

THE ŚIVASŪTRAS: TO WHAT EXTENT ARE THEY CRUCIAL TO PĀṆINI'S GRAMMATICAL SYSTEM?

ABSTRACT

This paper sets out to examine and to determine the source of generativeness within Pāṇini's grammatical system. Apart from a short study of the role played by the Śivasūtras, it also offers the full account of the so called "shortforms" (or pratyāhāras). In contrast to many other scientific papers dealing with some similar topics, this paper provides sufficient granularity in that regard, because it includes the full list of the generated shortforms (or pratyāhāras) that are 305 in number. In addition to that, the pratyāhāras are divided into those which are operative (41) and those which are not (264) in this paper. Quite expectedly, the Śivasūtras have a twofold division as well. From a methodological viewpoint, the paper discloses some semiotic aspects. In particular, it highlights the semiotic character of the Sanskrit text known as *Nandikeśakāśikā* and its relation to the Śivasūtras.

Keywords: the sounds of Sanskrit, Sanskrit grammar, generativeness, Pāṇini, Śivasūtras.

1. Introduction

There have been many different interpretations of Pāṇini's grammatical work since the appearance of the first translations of the *Aṣṭādhyāyī* grammar in the West as well as in India.¹ Over the course of the nineteenth century and later at the beginning of the twentieth century some of the first important western

1 The first complete and comprehensive translations into spoken European languages appeared during the 19th century (e.g. Böhtlingk's German translation was published in Germany in 1887. It was followed by Vasu's English translation appearing in India in 1891).

authors and translators were very philological in their outlook. And, of course, the same rings true for their interpretations.² As time passed, however, many things changed and largely so during the second half of the twentieth century. The sixties inaugurated some modern linguistic interpretations of Pāṇini and his work, as it became quite clear that the work known as *Aṣṭādhyāyī* was generative grammar par excellence. The fact that these modern ways of looking at Pāṇini's grammar - which are all based upon the assumption regarding the idea of generativeness - have not lost their impetus even in the first half of the twenty-first century is remarkable and is to be taken account of.

Apart from those scholars who have recognised the significance of the Śivasūtras for any coherent interpretation of Pāṇini's work, there has been a group of those who have tried to downplay the importance of the function attributed to the Śivasūtras within the context of Pāṇini's grammatical system. Some of them, who undoubtedly belong to the aforementioned group, have maintained the view that morphology can be found at the heart of Pāṇini's grammatical system. Some others, on the other hand, have endorsed the view that Pāṇini's grammar is not just a mere handbook of morphology, but a morphological treatise coupled with a semantic component. The first view is usually represented by those who believe that Pāṇini's grammar is based upon the principle of morphological generativeness. According to this view, the principle of generativeness has its origin in the morphological richness of the Sanskrit language, which is an attitude towards the phenomenon of generativeness that falls under the category of exogenism. The second view is held by those who think that the relationship between Pāṇini's grammar and its user is to be found at the crux of the matter (e.g. Van Nooten B.A. 1969). By bringing the interplay of semantics and morphology into the spotlight of the modern linguist's attention, this view practically excludes the significance of the Śivasūtras for any relevant interpretation of Pāṇini's grammar. It is in accordance with this standpoint that Van Nooten posed these two questions:

What is the principle that unites these many different sets of rules?
Where does the grammar begin?³

2 Faddegon (1929) can be seen as a representative of this group of authors. His article is rooted in a philological approach and is full of phonetical charts. ("The mnemotechnics of Pāṇini's Grammar. 1. The Śiva-Sūtra", AO 7, 1929, pp. 48 - 65.)

3 Van Nooten, Barend A. (1969): "Pāṇini's theory of verbal meaning", FL, Vol. 5, No. 2, p. 242.

Both views have something in common. The importance of the Śīvasūtras have been omitted from them.⁴

It is against the first view that I shall argue for an endogeneric source of the principle of generativeness. In other words, I inted to demonstrate that the origin of generativeness springs from within Pāṇini's grammatical system and that there cannot exist any alternative origin of it placed outside of his grammatical system.

Not unexpectedly, it is against the second view that I shall argue for the Śīvasūtras as the starting point of any serious and competent study of Pāṇini's aphorisms. It follows that my answer to Van Nooten's second question will be quite straightforward: the grammar known as *Aṣṭādhyāyī* begins from its beginning. When it comes to Van Nooten's first question, I shall try to bring to light the significance of the principle of brevity.

The last question is mine. It is about the cruciality of the Śīvasūtras to Pāṇini's grammatical system. To answer this, I shall discuss the topic of a tie between Sanskrit grammar and an ancient Indian traditon of theology by means of interpreting an unusual Sanskrit text.

To answer these questions, I shall give an analytic account of the Śīvasūtras and their generated shortforms as a preparatory ground for my answers at the very beginning of this paper and after that, I shall make an attempt to answer the aforementioned questions. In other words, this paper will be divided into two parts. The first part will be analytically shaped and, in contrast, the second part will tend to be more synthetic in its inner form. Of course, my task will be laid out in much greater detail in what follows.

PART ONE

2. The theoretical background pertaining to the Śīvasūtras:

What are they?

The Śīvasūtras are the first segment of the whole that can be divided into four parts. The parts are as follows:

1. Akṣarasamāmnāya (14 aphorisms also known as the Śīvasūtras)
2. Sūtrapāṭha (3981 aphorisms)
3. Dhātupāṭha (1943 verbal roots)
4. Gaṇapāṭha (a "list" of stems)⁵

4 Van Nooten (1969) has not mentioned the Śīvasūtras in his article.

5 Actually, the Gaṇapāṭha is much more than a list of stems, but I have no intention to delve deep into it here.

The first part (Akṣarasamāmnāya) can be subdivided into fourteen sections or the Śivasūtras that are fourteen in number. They are as follows:⁶

1. a, i, u **ṅ**
2. r, l **k**
3. e, o **ñ**
4. ai, au **c**
5. h, y, v, r **ṭ**
6. l **ṅ**
7. ñ, m, ṅ, ṇ, n **m**
8. jh, bh **ñ**
9. gh, ḍh, dh **ṣ**
10. j, b, g, ḍ, d **ś**
11. kh, ph, ch, ṭh, th, c, ṭ, t **v**
12. k, p **y**
13. s, ṣ, ś **r**
14. h **l**

The very word “śivasūtrāṇi” means “God’s aphorisms”. But the sheer translation of the word does not cover the full scale of the meanings associated with them. At best, it gives us a semiotic hint as to what lies hidden behind the concept.

It is by no means easy to offer a satisfactory definition of the concept of the Śivasūtras for many reasons. One of them is related to the gap that has existed between the modern scholars of the West and some traditionally minded sanskritists of the East since the nineteenth century. It is in that regard that Madhav Deshpande wrote:

“Pāṇini’s Grammar is headed by the well known fourteen Śivasūtras the rules which are traditionally believed to have been given to Pāṇini by the Lord Śiva. Most of the modern scholars now believe in Pāṇini’s authorship of these rules and their generic relationship with the formation of his grammar.”⁷

It is likely that professor Deshpande has referred to some modern scholars of the West. Actually, it is an undeniable fact that some Sanskrit scholars of

6 The boldened consonants, sibilants and semivowels are the metalinguistic markers of the given aphorisms. They are known as “anubandhas”.

7 Deshpande, Madhav M. (1975): *Critical Studies in Indian Grammarians: The Theory of Homogeneity*, University of Michigan, Centre for South and Southeast Asian Studies, Ann Arbor. Chapter II, 2.1, p.7

India still believe that the fourteen Śivasūtras are the rules which were revealed to Pāṇini by the Lord Śiva more than 2300 years ago. The other reason is that the western definition of the concept of “definition” did not exist in Ancient India at that time.

And yet, with reference to the concept of a correct definition, Deshpande has given us something comparable to the genus proximum coupled with its *differentia specifica*. He wrote:

“...a fundamental reference catalogue of certain sounds, arranged in a particular order conducive to the proper and concise formulation of the grammatical rules. “

In addition to it, he has even emphasised the significance of the teleological aspect of the Śivasūtras. He wrote:

“Its purpose is ...purely to facilitate concise formulation of rules. “⁸

Of course, within the context of his historical investigation, the definition hits its target very well. But from the point of view of semiotics it seems to be slightly incomplete. It is possible that something else could be added to it.

3. The character of the Śivasūtras

The character of the Śivasūtras is twofold. It is operative and distributive. Their operativeness pertains to the number of the productive shortforms (or the productive *pratyāhāras*) each one of them can generate. For example, the first Śivasūtra can generate 12 productive shortforms⁹, whereas the fourteenth Śivasūtra is absolutely inactive in that regard because it generates none of them.

As to their distributive character, it can be said that only 9 Śivasūtras out of 14 generate the productive shortforms (or the productive *pratyāhāras*). They are: 1. a, i, u **ṅ**; 3. e, o **ṅ**; 4. ai, au **ḥ**; 5. h, y, v, r **ḥ**; 7. ñ, m, ṇ, ṅ, n **m**; 9. gh, ḍh, dh **ṣ**; 10. j, b, g, ḍ, d **ś**; 11. kh, ph, ch, ṭh, th, c, ṭ, t **v** and 13. s, ṣ, ś **r**. It is in accordance with their distributive efficiency that the two thirds of them can generate the productive shortforms.¹⁰ Four Śivasūtras do take part in the process of generating the unproductive shortforms, which means that they are active, but not fully efficient. They are: 2. ṛ, ḷ **k**; 6. ḷ **ṅ**; 9. gh, ḍh, dh **ṣ** and 12. k, p **y**. But the fourteenth Śivasūtra (14. h **ḷ**) does not take part in it.

8 Deshpande, Madhav M. (1975): *ibid.* p.7

9 The twelve productive shortforms are: *ak, ac, aṭ, aṇ, aṇ2, am, al, aś, ik, ic, iṇ2* and *uk*. They are all generated by the first Śivasūtra, as it has been said earlier.

10 The productive shortforms are 41 in number. That is around 13 percent of all the shortforms.

4. The shortforms and Pāṇini's theory of homogeneity

The shortforms (pratyāhāras) are 305 in number. They are generated by applying some rules pertaining to the anubandhas on the content of the Śivasūtras in the sense of putting their sounds into sequences by combining various elements of the chosen Śivasūtras. But that is not all.

