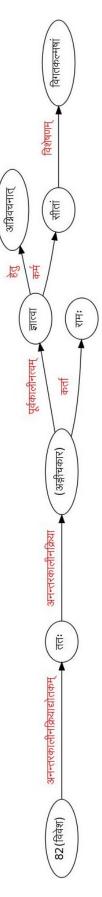
A82: ततः रामः जनसंसदि तां परुषम् उवाच।



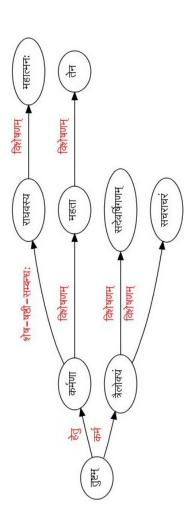
A82.1 : (तत्) अमृष्यमाणा सा सती सीता ज्वलनं विवेश॥८२॥



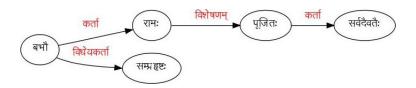
A83-84 : ततः अग्निवचनात् सीतां विगतकल्मषां ज्ञात्वा रामः (अङ्गीचकार)।



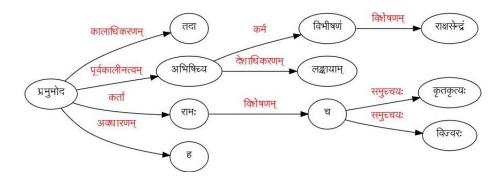
A83-84.1 : महात्मनः राघवस्य तेन महता कर्मणा सचराचरं सदेवर्षिगणं त्रैलोक्यं तुष्टम्।



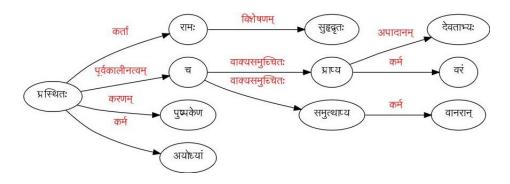
A83-84.2 : सर्वदैवतैः पूजितः रामः सम्प्रहृष्टः बभौ॥८३-८४॥



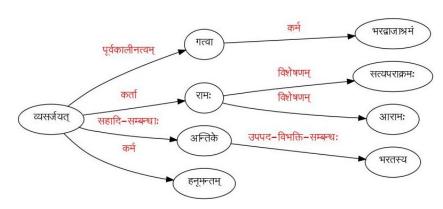
A85: तदा राक्षसेन्द्रं विभीषणं लङ्कायाम् अभिषच्य कृतकृत्यः विज्वरः च रामः प्रमुमोद ह॥८५॥



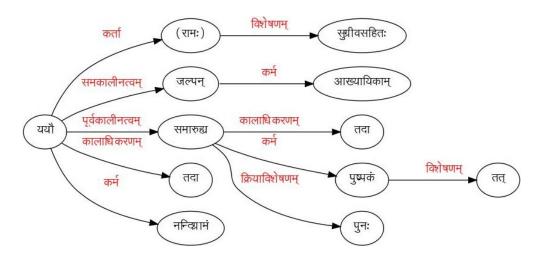
A86 : सुहृद्दृतः रामः देवताभ्यः वरं प्राप्य वानरान् समुत्थाप्य च पुष्पकेण अयोध्यां प्रस्थितः॥८६॥



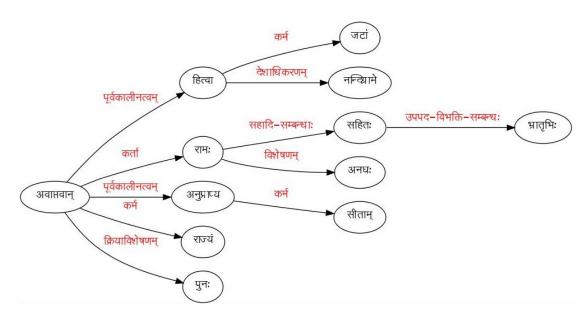
A87 : आरामः सत्यपराक्रमः रामः भरद्वाजाश्रमं गत्वा भरतस्य अन्तिके हनूमन्तम् व्यसर्जयत्॥ ८७॥