To understand how it works, an important concept related to that should be mentioned here. It is known as "savarṇa-grahaṇa". It translates as the "grabbing of the homogeneous class of sounds". According to professor Deshpande, it is Pāṇini's theory of homogeneity that can be discovered behind the term.¹¹ Although the compound "savarṇa-grahaṇa" cannot be found in Pāṇini's sūtras, which indicates a its later origin, the very word "savarṇa" does occur in ten sūtras. There are also some sūtras which do not contain the term visibly, but rather inherit it from previous sūtras. Two of them will be quoted here. They are as follows:

tulya-āśya-prayatnaṃ savarṇam || aṣṭādhyāyī – 1.1.9 ||¹²
na aj-jhalau || aṣṭādhyāyī – 1.1.10 ||¹³

The term "savarṇa" occurs in the first of the above mentioned sūtras (A 1.1.9) for the first time. As Pāṇini's theory of homogeneity opens with this sūtra, its importance cannot be emphasised. It contains a short definition of the concept known as "savarṇa". The term "savarṇa" does not occur in the second of the above mentioned sūtras (A 1.1.10) because it has been inherited from the sūtra (A 1.1.9). The sūtra (A 1.1.10) tells us that no homogeneity (savarṇa) between vowels and consonants is possible.

The five short vowels contained in the first two Śivasūtras (1. a, i, u ṅ and 2. ṛ, ḷ k) are to be coupled with their corresponding long vowels (e.g. the short /a/ with the long /ā/, the short /i/ with the long /ī/ etc.) because they are homogeneous. Nothing similar to that is to be done in the case of those Śivasūtras which contain consonants only.

That was the first point. The other involves the process of deleting the anubandhas of the previous Śivasūtras by affirming the anubandha of the last

11 Interestingly, the term "savarṇa-grahaṇa" has been translated as "homogeneous - representation" in his book. Deshpande, Madhav M. (1975): *ibid.* p.16.

12 Vasu's translation is as follows: "Those whose place of utterance and effort are equal, are called "savarṇa" or homogeneous letters. " Vasu, Śrīśa Chandra (1891): *The Aṣṭādhyāyī of Pāṇini*, vol.1, p. 11.

13 "There is however no homogeneity between vowels and consonants, though their place and effort be equal." Vasu, Śrīśa Chandra. (1891): *ibid.*, p.11.

chosen Śīvasūtra. Thus, the anubandha of the latter becomes a metalinguistic marker of a newly generated shortform (or a newly generated pratyāhāra). The anubandha of the first Śīvasūtra has to be erased in favour of the occurrence of the anubandha of the second Śīvasūtra. For example, the anubandha *ṇ* disappears from the newly generated shortform. On the other side, the anubandha *k* appears as the marker in the first shortform and can be found at the end of the new sequence of sounds known as “pratyāhāra”. The new shortform is headed by the initial sound of the first chosen Śīvasūtra. Roughly speaking, this is how the first shortform (pratyāhāra) is generated. When it comes the other Śīvasūtras, the same processes re-occur again and again till the last shortform is generated.

5. The structure of data and an analysis

The full list of the groups of shortforms (pratyāhāras) with their “sounds” (varṇas) generated by the productive Śīvasūtras is to be found here. It is as follows (Figure 1):

The first group of shortforms (pratyāhāras) with their “sounds” (varṇas) generated by the first Śīvasūtra (1 - 14)

1. ak*	a, ā, i, ī, u, ū, ṛ, ṝ, ḷ, ḹ
2. aṅ	a, ā, i, ī, u, ū, ṛ, ṝ, ḷ, ḹ, e, o
3. ac*	a, ā, i, ī, u, ū, ṛ, ṝ, ḷ, ḹ, e, o, ai, au
4. aṅ̄	a, ā, i, ī, u, ū, ṛ, ṝ, ḷ, ḹ, e, o, ai, au, h, y, v, r, l, ṅ, m, ṅ̄, ṅ̄̄, n, jh, bh
5. aṭ*	a, ā, i, ī, u, ū, ṛ, ṝ, ḷ, ḹ, e, o, ai, au, h, y, v, r
6. aṇ*	a, ā, i, ī, u, ū
7. aṇ2*	a, ā, i, ī, u, ū, ṛ, ṝ, ḷ, ḹ, e, o, ai, au, h, y, v, r, l
8. am*	a, ā, i, ī, u, ū, ṛ, ṝ, ḷ, ḹ, e, o, ai, au, h, y, v, r, l, ṅ, m, ṅ̄, ṅ̄̄, n
9. ay	a, ā, i, ī, u, ū, ṛ, ṝ, ḷ, ḹ, e, o, ai, au, h, y, v, r, l, ṅ, m, ṅ̄, ṅ̄̄, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p
10. ar	a, ā, i, ī, u, ū, ṛ, ṝ, ḷ, ḹ, e, o, ai, au, h, y, v, r, l, ṅ, m, ṅ̄, ṅ̄̄, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p, ś, ṣ, s
11. al*	a, ā, i, ī, u, ū, ṛ, ṝ, ḷ, ḹ, e, o, ai, au, h, y, v, r, l, ṅ, m, ṅ̄, ṅ̄̄, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p, ś, ṣ, s, h

12. av	a, ā, i, ī, u, ū, ṛ, ṝ, ḷ, ḹ, e, o, ai, au, h, y, v, r, l, ñ, m, ṇ, ṇ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t
13. aś*	a, ā, i, ī, u, ū, ṛ, ṝ, ḷ, ḹ, e, o, ai, au, h, y, v, r, l, ñ, m, ṇ, ṇ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d
14. aṣ	a, ā, i, ī, u, ū, ṛ, ṝ, ḷ, ḹ, e, o, ai, au, h, y, v, r, l, ñ, m,

The second group of shortforms (pratyāhāras) with their “sounds“ (varṇas) generated by the first Śivasūtra (15-28)

15. ik*	i, ī, u, ū, ṛ, ṝ, ḷ, ḹ
16. iñ	i, ī, u, ū, ṛ, ṝ, ḷ, ḹ, e, o
17. ic*	i, ī, u, ū, ṛ, ṝ, ḷ, ḹ, e, o, ai, au
18. iñ	i, ī, u, ū, ṛ, ṝ, ḷ, ḹ, e, o, ai, au, h, y, v, r, l, ñ, m, ṇ, ṇ, n, jh, bh
19. iṭ	i, ī, u, ū, ṛ, ṝ, ḷ, ḹ, e, o, ai, au, h, y, v, r
20. iṇ	i, ī, u, ū
21. iṇ2*	i, ī, u, ū, ṛ, ṝ, ḷ, ḹ, e, o, ai, au, h, y, v, r, l
22. im	i, ī, u, ū, ṛ, ṝ, ḷ, ḹ, e, o, ai, au, h, y, v, r, l, ñ, m, ṇ, ṇ, n
23. iy	i, ī, u, ū, ṛ, ṝ, ḷ, ḹ, e, o, ai, au, h, y, v, r, l, ñ, m, ṇ, ṇ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p
24. ir	i, ī, u, ū, ṛ, ṝ, ḷ, ḹ, e, o, ai, au, h, y, v, r, l, ñ, m, ṇ, ṇ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p, ś, ṣ, s
25. il	i, ī, u, ū, ṛ, ṝ, ḷ, ḹ, e, o, ai, au, h, y, v, r, l, ñ, m, ṇ, ṇ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p, ś, ṣ, s, h
26. iv	i, ī, u, ū, ṛ, ṝ, ḷ, ḹ, e, o, ai, au, h, y, v, r, l, ñ, m, ṇ, ṇ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t
27. iś	i, ī, u, ū, ṛ, ṝ, ḷ, ḹ, e, o, ai, au, h, y, v, r, l, ñ, m, ṇ, ṇ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d
28. iṣ	i, ī, u, ū, ṛ, ṝ, ḷ, ḹ, e, o, ai, au, h, y, v, r, l, ñ, m, ṇ, ṇ, n, jh, bh, gh, ḍh, dh

The third group of shortforms (pratyāhāras) with their “sounds“ (varṇas) generated by the first Śivasūtra (29 - 42)

29. uk*	u, ū, ṛ, ṝ, ḷ, ḹ
30. uñ	u, ū, ṛ, ṝ, ḷ, ḹ, e, o
31. uc	u, ū, ṛ, ṝ, ḷ, ḹ, e, o, ai, au
32. uñ	u, ū, ṛ, ṝ, ḷ, ḹ, e, o, ai, au, h, y, v, r, l, ñ, m, ṇ, ṇ, n, jh, bh
33. uṭ	u, ū, ṛ, ṝ, ḷ, ḹ, e, o, ai, au, h, y, v, r

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34.uṇ	u, ū,
35.uṇ2	u, ū, ṛ, ṝ, ḷ, ḹ, e, o, ai, au, h, y, v, r, l
36.um	u, ū, ṛ, ṝ, ḷ, ḹ, e, o, ai, au, h, y, v, r, l, ñ, m, ñ, ṇ, n
37.uy	u, ū, ṛ, ṝ, ḷ, ḹ, e, o, ai, au, h, y, v, r, l, ñ, m, ñ, ṇ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th,
38.ur	u, ū, ṛ, ṝ, ḷ, ḹ, e, o, ai, au, h, y, r, v, l, ñ, m, ñ, ṇ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p, ś, ṣ, s
39.ul	u, ū, ṛ, ṝ, ḷ, ḹ, e, o, ai, au, h, y, v, r, l, ñ, m, ñ, ṇ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p, ś, ṣ, s, h
40.uv	u, ū, ṛ, ṝ, ḷ, ḹ, e, o, ai, au, h, y, v, r, l, ñ, m, ñ, ṇ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t
41.uś	u, ū, ṛ, ṝ, ḷ, ḹ, e, o, ai, au, h, y, v, r, l, ñ, m, ñ, ṇ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d
42.uṣ	u, ū, ṛ, ṝ, ḷ, ḹ, e, o, ai, au, h, y, v, r, l, ñ, m, ñ, ṇ, n, jh, bh, gh, ḍh, dh

The fourth group of shortforms (pratyāhāras) with their “sounds“ (varṇas) generated by the second Śivasūtra (43 - 56)

43. ṛk	ṛ, ṝ, ḷ, ḹ
44. ṛṇ	ṛ, ṝ, ḷ, ḹ, e, o
45. ṛc	ṛ, ṝ, ḷ, ḹ, e, o, ai, au
46. ṛñ	ṛ, ṝ, ḷ, ḹ, e, o, ai, au, h, y, v, r, l, ñ, m, ñ, ṇ, n, jh, bh
47. ṛṭ	ṛ, ṝ, ḷ, ḹ, e, o, ai, au, h, y, v, r
48. ṛṇ2	ṛ, ṝ, ḷ, ḹ, e, o, ai, au, h, y, v, r, l
49. ṛm	ṛ, ṝ, ḷ, ḹ, e, o, ai, au, h, y, v, r, l, ñ, m, ñ, ṇ, n
50. ṛy	ṛ, ṝ, ḷ, ḹ, e, o, ai, au, h, y, v, r, l, ñ, m, ñ, ṇ, n, jh, h, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p
51. ṛr	ṛ, ṝ, ḷ, ḹ, e, o, ai, au, h, y, r, v, l, ñ, m, ñ, ṇ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p, ś, ṣ, s
52. ṛl	ṛ, ṝ, ḷ, ḹ, e, o, ai, au, h, y, v, r, l, ñ, m, ñ, ṇ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p, ś, ṣ, s, h
53. ṛv	ṛ, ṝ, ḷ, ḹ, e, o, ai, au, h, y, v, r, l, ñ, m, ñ, ṇ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t
54. ṛś	ṛ, ṝ, ḷ, ḹ, e, o, ai, au, h, y, v, r, l, ñ, m, ñ, ṇ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d
55. ṛṣ	ṛ, ṝ, ḷ, ḹ, e, o, ai, au, h, y, v, r, l, ñ, m, ñ, ṇ, n, jh, bh, gh, ḍh, dh

The fifth group of shortforms (pratyāhāras) with their “sounds” (varṇas) generated by the second Śivasūtra (56 - 68)

56. lk	l, l̄
57. lñ	l, l̄, e, o
58. lc	l, l̄, e, o, ai, au
59. lñ	l, l̄, e, o, ai, au, h, y, v, r, l, ñ, m, ñ, ṇ, n, jh, bh
60. lṭ	l, l̄, e, o, ai, au, h, y, v, r
61. lṇ2	l, l̄, e, o, ai, au, h, y, v, r, l
62. lṃ	l, l̄, e, o, ai, au, h, y, v, r, l, ñ, m, ñ, ṇ, n
63. ly	l, l̄, e, o, ai, au, h, y, v, r, l, ñ, m, ñ, ṇ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p
64. lr	l, l̄, e, o, ai, au, h, y, r, v, l, ñ, m, ñ, ṇ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p, ś, ṣ, s
65. ll	l, l̄, e, o, ai, au, h, y, v, r, l, ñ, m, ñ, ṇ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p, ś, ṣ, s, h
66. lv	l, l̄, e, o, ai, au, h, y, v, r, l, ñ, m, ñ, ṇ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t
67. lś	l, l̄, e, o, ai, au, h, y, v, r, l, ñ, m, ñ, ṇ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d
68. lṣ	l, l̄, e, o, ai, au, h, y, v, r, l, ñ, m, ñ, ṇ, n, jh, bh, gh, ḍh, dh

The sixth group of shortforms (pratyāhāras) with their “sounds” (varṇas) generated by the third Śivasūtra (69 - 80)

69. eñ*	e, o
70. ec*	e, o, ai, au
71. eñ	e, o, ai, au, h, y, v, r, l, ñ, m, ñ, ṇ, n, jh, bh
72. eṭ	e, o, ai, au, h, y, v, r
73. eṇ2	e, o, ai, au, h, y, v, r, l
74. em	e, o, ai, au, h, y, v, r, l, ñ, m, ñ, ṇ, n
75. ey	e, o, ai, au, h, y, v, r, l, ñ, m, ñ, ṇ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p
76. er	e, o, ai, au, h, y, r, v, l, ñ, m, ñ, ṇ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p, ś, ṣ, s
77. el	e, o, ai, au, h, y, v, r, l, ñ, m, ñ, ṇ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p, ś, ṣ, s, h

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78. ev	e, o, ai, au, h, y, v, r, l, ñ, m, ñ, ñ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t
79. eś	e, o, ai, au, h, y, v, r, l, ñ, m, ñ, ñ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d
80. eṣ	e, o, ai, au, h, y, v, r, l, ñ, m, ñ, ñ, n, jh, bh, gh, ḍh, dh

The seventh group of shortforms (pratyāhāras) with their “sounds“ (varṇas) generated by the fourth Śivasūtra (81 - 91)

81. aic*	ai, au
82. aiñ	ai, au, h, y, v, r, l, ñ, m, ñ, ñ, n, jh, bh
83. aiṭ	ai, au, h, y, v, r
84. aiṇ2	ai, au, h, y, v, r, l
85. aim	ai, au, h, y, v, r, l, ñ, m, ñ, ñ, n
86. aiṃ	ai, au, h, y, v, r, l, ñ, m, ñ, ñ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p
87. air	ai, au, h, y, r, v, l, ñ, m, ñ, ñ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p, ś, ṣ, s
88. ail	ai, au, h, y, v, r, l, ñ, m, ñ, ñ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p, ś, ṣ, s, h
89. aiv	ai, au, h, y, v, r, l, ñ, m, ñ, ñ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t
90. aiś	ai, au, h, y, v, r, l, ñ, m, ñ, ñ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d
91. aiṣ	ai, au, h, y, v, r, l, ñ, m, ñ, ñ, n, jh, bh, gh, ḍh, dh

The eighth group of shortforms (pratyāhāras) with their “sounds“ (varṇas) generated by the third Śivasūtra (92 - 103)

92. oñ	o
93. oc	o, ai, au
94. oñ	o, ai, au, h, y, v, r, l, ñ, m, ñ, ñ, n, jh, bh
95. oṭ	o, ai, au, h, y, v, r
96. oṇ2	o, ai, au, h, y, v, r, l
97. om	o, ai, au, h, y, v, r, l, ñ, m, ñ, ñ, n
98. oy	o, ai, au, h, y, v, r, l, ñ, m, ñ, ñ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p

99. or	o, ai, au, h, y, r, v, l, ñ, m, ñ, ñ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p, ś, ṣ, s
100. ol	o, ai, au, h, y, v, r, l, ñ, m, ñ, ñ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p, ś, ṣ, s, h
101. ov	o, ai, au, h, y, v, r, l, ñ, m, ñ, ñ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t
102. oś	o, ai, au, h, y, v, r, l, ñ, m, ñ, ñ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d
103. oṣ	o, ai, au, h, y, v, r, l, ñ, m, ñ, ñ, n, jh, bh, gh, ḍh, dh

The ninth group of shortforms (pratyāhāras) with their “sounds“ (varṇas) generated by the fourth Śivasūtra (104 - 114)

104. auc	au
105. auñ	au, h, y, v, r, l, ñ, m, ñ, ñ, n, jh, bh
106. auṭ	au, h, y, v, r
107. auṇ2	au, h, y, v, r, l
108. aum	au, h, y, v, r, l, ñ, m, ñ, ñ, n
109. auy	au, h, y, v, r, l, ñ, m, ñ, ñ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p
110. aur	au, h, y, v, r, l, ñ, m, ñ, ñ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p, ś, ṣ, s
111. aul	au, h, y, v, r, l, ñ, m, ñ, ñ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p, ś, ṣ, s, h
112. auv	au, h, y, v, r, l, ñ, m, ñ, ñ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t
113. auś	au, h, y, v, r, l, ñ, m, ñ, ñ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d
114. auṣ	au, h, y, v, r, l, ñ, m, ñ, ñ, n, jh, bh, gh, ḍh, dh

The tenth group of shortforms (pratyāhāras) with their “sounds“ (varṇas) generated by the twelfth Śivasūtra (115 - 117)

115. kay	k, p
116. kar	k, p, ś, ṣ, s
117. kal	k, p, ś, ṣ, s, h

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The eleventh group of shortforms (pratyāhāras) with their “sounds“ (varṇas) generated by the eleventh Śivasūtra (118 - 121)

118. khay*	kh, ph, ch, ṭh, th, c, ṭ, t, k, p
119. khar*	kh, ph, ch, ṭh, th, c, ṭ, t, k, p, ś, ṣ, s
120. khal	kh, ph, ch, ṭh, th, c, ṭ, t, k, p, ś, ṣ, s, h
121. khav	kh, ph, ch, ṭh, th, c, ṭ, t

The twelfth group of shortforms (pratyāhāras) with their “sounds“ (varṇas) generated by the tenth Śivasūtra (122 - 126)

122. gay	g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p
123. gar	g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p, ś, ṣ, s
124. gal	g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p, ś, ṣ, s, h
125. gav	g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t
126. gaś	g, ḍ, d

The thirteenth group of shortforms (pratyāhāras) with their “sounds“ (varṇas) generated by the ninth Śivasūtra (127 - 132)

127. ghay	gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p
128. ghar	gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p, ś, ṣ, s
129. ghal	gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p, ś, ṣ, s, h
130. ghav	gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t
131. ghaś	gh, ḍh, dh, j, b, g, ḍ, d
132. ghaṣ	gh, ḍh, dh

The fourteenth group of shortforms (pratyāhāras) with their “sounds“ (var as) generated by the seventh Śivasūtra (133 - 140)

133. ṅaṅ	ṅ, ṅ, n, jh, bh
134. ṅam*	ṅ, ṅ, n
135. ṅay	ṅ, ṅ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p
136. ṅar	ṅ, ṅ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p, ś, ṣ, s
137. ṅal	ṅ, ṅ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p, ś, ṣ, s, h

138. ñav	ñ, ṅ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t
139. naś	ñ, ṅ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d
140. naṣ	ñ, ṅ, n, jh, bh, gh, ḍh, dh

The fifteenth group of shortforms (pratyāhāras) with their “sounds“ (varṇas) generated by the eleventh Śivasūtra (141 - 144)

141. cay	c, ṭ, t, k, p
142. car*	c, ṭ, t, k, p, ś, ṣ, s
143. cal	c, ṭ, t, k, p, ś, ṣ, s, h
144. cav	c, ṭ, t

The sixteenth group of shortforms (pratyāhāras) with their “sounds“ (varṇas) generated by the eleventh Śivasūtra (145 - 148)

145. chay	ch, ṭh, th, c, ṭ, t, k, p
146. char	ch, ṭh, th, c, ṭ, t, k, p, ś, ṣ, s
147. chal	ch, ṭh, th, c, ṭ, t, k, p, ś, ṣ, s, h
148. chav*	ch, ṭh, th, c, ṭ, t

The seventeenth group of shortforms (pratyāhāras) with their “sounds“ (varṇas) generated by the tenth Śivasūtra (149 - 153)

149. jay	j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p
150. jar	j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p, ś, ṣ, s
151. jal	j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p, ś, ṣ, s, h
152. jav	j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t
153. jaś*	j, b, g, ḍ, d

The eighteenth group of shortforms (pratyāhāras) with their “sounds“ (varṇas) generated by the eighth Śivasūtra (154 - 160)

154. jhañ	jh, bh
155. jhay*	jh, bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p
156. jhar*	jh, bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p, ś, ṣ, s
157. jhal*	jh, bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p, ś, ṣ, s, h

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158. jhav	jh, bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t
159. jhaṣ*	jh, bh, gh, ḍh, dh, j, b, g, ḍ, d
160. jhaṣ*	jh, bh, gh, ḍh, dh