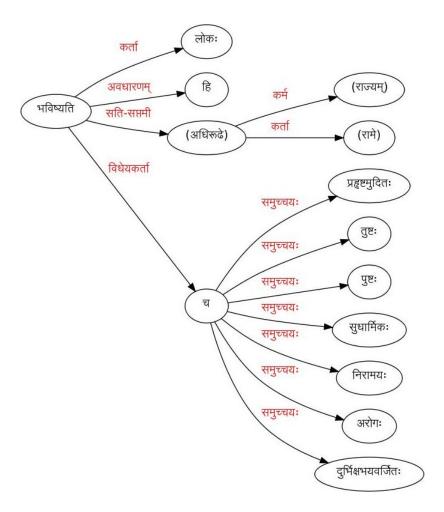
A88 : तदा सुग्रीवसिहतः (रामः) तत् पुष्पकं पुनः समारुह्य आख्यायिकाम् जल्पन् तदा निन्दिग्रामं ययौ॥ ८८॥



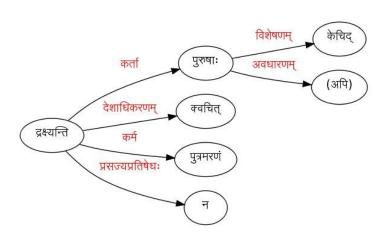
A89: अनघः रामः भ्रातृभिः सहितः नन्दिग्रामे जटां हित्वा सीताम् अनुप्राप्य राज्यं पुनः अवाप्तवान्॥८९॥



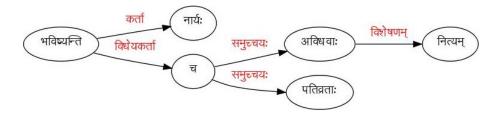
A90 : लोकः हि (राज्यम् अधिरूढे रामे) प्रहृष्टमुदितः तुष्टः पुष्टः सुधार्मिकः निरामयः अरोगः दुर्भिक्षभयवर्जितः च भविष्यति॥ ९०॥



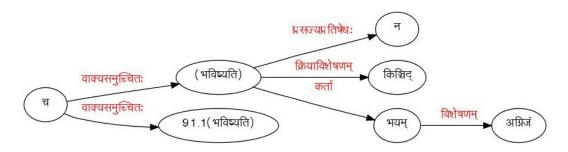
A91: केचिद् (अपि) पुरुषाः क्वचित् पुत्रमरणं न द्रक्ष्यन्ति।



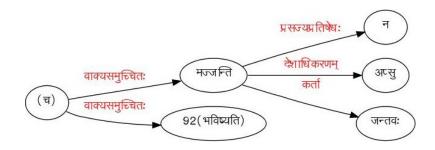
A91.1 : नार्यः नित्यम् अविधवाः पतिव्रताः च भविष्यन्ति॥९१॥



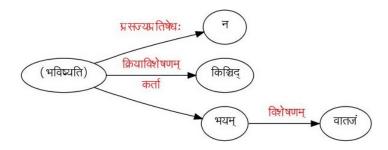
A92: न च अग्निजं किञ्चिद् भयम् (भविष्यति),



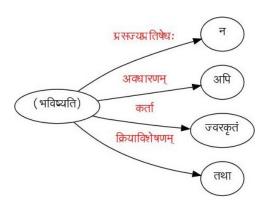
A92.1: न (च) अप्सु जन्तवः मज्जन्ति,



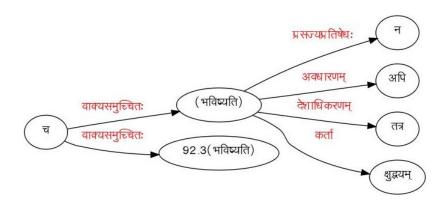
A92.2: न किञ्चिद् वातजं भयम् (भविष्यति),



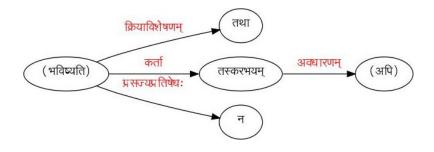
A92.3: न अपि ज्वरकृतं तथा (भविष्यति) ॥९२॥



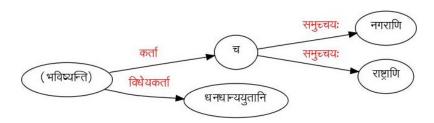
A93-94: न च अपि तत्र क्षुद्भयम् (भविष्यति),



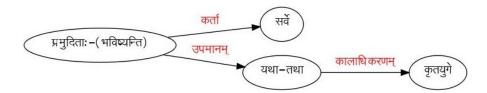
A93-94.1 : तथा तस्करभयम् (अपि) न (भविष्यति)।