The nineteenth group of shortforms (pratyāhāras) with their “sounds“ (varṇas) generated by the seventh Śivasūtra (161 - 168)

161. ñaṅ	ñ, m, ṅ, ṇ, n, jh, bh
162. ñam*	ñ, m, ṅ, ṇ, n
163. ñay	ñ, m, ṅ, ṇ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p
164. ñar	ñ, m, ṅ, ṇ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p, ś, ṣ, s
165. ñal	ñ, m, ṅ, ṇ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p, ś, ṣ, s, h
166. ñav	ñ, m, ṅ, ṇ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t
167. ñaś	ñ, m, ṅ, ṇ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d
168. ñaṣ	ñ, m, ṅ, ṇ, n, jh, bh, gh, ḍh, dh

The twentieth group of shortforms (pratyāhāras) with their “sounds“ (varṇas) generated by the eleventh Śivasūtra (169 - 172)

169. ṭay	ṭ, t, k, p
170. ṭar	ṭ, t, k, p, ś, ṣ, s
171. ṭal	ṭ, t, k, p, ś, ṣ, s, h
172. ṭav	ṭ, t

The twenty-first group of shortforms (pratyāhāras) with their “sounds“ (varṇas) generated by the eleventh Śivasūtra (173 - 176)

173. ṭhay	ṭh, th, c, ṭ, t, k, p
174. ṭhar	ṭh, th, c, ṭ, t, k, p, ś, ṣ, s
175. ṭhal	ṭh, th, c, ṭ, t, k, p, ś, ṣ, s, h
176. ṭhav	ṭh, th, c, ṭ, t

The twenty-second group of shortforms (pratyāhāras) with their “sounds” (varṇas) generated by the tenth Śivasūtra (177 - 181)

177. ḍay	ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p
178. ḍar	ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p, ś, ṣ, s
179. ḍal	ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p, ś, ṣ, s, h
180. ḍav	ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t
181. ḍaś	ḍ, d

The twenty-third group of shortforms (pratyāhāras) with their “sounds” (varṇas) generated by the ninth Śivasūtra (182 - 187)

182. ḍhay	ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p
183. ḍhar	ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p, ś, ṣ, s
184. ḍhal	ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p, ś, ṣ, s, h
185. ḍhav	ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t
186. ḍhaś	ḍh, dh, j, b, g, ḍ, d
187. ḍhaṣ	ḍh, dh

The twenty-fourth group of shortforms (pratyāhāras) with their “sounds” (varṇas) generated by the seventh Śivasūtra (188 - 195)

188. ṇañ	ṇ, n, jh, bh
189. ṇam	ṇ, n
190. ṇay	ṇ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p
191. ṇar	ṇ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p, ś, ṣ, s
192. ṇal	ṇ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p, ś, ṣ, s, h
193. ṇav	ṇ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t
194. ṇaś	ṇ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d
195. ṇaṣ	ṇ, n, jh, bh, gh, ḍh, dh

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The twenty-fifth group of shortforms (pratyāhāras) with their “sounds” (varṇas) generated by the eleventh Śivasūtra (196 - 199)

196. tay	t, k, p
197. tar	t, k, p, ś, ṣ, s
198. tal	t, k, p, ś, ṣ, s, h
199. tav	t

The twenty-sixth group of shortforms (pratyāhāras) with their “sounds” (varṇas) generated by the eleventh Śivasūtra (200 - 203)

200. thay	th, c, ṭ, t, k, p
201. thar	ṭh, th, c, ṭ, t, k, p, ś, ṣ, s
202. thal	ṭh, th, c, ṭ, t, k, p, ś, ṣ, s, h
203. thav	ṭh, th, c, ṭ, t

The twenty-seventh group of shortforms (pratyāhāras) with their “sounds” (varṇas) generated by the tenth Śivasūtra (204 - 208)

204. day	d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p
205. dar	d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p, ś, ṣ, s
206. dal	d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p, ś, ṣ, s, h
207. dav	d, kh, ph, ch, ṭh, th, c, ṭ, t
208. daś	d

The twenty-eighth group of shortforms (pratyāhāras) with their “sounds” (varṇas) generated by the ninth Śivasūtra (209 - 214)

209. dhay	dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p
210. dhar	dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p, ś, ṣ, s
211. dhal	dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p, ś, ṣ, s, h
212. dhav	dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t
213. dhaś	dh, j, b, g, ḍ, d
214. dhaṣ	dh

The twenty-ninth group of shortforms (pratyāhāras) with their “sounds” (varṇas) generated by the seventh Śivasūtra (215 - 222)

215. nañ	n, jh, bh
216. nam	n
217. nay	n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p

218. nar	n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p, ś, ṣ, s
219. nal	n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p, ś, ṣ, s, h
220. nav	n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t
221. naś	n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d
222. naṣ	n, jh, bh, gh, ḍh, dh

The thirtieth group of shortforms (pratyāhāras) with their “sounds“ (varṇas) generated by the twelveth Śivasūtra (223 - 225)

223. pay	p
224. par	p, ś, ṣ, s
225. pal	p, ś, ṣ, s, h

The thirty-first group of shortforms (pratyāhāras) with their “sounds“ (varṇas) generated by the eleventh Śivasūtra (226 - 229)

226. phay	ph, ch, ṭh, th, c, ṭ, t, k, p
227. phar	ph, ch, ṭh, th, c, ṭ, t, k, p, ś, ṣ, s
228. phal	ph, ch, ṭh, th, c, ṭ, t, k, p, ś, ṣ, s, h
229. phav	ph, ch, ṭh, th, c, ṭ, t

The thirty-second group of shortforms (pratyāhāras) with their “sounds“ (varṇas) generated by the tenth Śivasūtra (230 - 234)

230. bay	b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p
231. bar	b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p, ś, ṣ, s
232. bal	b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p, ś, ṣ, s, h
233. bav	b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t
234. baś*	b, g, ḍ, d

The thirty-third group of shortforms (pratyāhāras) with their “sounds“ (varṇas) generated by the eighth Śivasūtra (235 - 241)

235. bhañ	bh
236. bhay	bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p
237. bhar	bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p, ś, ṣ, s

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238. bhal	bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p, ś, ṣ, s, h
239. bhav	bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t
240. bhaś	bh, gh, ḍh, dh, j, b, g, ḍ, d
241. bhaṣ*	bh, gh, ḍh, dh

The thirty-fourth group of shortforms (pratyāhāras) with their “sounds” (varṇas) generated by the seventh Śivasūtra (242 - 249)

242. mañ	m, ñ, ṇ, n, jh, bh
243. mam	m, ñ, ṇ, n
244. may*	m, ñ, ṇ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p
245. mar	m, ñ, ṇ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p, ś, ṣ, s
246. mal	m, ñ, ṇ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p, ś, ṣ, s, h
247. mav	m, ñ, ṇ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t
248. maś	m, ñ, ṇ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d
249. maṣ	m, ñ, ṇ, n, jh, bh, gh, ḍh, dh

The thirty-fifth group of shortforms (pratyāhāras) with their “sounds” (varṇas) generated by the fifth Śivasūtra (250 - 259)

250. yañ*	y, v, r, l, ñ, m, ñ, ṇ, n, jh, bh
251. yaṭ	y, v, r
252. yaṇ2*	y, v, r, l
253. yam*	y, v, r, l, ñ, m, ñ, ṇ, n
254. yay*	y, v, r, l, ñ, m, ñ, ṇ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p
255. yar*	y, v, r, l, ñ, m, ñ, ṇ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p, ś, ṣ, s
256. yal	y, v, r, l, ñ, m, ñ, ṇ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p, ś, ṣ, s, h
257. yav	y, v, r, l, ñ, m, ñ, ṇ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t
258. yaś	y, v, r, l, ñ, m, ñ, ṇ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d
259. yaṣ	y, v, r, l, ñ, m, ñ, ṇ, n, jh, bh, gh, ḍh, dh

The thirty-sixth group of shortforms (pratyāhāras) with their “sounds“ (varṇas) generated by the fifth Śivasūtra (260 - 269)

260. rañ	r, l, ñ, m, ñ, ṇ, n, jh, bh
261. raṭ	r
262. raṇ2	r, l
263. ram	r, l, ñ, m, ñ, ṇ, n
264. ray	r, l, ñ, m, ñ, ṇ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p
265. rar	r, l, ñ, m, ñ, ṇ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p, ś, ṣ, s
266. ral*	r, l, ñ, m, ñ, ṇ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p, ś, ṣ, s, h
267. rav	r, l, ñ, m, ñ, ṇ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t
268. raś	r, l, ñ, m, ñ, ṇ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d
269. raṣ	r, l, ñ, m, ñ, ṇ, n, jh, bh, gh, ḍh, dh

The thirty-seventh group of shortforms (pratyāhāras) with their “sounds“ (varṇas) generated by the sixth Śivasūtra (270 - 278)

270. lañ	l, ñ, m, ñ, ṇ, n, jh, bh
271. laṇ2	l
272. lam	l, ñ, m, ñ, ṇ, n
273. lay	l, ñ, m, ñ, ṇ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p
274. lar	l, ñ, m, ñ, ṇ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p, ś, ṣ, s
275. lal	l, ñ, m, ñ, ṇ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p, ś, ṣ, s, h
276. lav	l, ñ, m, ñ, ṇ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t
277. laś	l, ñ, m, ñ, ṇ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d
278. laṣ	l, ñ, m, ñ, ṇ, n, jh, bh, gh, ḍh, dh

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The thirty-eighth group of shortforms (pratyāhāras) with their “sounds” (varṇas) generated by the fifth Śivasūtra (279 - 288)

279. vañ	v, r, l, ñ, m, ñ, ṇ, n, jh, bh
280. vaṭ	v, r
281. vaṇ2	v, r, l
282. vam	v, r, l, ñ, m, ñ, ṇ, n
283. vay	v, r, l, ñ, m, ñ, ṇ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p
284. var	v, l, ñ, m, ñ, ṇ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p, ś, ṣ, s
285. val*	v, l, ñ, m, ñ, ṇ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p, ś, ṣ, s, h
286. vav	v, r, l, ñ, m, ñ, ṇ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t
287. vaś*	v, r, l, ñ, m, ñ, ṇ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d
288. vaṣ	v, r, l, ñ, m, ñ, ṇ, n, jh, bh, gh, ḍh, dh

The thirty-ninth group of shortforms (pratyāhāras) with their “sounds” (varṇas) generated by the thirteenth Śivasūtra (289 - 290)

289. śar*	ś, , s
290. śal*	ś, , s, h

The fortieth group of shortforms (pratyāhāras) with their “sounds” (varṇas) generated by the thirteenth Śivasūtra (291 - 292)

291. śar	ś, s
292. śal	ś, s, h

The forty-first group of shortforms (pratyāhāras) with their “sounds” (varṇas) generated by the thirteenth Śivasūtra (293 - 294)

293. sar	s
294. sar	s, h

The fourty-second group of shortforms (pratyāhāras) with their “sounds“ (varṇas) generated by the fifth Śivasūtra (295 - 305)¹⁴

295. hañ	h, y, v, r, l, ñ, m, ñ, ṇ, n, jh, bh
296. haṭ	h, y, v, r
297. haṇ	h, y, v, r, l
298. ham	h, y, v, r, l, ñ, m, ñ, ṇ, n
299. hay	h, y, v, r, l, ñ, m, ñ, ṇ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p
300. har	h, y, v, r, l, ñ, m, ñ, ṇ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p, ś, ṣ, s
301. hal2	h
302. hal*	h, y, v, r, l, ñ, m, ñ, ṇ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p, ś, ṣ, s, h
303. hav	h, y, v, r, l, ñ, m, ñ, ṇ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t
304. haś*	h, y, v, r, l, ñ, m, ñ, ṇ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d
305. haṣ	h, y, v, r, l, ñ, m, ñ, ṇ, n, jh, bh, gh, ḍh, dh

6. The Śivasūtras and the function of the shortforms (pratyāhāras)

As the Śivasūtras create sparks that can set in motion the process of productiveness with regard to the inner functional aspect of the entire system of Pāṇini's grammar, their power can be described as generative. It means that their main ability of accomplishing grammatical results is by all means very prolific.

To see how it functions, it is important now to differentiate between the productive shortforms (or productive pratyāhāras) of Pāṇini's grammar and those that are not productive at all. In all, there are 305 shortforms (or pratyāhāras), as they have already been presented earlier (table no.1). However, only 41 out of 305 are really productive in the sense of playing a role within the framework of that part of Pāṇini's grammar which is known as “Sūtrapāṭha“. It follows that 264 of them do not leave any imprint on the set of 3981 aphorisms found in the Sūtrapāṭha.

14 A similar set containing 305 shortforms is included in the software Gaṇakāṣṭhādhyāyī Version 6.0. (Electronic source: <http://www.taralabalu.org>, accessed on the 9th of July 2023)

Not surprisingly, this quantitative value pertaining to the productive shortforms (or productive *pratyāhāras*) has been challenged many times.¹⁵ But the question about the real number of productive shortforms (or productive *pratyāhāras*) should be put aside at this moment. It is an issue that has been controversial in India no less than in the West.

7. The character of the shortforms (*pratyāhāras*)

In comparison with the role played by the Śīvasūtras, the role the shortforms (*pratyāhāras*) play, is somewhat different. And a different character can be found in them, though they can be analysed in a similar manner, and though they are divided into two groups just like the Śīvasūtras. In other words, though the shortforms are of a derivative character, they are either operative or distributive almost analogously like the Śīvasūtras.

8. The shortforms (*pratyāhāras*) and their operativeness

Not all shortforms are operative. More than 75 percent of them play no role in the process of how to reduce the number of syllables of Pāṇini's aphorisms within framework of the Sūtrapāṭha. And less than 25 percent do play their roles effectively as it has already been said. In addition to it, some of the shortforms occur in very many aphorisms (e.g. *hal*) and some of them occur in very few aphorisms (e.g. *chav*).¹⁶

9. The productive shortforms (*pratyāhāras*) and their distribution

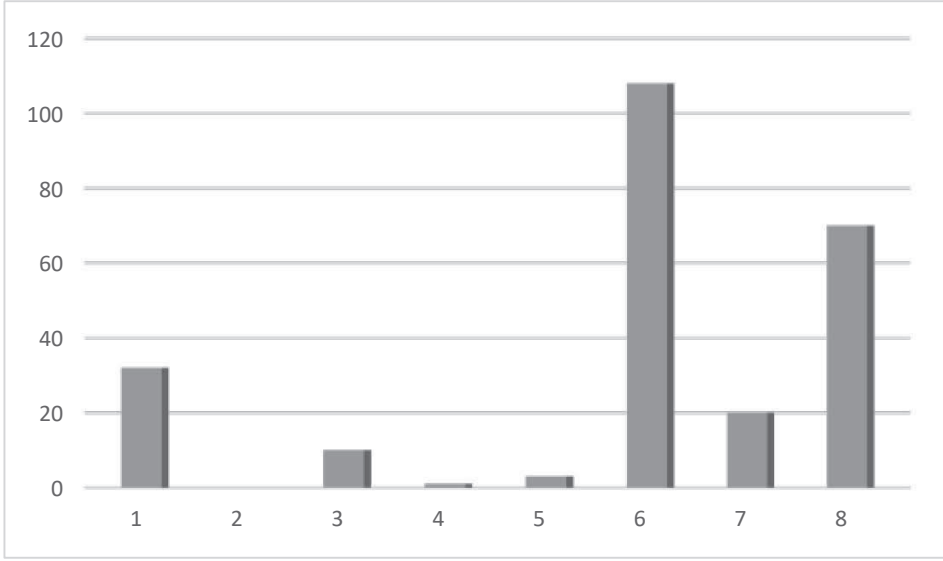
The distributive power of the productive shortforms (*pratyāhāras*) is related to the fact that they occur in 7 out of 8 chapters of the Aṣṭādhyāyī grammar. In

15 According to some scholars, the productive shortforms (or productive *pratyāhāras*) are 42 in number. Some scholars put their number on 43 or even 44. When it comes to Pāṇini's grammar only, their number is 41, because those shortforms occurring in other Sanskrit texts should be omitted.

16 The shortform *chav* (No.148) contains the following sounds: *ch*, *ṭh*, *th*, *c*, *ṭ*, *t*. It is related to these aphorisms of the Aṣṭādhyāyī grammar: *naś-chav-yaprasān* || A 8.3.7 || and *ubhayatha rkṣu* || A 8.3.8 ||.

fact, it is easier to say where they do not occur at all. They are not to be found in the second chapter of the Aṣṭādhyāyī grammar.

The distribution of the shortforms (pratyāhāras) extending from the first chapter of the Aṣṭādhyāyī grammar to the last one is as follows (**Figure 2**):



It is obvious that there are 32 shortforms occurring in the first chapter of the Aṣṭādhyāyī grammar. When it comes to the third chapter, just 10 of them can be found in it. Only one occurs in the fourth chapter. Only 3 of them are to be found in the fifth chapter. Interestingly, 108 of them occur in the sixth chapter. There are 20 occurring in the seventh chapter. And 70 of them occur in the eighth chapter.

The full list of the aforementioned productive shortforms of Pāṇini's grammar has been sketched (Figure 3). It is as follows:¹⁷

17 This figure is based upon a similar set of tables that can be found in Misra's book. (Misra, Vidya Niwas (1965): *The Descriptive Technique of Pāṇini: An introduction*, Mouton&Co, Hague Paris, pp. 42-57 and pp. 130-140.

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Order of appearance	Enumerated shortforms (pratyāhāras)	Productive shortforms (pratyāhāras)	Sounds (varṇas)	Aphorisms (taken from the Sūtrapāṭha)
I	1.	<i>ak</i>	<i>a,ā,i,ī,u,ū, r, ṛ, ḷ, ḹ</i>	A 6.1.101; 6.1.102-105; 6.1.107; 6.1.128; 7.4.2.
II	3.	<i>ac</i>	<i>a,ā,i,ī,u,ū, r, ṛ, ḷ, ḹ, e,o,ai,au</i>	A 1.1.10; 6.1. 77-78; 6.1. 90; 6.1. 101.
III	5.	<i>aṭ</i>	<i>a,ā,i,ī,u,ū, r, ṛ, ḷ, ḹ, e,o,ai,au,h,y,v,r</i>	A 8.3.3; 8.3. 9; 8.3. 63; 8.3.71; 8.3.119; 8.4. 2.
IV	6.	<i>aṇ</i>	<i>a,ā,i,ī,u,ū</i>	A 1.1. 69; 8.4.57.
V	7.	<i>aṇ2</i>	<i>a,ā,i,ī,u,ū, r, ṛ, ḷ, ḹ, e,o,ai,au,h,y,v,r,l</i>	A 1.1.51; 6.3.111; 7.4.13; 8.4.57.
VI	8.	<i>am</i>	<i>a,ā,i,ī,u,ū, r, ṛ, ḷ, ḹ, e,o,ai,au,h,y,v,r,l,ñ, m, ṇ, ṅ, n</i>	A 8.3.6; 8.3.7; 8.3.8.
VII	11.	<i>al</i>	<i>a,ā,i,ī,u,ū, r, ṛ, ḷ, ḹ, e,o,ai,au,h,y,v,r,l, ṇ, m, ṇ, ṅ, n, jh, bh,gh, dh, dh, j, b, g, ḍ, d,kh, ph, ch, ṭh, th, c, ṭ, t, k, p, s, ś, ś, h</i>	A 1.1. 52; 1.1. 54-55; 1.1. 56; 1.2. 41.
VIII	13.	<i>aś</i>	<i>a,ā,i,ī,u,ū, r, ṛ, ḷ, ḹ, e,o,ai,au,h,y,v,r,l, ṇ, m, ṇ, ṅ, n, jh, bh,gh, dh, dh,j, b, g, ḍ, d</i>	A 8.3.17; 8.3.18; 8.3.19; 8.3.20.