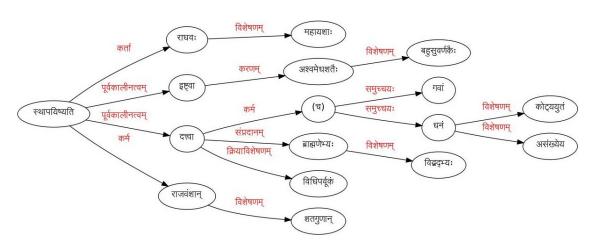
A93-94.2: नगराणि राष्ट्राणि च धनधान्ययुतानि (भविष्यन्ति)।



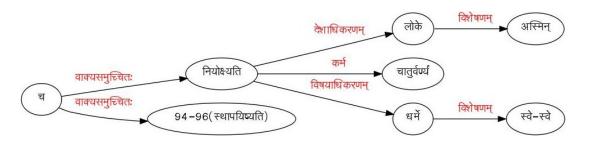
A93-94.3 : सर्वे तथा प्रमुदिताः (भविष्यन्ति) यथा कृतयुगे॥ ९३-९४॥



A94-96 : महायशाः राघवः अश्वमेधशतैः बहुसुवर्णकैः इष्ट्वा गवां कोट्ययुतं असंख्येय धनं (च) विदुद्भ्यः ब्राह्मणेभ्यः विधिपूर्वकं दत्त्वा राजवंशान् शतगुणान् स्थापयिष्यति ।



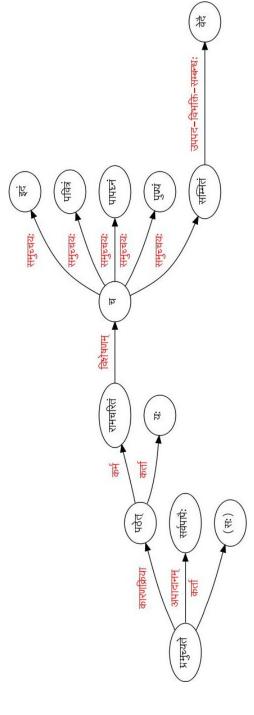
A94-96.1 : अस्मिन् लोके चातुर्वर्ण्यं स्वे-स्वे धर्मे नियोक्ष्यति च॥९४-९६॥



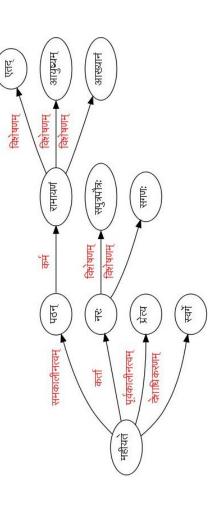
A97 : रामः दशवर्षसहस्त्राणि दशवर्षशतानि च राज्यम् उपासित्वा ब्रह्मलोकं प्रयास्यति॥९७॥



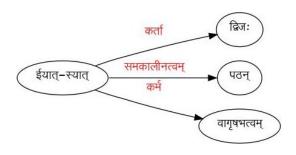
A98 : इदं पवित्रं पापघ्नं पुण्यं वेदेश्य सिम्मितं रामचरितं यः पठेत् सर्वपापैः (सः) प्रमुच्यते॥९८॥



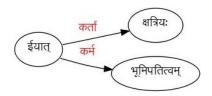
A99 : एतद् आयुष्यम् आख्यानं रामायणं पढन् नरः सपुत्रपौत्रः सगणः प्रेत्य स्वर्गे महीयते॥९९॥



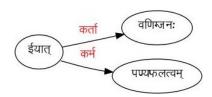
A100 : द्विजः पठन् वागृषभत्वम् ईयात् स्यात्