IX	15.	<i>ik</i>	<i>i, ī, u, ū, ṛ, ṝ, l, l̄</i>	A 1.1.3; 1.1.4; 1.1.5; 1.1.45; 1.2.9; 1.1.10; 3.1.135; 5.1.131; 6.1.77; 6.1.127; 6.2.29-31; 6.3.61 6.3.121; 6.3.123-124; 6.3.134; 7.1.74; 8.2.76-78.
X	17.	<i>ic</i>	<i>i, ī, u, ū, ṛ, ṝ, l, l̄, e, o, ai, au</i>	A 3.1.36; 6.1.104; 6.1.106; 6.3.68; 8.4.31-32.
XI.	21.	<i>iṅ2</i>	<i>i, ī, u, ū, ṛ, ṝ, l, l̄, e, o, ai, au, h, y, v, r, l</i>	A 8.3.39; 8.3.59; 8.3.104; 8.3.105 - 107; 8.3.119.
XII.	29-	<i>uk</i>	<i>u, ū, ṛ, ṝ, l, l̄</i>	A 4.1.6; 5.1.2; 6.3.45; 7.1.70.
XIII	69.	<i>eñ</i>	<i>e, o</i>	A 1.1.2 1.1.75 6.1.69 6.1.94 6.1.109 -110 6.1.115 -122
XIV	70.	<i>ec</i>	<i>e, o, ai, au</i>	A 1.1.48 6.1.45 - 57 6.1.78 6.1.79 - 83 6.1.89 6.1.188 8.2.107-108

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XV	81.	<i>aic</i>	<i>ai, au</i>	A 1.1.1
XVI	118.	<i>khay</i>	<i>kh, ph, ch, th, th, c, t, t, k, p</i>	A 7.4.61 8.3.6
XVII	119.	<i>khar</i>	<i>kh, ph, ch, th, th, c, t, t, k, p, s, s, s</i>	A 8.3.15 8.3.34-35 8.4.55
XVIII	134.	<i>nan</i>	<i>n̄, n̄, n</i>	8.3.32
XIX	142.	<i>car</i>	<i>c, t, t, k, p, s, s, s</i>	A 1.1.58 8.4.55 - 56
XX	148.	<i>chav</i>	<i>ch, th, th, c, t, t</i>	A 8.3.7 8.3.8
XXI	153.	<i>jaś</i>	<i>j, b, g, d, d</i>	A 1.1.58; 8.2.39; 8.4.53.
XXII	155.	<i>jhay</i>	<i>jh, bh, gh, dh, dh, j, b, g, d, d, kh, ph, ch, th, th, c, t, t, k, p</i>	A 5.4.111 8.2.10 8.4.62 8.4.63
XXIII	156.	<i>jhar</i>	<i>jh, bh, gh, dh, dh, j, b, g, d, d, kh, ph, ch, th, th, c, t, t, k, p, s, s, s</i>	A 8.4.65
XXIV	157.	<i>jhal</i>	<i>jh, bh, gh, dh, dh, j, b, g, d, d, kh, ph, ch, th, th, c, t, t, k, p, s, s, s, h</i>	A 1.2.9 -13; 6.1.58 – 59; 6.1.180 - 181; 6.1.183 - 185; 6.4.15; 6.4.16 – 21; 6.4.37; 6.4.42; 6.4.101; 7.1.60; 7.1.72; 7.3.103; 8.4.53 – 56.
XXV	159.	<i>jhaś</i>	<i>jh, bh, gh, dh, dh, j, b, g, d, d</i>	A 8.4.53.
XXVI	160.	<i>jhaṣ</i>	<i>jh, bh, gh, dh, dh</i>	A 8.2.37; 8.2.40.

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XXVII	234.	<i>baś</i>	<i>b, g, ḍ, d</i>	A 8.2.37; 8.2.38.
XXVIII	241.	<i>bhaṣ</i>	<i>bh, gh, ḍh, dh</i>	A 8.2.37; 8.2.38.
XXIX	244.	<i>may</i>	<i>m, ṅ, ṇ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p</i>	A 8.3.33.
XXX	250.	<i>yañ</i>	<i>y, v, r, l, ñ, m, ṅ, ṇ, n, jh, bh</i>	A 7.3. 101-102.
XXXI	252.	<i>yaṇ2</i>	<i>y, v, r, l</i>	A 1.1.45; 6.1.27; 6.1.77; 6.1. 174 -175; 6.4. 81 – 85; 6.4.87; 6.4.156.
XXXII	253.	<i>yam</i>	<i>y, v, r, l, ñ, m, ṅ, ṇ, n</i>	A 8.4.64.
XXXIII	254.	<i>yay</i>	<i>y, v, r, l, ñ, m, ṅ, ṇ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p</i>	A 8.4.58 – 59.
XXXIV	255.	<i>yar</i>	<i>y, v, r, l, ñ, m, ṅ, ṇ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p, s, ṣ, ś</i>	A 8.4.45 – 47.
XXXV	266.	<i>ral</i>	<i>r, l, ñ, m, ṅ, ṇ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p, s, ṣ, ś, h</i>	A1.2. 26.
XXXVI	285.	<i>val</i>	<i>v, r, l, ñ, m, ṅ, ṇ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p, s, ṣ, ś, h</i>	A 6.1.66; 7.2.35 – 36; 7.2.44 – 46; 7.2.76.
XXXVII	287.	<i>vaś</i>	<i>v, r, l, ñ, m, ṅ, ṇ, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d</i>	A 7.2.8.

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XXXVIII	279.	<i>šar</i>	<i>s, š, ś</i>	A 7.4.61; 8.3.28; 8.3.35; 8.4.49.
XXXIX	290.	<i>šal</i>	<i>s, š, ś, h</i>	A 3.1.45.
XL	302.	<i>hal</i>	<i>h, y, v, r, l, ñ, m, ñ, n, n, jh, bh, gh, dh, dh, j, b, g, d, d, kh, ph, ch, th, th, c, t, t, k, p, s, š, ś, h</i>	A 1.1.7; 1.1.10; 1.2.10 – 11; 1.2.26 1.3.3 – 4; 3.1.12; 3.1.22; 3.1.83; 3.1.124; 3.2.149; 3.3.103; 3.3.121; 6.1.68 – 69; 6.1.132 – 133; 6.1.174 – 175; 6.3.9 – 10; 6.4.2; 6.4.24; 6.4.49 – 50; 6.4.64 6.4.100 – 101; 6.4.113 – 116; 6.4.150 – 152; 7.2.3 – 4; 7.2.7; 8.2.77 – 78; 8.3.22 – 23; 8.4.31 – 32; 8.4.64.
XLI.	304.	<i>has</i>	<i>h,y,v,r,l,ñ, m, ñ, n, n, jh, bh, gh, dh, dh, j, b, g, d, d</i>	A 6.1.114.

PART TWO

10. A discussion

There are two different views on the main source of generativeness pertaining to Pāṇini's grammatical system. The first view is about morphology. It is held by those scholars who think that the morphological type of generativeness can be found hidden behind the scene of Pāṇini's grammatical task. The second view is about semantics. The proponents of that view believe that the so called "meaning categories" should be introduced into the study of Pāṇini's grammar. They think that the relationship between Pāṇini's grammar and its user could be posited at the very heart of that matter, as it has been mentioned already.

11. The first view

Some objections may be raised with regard to this view. They are of three different kinds.

Firstly, morphology is not autonomous within the framework of Pāṇini's grammatical system. As opposed to some contemporary linguistic models of the West characterised by a gap between morphology and syntax, Pāṇini's treatment of morphology cannot be separated so sharply from syntax and various processes related to the sounds of Sanskrit.

Secondly, it is likely that this view is, to some extent, associated with what Sir William Jones said about Sanskrit in 1786. Apart from having stated that Sanskrit, Greek and Latin languages had a common root, he also implied that Sanskrit was richer in the sense that it was much better grammatically shaped than the ancient classical languages of Europe. While being „more perfect than Greek, more copious than the Latin, and more exquisitely refined than either.“¹⁸, Sanskrit excels both of them, according to

18 The relevant part of his discourse is as follows:

“The Sanscrit language, whatever be its antiquity, is of a wonderful structure; more perfect than the Greek, more copious than the Latin, and more exquisitely refined than either, yet bearing to both of them a stronger affinity, both in the roots of verbs and the forms of grammar, than could possibly have been produced by accident; so strong indeed, that no philologer could examine them all three, without believing them to have sprung from some common source, which, perhaps, no longer exists; there is a similar reason, though not quite so forcible, for supposing that both the Gothic and the Celtic, though blended with a very different idiom, had the same origin with the Sanscrit; and the old Persian might be added to the same family.”

him. The meaning of his words might be misleading, if seen in the isolation of some special circumstances pertaining to the development of the oriental philology of the West and, in particular, if taken out of its historical context. To some linguists of the 20th century, it might have looked like a case for the morphological superiority of Sanskrit over ancient Greek and Latin. Not unexpectedly, certain views on Sanskrit as a morphologically rich language came into existence in the West with some of them being related to Pāṇini's grammar in the aforementioned sense. In other words, the view that Pāṇini's grammar was about morphology in the first place was in line with the view that Sanskrit as a language revealed the richness of morphological patterns possessed by no other known Indo-European language. It is not unlikely that the view held by those who believe that Pāṇini's grammar is based upon the principle of morphological generativeness might have been influenced by Sir William Jones's attitude towards Sanskrit and its grammatical structure. Or, if not, it should be indirectly associated with his attitude.¹⁹

Thirdly, Pāṇini's grammar has been translated into some Tibeto-Burman languages. To the native speakers of these languages Sanskrit has never looked like as a language that exhibits the morphological superiority of the first class over all the other Indo-European languages.²⁰ For example, no Buddhist scholar of Tibet has ever been seriously interested in the comparative study of various Indo-European languages with special reference to the morphological superiority of Sanskrit over the rest of them. In other words, the view that Sanskrit is morphologically superior to other Indo-European languages appears to be culturally determined.

Third Anniversary Discourse to the Asiatic Society (1786). Taken from :*The Works of Sir William Jones in Six Volumes*, Vol. I, London: printed for G.G. and J. Robinson Pater Noster Row and R. H. Evans (Successor to Mr. Edwards) No 26, Pall Mall, 1799, pp. 26.

19 Sir William Jones's words might have had some repercussions on the reception of Pāṇini's grammatical system in the West even in this context. This is a historically characterised objection.

20 The *Aṣṭādhyāyī* grammar was translated into Tibetan a long time ago. This fact should be interpreted within the context of the spread of Buddhism across Asia. To the Buddhists of Tibet, Sanskrit was a Buddhist language. Although the *Aṣṭādhyāyī* grammar was not seen as a Buddhist work by them, there was a tie between Pāṇini's grammar and some Buddhist Sanskrit grammars. And they saw the tie.

12. The second view

Van Nooten has not used the term “generativeness” in his article. Nor has he said anything about the generative nature of the *Aṣṭādhyāyī* grammar explicitly. However, the view held by those who believe that the core of the *Aṣṭādhyāyī* grammar is rooted in morphology, has been criticised severely by Van Nooten. And in all likelihood, his criticism presupposes the notion of the morphological type of generativeness.

But one should focus on Van Nooten’s question again. The question is as follows: “What is the principle that unites these many different sets of rules?”. It is probable that he has tried to refer to the set of 3995 rules taken from both the *Akṣarasamāmnāya* (14 aphorisms also known as “Śivasūtras”) and the *Sūtrapāṭha* (3981 aphorisms).²¹ He wrote:

“...the possibility of introducing a greater unity and system into the *Aṣṭādhyāyī* by interpreting the “meaning” statements in the grammar in such a manner that they form the link between the grammar and its user.”²²

It follows that, in his opinion, the *Aṣṭādhyāyī* grammar is not based upon a great unity and system. That is why he has made an attempt to introduce a greater unity and system into it. To him, it is a matter of interpretation. He also wrote:

“I have investigated the possibility of adding a new dimension to the interpretation of Pāṇini’s grammar, viz. that of the relationship between the grammar and its user.”²³

It is remarkable to notice that he has used the term “speech act” in the context of his interpretation of Patañjali’s comment on A 7.1.33.²⁴ In fact, the term belongs to the field of pragmalinguistics rather than to the science of meaning known as semantics.

So he has intended to find a tie between grammar and its user by means of the so called “meaning” statements. To do it, he has focused his attention on the critique of those who believe that the *Aṣṭādhyāyī* grammar is about morphology and various morphological processes bound up with morphophonology. According to him, the *Aṣṭādhyāyī* grammar is not just a handbook on morphology.

21 He has not mentioned the term “Akṣarasamāmnāya” in his paper, but it is probable that he has not tried to exclude it from his account of what Pāṇini’s grammatical system is.

22 Van Nooten, Barend A.(1969): “Pāṇini’s theory of verbal meaning”, FL volume 5, No. 2, p.244.

23 Van Nooten, Barend A.(1969): *ibid.* p. 253.

24 Needless to say, he has drawn on Patañjali and his work extensively.

He wrote:

„...Pāṇinean grammar is capable of describing the facts of the Sanskrit language without being, in the narrow sense of the word, a mere handbook of morphology. Often is regarded as just that.“²⁵

Of course, Pāṇini was not a compiler of any handbooks and his work is not about morphology only. As a matter of fact, the *Aṣṭādhyāyī* grammar has never been seen as a morphological handbook by the most prominent experts of India. What Van Nooten has written, must be attributed to some non-Indian scholars exclusively.

What Van Nooten has meant by the term “Sanskrit language“ is not perfectly clear. Pāṇini did not use the term “Sanskrit“ in his grammatical work.²⁶ Pāṇini used the term “bhāṣā“ instead. Evidently, Pāṇini described the two idioms of ancient India: the Vedic language of the hymns expressed in verses (also known as “chandas“) and the language devoid of metrical structure (known as “bhāṣā“). At the beginning of the 20th century some philologists declared that Pāṇini had described the language of the Brāhmaṇas.²⁷ When Van Nooten has introduced the term “user of the *Aṣṭādhyāyī* grammar“, has he meant the user of the grammar of the Vedic language? Or has he meant the user of the grammar of the language of the Brāhmaṇas (known as “bhāṣā“) perhaps? His position is not clear.

This is not the only moot point in Van Nooten’s article. He seems to have contradicted his own statement as he wrote:

“Lately, attempts have been made to introduce unity in Pāṇini’s system by taking recourse to modern linguistic systems such as the theories of morphemes and phonemes, the stratificational theory and the transformational analysis. Unless I missed the point of these discussions I could not escape the impression that these are foreign impositions on Pāṇini’s grammar that do not touch the premises upon which it is based. The framework of a foreign theory cannot very well accommodate every one of Pāṇini’s idiosyncrasies, nor are Pāṇini’s categories valid equivalents of our western ones.“²⁸

25 Van Nooten, Barend A.(1969): *ibid.* p. 242.

26 “Sanskrit“ as a language name appeared for the first time in the epic literature of India (Rāmāyaṇa).

27 “Bhandakar and Kielhorn have declared that the language described by Pāṇini was that of the Brāhmaṇas“. Sköld, Hannes (1926): “The Relative Chronology of Pāṇini and the Prātiśākhya“. IA, No. 55, p.181.

28 Van Nooten, Barend A.(1969): *ibid.* p. 244.

Quite interestingly, it is Van Nooten's intention to offer a foreign imposition on Pāṇini's grammar. And how can his imposition on Pāṇini's grammar touch the premises upon which it is based, seems to be a question about another moot point.

He wrote:

"It is expedient to operate with a notion: "category of meaning", although there is no term corresponding to this notion in Sanskrit grammar. "²⁹

He has abandoned the term "artha" by saying that the word "artha" simply means "meaning", while being unrelated to his "meaning-categories". In addition, he has reduced the use of the term "artha" to the "occasional references to the root-list that occur in the text."³⁰

In fact, the term "artha" has always been inseparably associated with the term "śabda" in the grammatical tradition of India and to discuss the former without even mentioning the latter would have been out of place, to say the least. Even the principles of brevity have been based upon them. For example, Pāṇini's grammar has been seen in India as a work rooted in the principle of brevity pertaining to the notion of śabda, whereas Śarvavarman's *Kātantra* has been described in South Asia as a grammatical work rooted in the principle of brevity related to the notion of artha.³¹ If the translation of the word "śabda" as "expression plan" be acceptable and partly correct, then it is the brevity pertaining to the expression plan that is clearly visible in Pāṇini's grammar. But it does not hold good for other grammars. For example, Śarvavarman's grammar is based upon the other type of brevity. If it be acceptable and somewhat correct for the word "artha" to get rendered as "content plan", then it is the brevity pertaining to the content plan that is to be found in Śarvavarman's grammar known as "Kātantra".

On the other side, Van Nooten's "meaning-categories" cannot be found in the aphorisms of Pāṇini's grammar. In other words, his "meaning-categories" are not visible. It is obvious that they do not occur in the sūtras of the *Aṣṭādhyāyī* grammar, whereas the term "artha" does. It occurs in the text of Pāṇini's grammar more than 80 times. It does occur in the variety of contexts in them. Therefore, the term corresponding to the concept of "artha" cannot be reduced to any "occasional references to the root-list".

In what sense can Van Nooten's "meaning-categories" form the "organisational principle along which Pāṇini's grammar is structured" is far from being clear.

29 Van Nooten, Barend A.(1969): *ibid.* p. 245.

30 Van Nooten, Barend A.(1969): his footnote, p. 245.

31 I am referring to the terms "śabdālāghava" and "arthalāghava".

In addition to that, he has claimed that for the “verbal paradigm, with very few exceptions“, a logical progression of his “meaning-categories“ could be found“.³² But how? The beginning of Pāṇini’s grammar cannot be found in the “verbal paradigm“, nor it can be found in the will of the user of the grammar. And much of what he has said about a native speaker of Sanskrit comes down to a sheer speculation. In short, his hypothesis does appear to lack in clarity and preciseness.

Nevertheless, his article is important to some extent. It is his attack on the prejudice about Pāṇini’s grammar in the sense of being labelled as “a mere handbook of morphology“ that represents the most significant part of his work.³³ It is possible that he has assumed the existence of the morphological type of generativeness, while saying that Pāṇini’s grammar is not “a mere handbook of morphology“. Unfortunately, he has not stated it explicitly.

13. The Śivasūtras and the principle of brevity

In the American tradition of generative grammar brevity is an important part of explanation.³⁴ Not surprisingly, some American authors have tried to impose their own framework on Pāṇini’s grammar by interpreting the concept of brevity in an unusual way, if seen from the perspective of ancient India. According to them, the concept of brevity is to be divided into brevity per se, explanatory brevity and brevity that generalises.³⁵

To achieve a greater clarity it would be advisable to reformulate the second question. A better form of the same question would be this: “In the absence of what principle the unity of these many different sets of rules would disappear?“

From the viewpoint of the system, the absence of the principle of brevity implies the absence of the unity of these many different sets of rules in Pāṇini’s grammar. In other words, it is the principle of brevity that unites these many different sets of rules. To be more explicit, one should say that it is the principle of brevity rooted in śabda (śabdālāghava) that unties these many different sets of rules within the framework of the Sūtrapāṭha (3981 aphorisms). And the Śivasūtras are bound up with the conditions of possibility of that type of the principle of brevity.

32 Van Nooten, Barend A. (1969): *ibid.* p. 253.

33 Van Nooten, Barend A. (1969): *ibid.* p. 242.

34 Smith, Henry(1992): “Brevity in Pāṇini“, *JIP* 20, p. 138

35 Smith, Henry(1992): *ibid.*, *JIP* 20, p.

14. A semiotic perspective: The generative power of the Śivasūtras and the theological context of ancient India

To do some better justice to Pāṇini and his work, one should take a closer look at the ancient world Pāṇini belonged to. It is likely that Pāṇini lived more than 2300 years ago. In all likelihood, the science of language was strongly depended on theology in ancient India. It centred around the cult of Śiva the God almighty who played his drum known as Ḍamaru, while holding his powerful trident in his hand. He was regarded as the Lord of dance. And his dance was of cosmological importance. No tie between macrocosmos and microcosmos was broken.

To the phonologists and phoneticians of our modern world, the aforementioned tie means very little. In other words, very few modern linguists would incline to look for a semiotic bond between the sound patterns of any language and some hidden theological aspects related to the sounds and their structural patterns. Although the existence of the extra-linguistic side of some linguistic categories is evident, they believe that linguistic categories should be emptied of their extra-linguistic correlates.³⁶ They think so, while relying on the western concept of what science is. But the extra-linguistic background of the Śivasūtras pertaining to the ancient world of India was so radically different from the underlying assumptions of our modern scientific world that the semiotic aspects of the Śivasūtras cannot be neglected - nor can they be put aside as irrelevant- if Pāṇini's treatment of the Śivasūtras is to be interpreted fully and without gaps.

To take such a close look at the ancient world Pāṇini lived in, one should focus one's attention on an unusual Sanskrit text. The text is known as *Nandikeśakāśikā*. It was composed by Nandi and commented on by Upamanyu. It contains twenty seven verses³⁷ that reveal an interesting interpretation of the Śivasūtras.³⁸

36 Cardona thinks that Pāṇini emptied his categories of any extra-linguistic elements. Al-George, Sergiu (1968): "The Extra-linguistic Origin of Pāṇini's Syntactic Categories and Their Linguistic Accuracy", JOIB, Vol. XVIII, 1- 2, September-December, M.S. University of Baroda, India, pp.1-5.

37 The *Nandikeśakāśikā* has been omitted repeatedly from various lists of relevant works on and about Pāṇini in the West. However, there is an exception to the rule. I am referring to Ida Politano's work on *Nandikeśakāśikā*. It does exist as a thesis (academic year 2017-18, Università degli Studi di Torino). It is entitled "Studio dei Māheśvarasūtra in relazione con la figura di Śiva Naṭarāja". Unfortunately, it has remained inaccessible to me.

38 In the text known as *Nandikeśakāśikā*, the Śivasūtras are understood in a syllabic sense. It means that they are not seen as a set of isolated letters, but as a set of syllables.

Starting with the syllable “a”, the first Śivasūtra deals with the inner thatness (tattva) which is the cause of all the worlds and all the classes of sounds (varṇas). The sound “a” is the form of attributeless Brahman in all objects. Associated with the vowel “ī”, which symbolises consciousness (citkalā), the vowel “u” represents God in the form of the world.