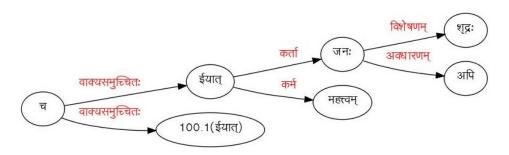
A100.3: क्षत्रियः भूमिपतित्वम् ईयात्



A100.1: वणिग्जनः पण्यफलत्वम् ईयात्



A100.2 : शूद्रः जनः च अपि महत्त्वम् ईयात्॥ १००॥



Bibliography

- [1] Bhatta, G. Mahabaleswar. 2005. Kārakam. Samskṛta Bhāratī, Banglore.
- [2] Buknell, Roderick. 1996. Sanskrit Manual. Motilal Banarsidass, Delhi.
- [3] Chandra, Iswar (Comm.). 2004. *Pāṇiniviracita Aṣṭādhyāyī*. Chaukhamba Samskrita Pratisthan, Delhi.
- [4] Chaturveda, Giridhara Sharma and Vidyabhaskara, Parameswarananda Sharma (Comm.). 2004. *Vaiyākaraṇa Siddhāntakoumudī*. Motilal Banarsidass, Delhi.
- [5] Daalen, L A Van. 2004. Vālmiki's Sanskrit. Motilal Banarsidass, Delhi.
- [6] Dahal, Acharya Lokamani (Comm.). 2006. Paramalaghumañjuṣā. Choukhamba Surabharati, Varanasi.
- [7] Dash, Gopalkrishna and Dash, Kadambini (Comm.). 1993. *Siddhānta Koumudī*. Pañ-casakhā Prakasan, Cuttack.
- [8] Dvivedi, Chandrika Prasad (Comm.). 2005. *Vaiyākaraṇabhūṣaṇasāra*. Choukhamba Sanskrit Pratishtan, Delhi.
- [9] Janaki, S. S. 1997. *Sanskrit and Science*. The Kuppuswami Sastri Research Institute, Mylapore.
- [10] Kale, M. R. 1994. A Higher Sanskrit Grammar. Motilal Banarsidass, Delhi.
- [11] Kapoor, Kapil. 2010. Dimensions of Pāṇinian Grammar: The Grammatical System. D. K. Printworld, Delhi.

- [12] Mishra, Sudhir Kumar. 2007. *Sanskrit Kāraka Analyzer for Machine Translation* (Ph.D. Thesis). Jawaharlal Nehru University, Delhi.
- [13] Pandey, Umasankar. 1977. Samskrit Racana. Choukhamba Vidyabhavan, Varanasi.
- [14] Pathak, Manish Kumar. 2004. An Introduction to Sanskrit Grammar. Bharatiya Kala Prakasan, Delhi.
- [15] Ramakrishnamacharyulu, K. V. 2009. "Annotating Sanskrit Texts based on Śābdabodha Systems", in Kulkarni, Amba and Huet, Gérard (eds.). Sanskrit Computational Linguistics (Proceedings to Third International Sanskrit Computational Linguistics Symposium). Springer, Berlin.
- [16] Ray, Bidyut Lata. 2004. *Pāṇini to Patañjali : A Grammatical March*. D. K. Printworld, Delhi.
- [17] Sarangi, A. C. 1985. *The Development of Sanskrit from Pāṇini to Patañjali*. Bharatiya Vidya Prakasan, Delhi.
- [18] Sastri, Charu Deva. 1990. Pāṇini Re-interpreted. Motilal Banarsidass, Delhi.
- [19] Sastri, Satyavrat. *The Rāmāyaṇa A Linguistic Study*. Munshiram Manoharlal Oriental Publishers, New Delhi.
- [20] Sharma, Mahendra Kumar. 2007. Pārijātasaṃskṛtavyākaraṇa. Sablaim, Jaipur.
- [21] Sharma, Umashankar. Sanskrit Vyākaraņa Mem Kārakatatvānuśīlana.
- [22] Shastri, Vagish. 2000. Conversational Sanskrit. Vagyoga Chetanapitham, Varanasi.
- [23] Sheeba, V. 2007. *Computational Model for Linguistics Study of Sanskrit Bālakaṇḍa of Rāmāyaṇa* (Ph.D. Thesis). University of Kerala, Thiruvantapuram.
- [24] Tripathi, Ramakanta (Comm.). 2005. Siddhāntakoumudī Kāraka Prakaraṇa. Chaukhamba Sanskrit Series, Varanasi.
- [25] Vasu, Srisa Chandra (Comm.). 2003. Siddhāntakoumudī of Bhaṭṭojī Dikṣīta. Motilal Banarsidass, Delhi.

- [26] Vempaty, Kutumba Sastry. 2002. *Saṇkṣepa Rāmāyaṇam* Rashtriya Sanskrit Sansthan, Delhi.
- [27] Williams, Monier Monier. 1857. A Practical Grammar of the Sanskrit Language. Oxford University Press, Oxford. (E-text published on American Libraries Internet Archive [http://www.archive.org/details/cu31924023200730])
- [28] [http://en.wikibooks.org/wiki/LaTeX]
- [29] [http://en.wikipedia.org/wiki/Sanskrit_nouns]