The second Śivasūtra introduces the concept of mental tendency (manovṛtti) into the text. It is coupled with the concept of illusion (māyā). Lord is linked to the vowel “ī”, the concept of illusion (māyā) is associated with the vowel “ī” and the concept of mental tendency (manovṛtti) is linked to the anubandha “k”. By resorting to the great illusion (māyā) and by revealing it by means of mental tendencies, Lord gave birth to the form of the world.

The third Śivasūtra highlights the union between the great illusion (māyā) and the Lord of the universe (Īśvara). The vowel “e” stands for the great illusion and the segment “on” represents the Lord.

The fourth Śivasūtra is associated with 14 worlds; the syllable “ai” symbolises 7 worlds above the earth and the syllable “au” symbolises 7 worlds below the earth.

The fifth Śivasūtra is related to the space and the three elements of nature; the syllable “ha” symbolises space (vyoma), the syllable “ya” symbolises air (vāyu), the syllable “va” symbolises water (āp) and the syllable “ra” symbolises fire.

The sixth Śivasūtra is associated with one element only - the syllable “la” symbolises earth.

The seventh Śivasūtra is bound up with the objects of senses. Thus the syllable “ṅa” symbolises the sounds of nature, the syllable “ma” symbolises the tactile objects and the sense of touch, the syllable “ṇa” symbolises the visible objects, the syllable “ṅa” symbolises the objects of taste and the syllable “na” symbolises the objects of smell.

The eighth Śivasūtra and the ninth one are related to the organs of motion of some living organisms. The syllable *jha* symbolises the speech and the syllable *bha* stands for hands (the eighth sūtra). On the other side, the syllable *gha* symbolises feet, while the syllables *ḍha* and *dha* symbolise anus and the generative organs of all the living beings (the ninth sūtra).

The tenth Śivasūtra is linked to the sense organs of various living organisms. Thus the syllable *ja* symbolises the ears of the living organisms and the syllable *ba* symbolises the skin of the living beings; further, the syllable *ga* is a symbol of the eyes of the living organisms and the syllable *ḍa* stands for their nose, while the syllable *da* symbolises their tongue.

The eleventh Śivasūtra is divided into the first five syllables that are related to the five types of breath (prāṇas) and the last three syllables that symbolise some important elements within the framework of the Sāṅkhya philosophy. The syllables *kha*, *pha*, *cha*, *ṭha* and *tha* represent the five breaths of living beings. On the other side, the syllable *ca* symbolises mind (manas), the syllable *ṭa* symbolises reason (buddhi) and the syllable *ta* symbolises Selfhood (ahaṅkara).

The twelfth Śivasūtra is connected to the duality of prakṛti and puruṣa. The syllable *ka* symbolises the concept of prakṛti (the primordial female) and the syllable *pa* symbolises the concept of puruṣa (the primordial male).

The thirteenth Śivasūtra is associated with the three qualities of nature. The syllable *śa* stands for the quality of rajas and the syllable *ṣa* is related to the grossest quality of tamas. The syllable *sa* symbolises the finest quality of nature, that is to say, it is a symbol of sattva.

The fourteenth Śivasūtra represents the God himself. It symbolises Śambhu.

To an uninitiated person, the *Nandikeśakāśikā* looks like a theological and theistic variant of the Sāṅkhya philosophy with some special reference to Pāṇini's ādisūtras. In fact, the *Nandikeśakāśikā* is something else.

Its text is silent on the topic of the shortforms (*pratyāhāras*). It is probably up to some diligent readers of the text to continue where the author and his commentator have stopped. It will be done here. For example, the shortform *hal* (No.302) occurs in many chapters of the *Aṣṭādhyāyī* grammar.³⁹ It occurs in the first chapter, the third chapter, the sixth chapter, the seventh chapter and the eighth chapter. As it is known that the shortform *hal* has been generated by the fifth Śivasūtra, and as it is known that the symbolism of space and other elements is associated with the fifth Śivasūtra, it follows that the symbolism of space and other elements can be found in the aforementioned chapters of the *Aṣṭādhyāyī* grammar.

A possible objection to this type reasoning would target the fact that *Nandikeśakāśikā* is posterior to Pāṇini's grammar. What is more, the content of *Nandikeśakāśikā* might indicate the existence of a strong tie between the Sāṅkhya philosophy and Pāṇini's grammar, which is somewhat problematic from a chronological viewpoint. In reply to this objection it can be stated that, of course, the historical appearance of the *Aṣṭādhyāyī* grammar pre-dates the appearance of the *Nandikeśakāśikā*. But it does not follow that Pāṇini's work is drastically different from the *Nandikeśakāśikā*. Pāṇini's grammatical work, not

39 The shortform *hal* (302) contains 34 sounds. They are as follows: *h, y, v, r, l, ṅ, m, ṇ, n, n, jh, bh, gh, ḍh, dh, j, b, g, ḍ, d, kh, ph, ch, ṭh, th, c, ṭ, t, k, p, s, ṣ, ś, h*.

much less than the *Nandikeśakāśikā*, contains some semiotic hints. Although Pāṇini was not an advocate of the Sāṅkhya philosophy, the spirit of semiotics was not unknown to him.⁴⁰

That is why it is a pity that the work known as *Nandikeśakāśikā* has fallen into oblivion in some Indological circles. For it can give as a valuable hint as to how to interpret the most important part of the *Aṣṭādhyāyī* grammar in a semiotic manner.

It can be said that the Śivasūtras were semiotically linked to the power of Śiva's drum in ancient India.⁴¹ The sign was indexical. On the other hand, the picture of Śiva as the Lord of dance was somewhat different. The sign was iconic. Lastly, the Śivasūtras themselves were symbols. In short, the *Nandikeśakāśikā* can be regarded as an introduction into the semiotics of the Śivasūtras.

In all, what the Sanskrit stanzas of the *Nandikeśakāśikā* suggest is twofold. Firstly, there is a parallelism between the generative processes of Pāṇini's grammar and the evolutive processes related to the development of the world itself. Put simply, they run in parallel. Secondly, the Śivasūtras are the first aphorisms (ādisūtras). Such being the case, they can be viewed as the starting point of Pāṇini's grammar.

Conclusion

The significance of the Śivasūtras within the context of Pāṇini's grammatical system as a whole has been discussed thus far. In that particular regard, four important questions have been given four different answers. The questions are as follows: (1) What is the main source of generativeness within Pāṇini's grammatical system? (2) Where does Pāṇini's grammar begin? (3) What is the principle that unites these many different sets of rules? (4) To what extent are the Śivasūtras crucial to Pāṇini's grammatical system?

40 That Pāṇini emptied his grammatical work of all the semiotic elements, as some western authors claim, does not seem to be a strong argument(Cardona 's argument against Al-George's): JOIB ibid. p.5

41 nṛttāvasāne naṭarājarājo nanāda dhakkām navapañcavāraṃ/
uddhatukāmassanakādisiddha - netadvimarśe śivasūtrajālam//1//
At the close of his dance, Naṭarāja, the lord of dance, in order to uplift Śanaka and other siddhas sounded the hand-drum fourteen times. I comment upon the collection of these aphorisms of Śiva.
Balasubramanian K.S. and Vasudeva T.V. (2009): *Śrīnandikeśakāśikā, with Roman transliteration and English translation*, The Kuppaswami Sastri Research Institute, Chennai, India, pp. 3 - 4.

With regard to the first question, it has been demonstrated that it is much more profitable to study the real character of the complex nature of the Śivasūtras while searching for the main source of generativeness than anything else of the sort. Why is it so? Firstly, the sounds of Sanskrit are generated at the initial stages of the process of generativeness. After that, various morphological forms come into being at some later stages. It holds likewise for different semantic units as they are posterior to the generated sounds of Sanskrit. For these reasons, being involved in reflections on the morphological and semantic aspects of Pāṇini's grammatical system does not seem to be very fruitful, when it comes to any inquiry into the source of generativeness with reference to Pāṇini's grammatical work.

As to the question about the beginning of the *Aṣṭādhyāyī* grammar, the very term "Ādisūtras" suggests the answer to the question. As the Ādisūtras are the primaeval aphorisms or the first aphorisms, it follows that Pāṇini's grammar begins with them.

A straightforward answer has been given to the third question. It is the principle known as "śabdālāghava" that unites "these many different sets of rules" within the framework of Pāṇini's grammar.

Finally, it can be said that the Śivasūtras are crucial to Pāṇini's grammatical system to a tremendous extent indeed. Their cruciality implies not only linguistic aspects of the whole thing, but even some extra-linguistic ones. It means that the answer to the last question touches upon the sphere of semiotics. Hence, something can be added to Deshpande's definition by stating that the Śivasūtras are more than "a fundamental reference catalogue of certain sounds, arranged in a particular order conducive to the proper and concise formulation of the grammatical rules. "

U KOLIKOJ SU MJERI AFORIZMI BOGA ŠIVE KLJUČNI ZA PĀNINIJEV GRAMATIČKI SUSTAV?

SAŽETAK

Ovaj rad započinje istraživati i određivati izvor generativnosti u Pāṇinijevom gramatičkom sustavu. Pored kratke studije o ulozi koju igraju Śīva-sūtre u spomenutom sustavu, on također nudi potpun prikaz takozvanih kratkih formi (ili *pratyāhāra*). Za razliku od ostalih radova koje se bave nekim sličnim temama, ovaj rad pruža dovoljno detaljnu dubinu koju je teško naći drugdje, jer uključuje potpun popis generiranih kratkih formi (ili *pratyāhāra*), kojih je brojem 305. Uz to su u ovom radu *pratyāhāre* podijeljene na one koje su operativne (41) i one koje to nisu (264). Potpuno očekivano, i Śīva-sūtre sutre su podijeljene dvojako. S metodološkog gledišta, rad razotkriva u sebi neke semiotičke elemente. On posebice ističe semiotički karakter sanskrtskog teksta poznatog kao *Nandikeśakāśikā* i njegovog odnosa prema Śīva-sūtrama. On također iznosi na vidjelo semiotički model tumačenja svakog pojedinog glasa pripadnog Śīva-sūtrama. U nekim su slučajevima također uključeni i metalingvistički markeri poznati kao „*anubandhe*“. Ključna je misao da glasovi jezika sanskrta imaju svoje izvanjezične korelate. Na kraju istraživanja ovaj rad također daje četiri odgovora na četiri pitanja s naglaskom na tom da je četvrto pitanje najvažnije od svih.

Ključne riječi: glasovi sanskrta, sanskrtska gramatika, generativnost, Pāṇini, Śīva-sūtre.

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Abbreviations:

AO - Acta Orientalia

FL- Foundations of Language

IA - Indian Antiquary

JIP- Journal of Indian Philosophy

JOIB – Journal of the Oriental Institute Baroda

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