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The Pāṇinian notion of nominal coordination in the light of the Vedic literature praxis.



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List of abbreviations[1]

[A]	*Aṣṭādhyāyī*
[AB]	*Aitareya Brāhmaṇa*
[AHS]	*Aṣṭāṅgahṛdaya Saṃhitā*
[ArthaŚ]	*Arthaśāstra*
[ĀpDhS]	*Āpastamba Dharmasūtra*
[ĀśvGS]	*Āśvalāyana Gṛhyasūtram.*
[ĀpŚS]	*Āpastamba Śrautasūtra*
[AV]	*Atharvaveda Saṃhitā*
[BĀU]	*Bṛhadāraṇyaka Upaniṣad*
[BaudhDhS]	*Baudhāyanadharmasūtra*
[BaudhŚS]	*Baudhāyana Śrautasūtra*
[BhārGS]	*Bhāradvāja Gṛhyasūtra*
[BhāMañj]	*Bhāratamañjarī*
[C]	*Candravyākaraṇa*
[Ca]	*Caraka Saṃhitā*

[1] As for the critical edition, see the bibliographic references.

[DrāhŚS] *Drāhyāyaṇa Śrautasūtra*

[GautDhS] *Gautama Dharmasūtra*

[GB] *Gopatha Brāhmaṇa*

[GobhGS] *Gobhilagṛhyasūtra*

[JaimGS] *Jaimini Gṛhyasūtra*

[KauśS] *Kauśika Sūtra*

[KāṭhGS] *Kāṭhaka Gṛhyasūtra*

[KhādGS] *Khādira Gṛhyasūtra*

[KātyŚS] *Kātyāyana Śrautasūtra*

[KS] *Kāṭhaka Saṃhitā.*

[KU] *Kauṣītaki Upaniṣad*

[KV] *Kāśikāvṛttī*

[M] *Vyākarana Mahābhāṣya*

[ManuS] *Mānava-Dharmaśāstra*

[Mbh] *Mahābhārata.*

[MPur] *Matsya purāṇa*

[MS] *Maitrāyaṇī Saṃhitā*

[PB] *Pañcaviṃśa Brāhmaṇa*

[PS] *Paippalāda Saṃhitā*

[PārGS] *Pāraskaragṛhyasūtra*

[R] *Rāmāyaṇa*

[ṚV] *Ṛgveda*

[ŚāṅkhGS] *Śāṅkhāyana Gṛhyasūtra*

[ŚS]	*Śaunakiya Saṃhitā*
[ŚBM]	*Śatapatha Brāhmaṇa*
[TB]	*Taittirīya Brāhmaṇa*
[TS]	*Taittirīya Saṃhitā*
[VaikhGṛS]	*Vaikhānasa Gṛhyasūtra*
[ViPur]	*Viṣṇupurāṇa*
[VP]	*Vākyapadīya*
[VSM]	*Vajasaneyi-Saṃhitā Mādhyandina*

Introduction

> In the end, we have to return to Pāṇini's formulations themselves, to compare his work, so to speak, with its own method, and to wring evidence from its weaknesses, which will betray something of its historical limitation: the merciless eye of the historian will not heed the beauty of the edifice in its entirety, but will be intent on looking for unassimilated elements which disturb its harmony, for flaws that might be due to the author being influenced by older sources, or not yet having reached certain stages of development (Thieme 1935: x).

It possible to investigate the Pāṇinian conception about coordination through the Vedic literature? On this matter, among others, Deshpande (2001: 43) discusses about a non-secondary methodological problem: "did […] (Pāṇini) know the Vedic literature in the same form in which we know it today"?

As Bronkhorst (2016: 8) clearly explains, there is a close link between the regions in which a considerable number of Vedic texts has been composed and the Gandhāra, where Pāṇini lived according to both the tradition (e.g. Xuanzang's chronicles) and the analysis of his linguistic

descriptions as stated , e.g. by Witzel (1989: 7: fn 11); as for the northern provenience of Pāṇini, Thieme (1935: 64), in his fundamental work whose essence represent a milestone in the field of Pāṇinian and Vedic studies, states that "nothing can confirm this tradition more conclusively than Pāṇini's relation to the Black YV", and provides more evidence to corroborate this point. The Northwest of India, especially the Gandhāra, played a 'pivotal' role in the formation of the Vedic Canon, as the fascinating reconstruction of Witzel (2011) suggests. The presence of the Brahmanic community obviously granted the conservation of the texts and their oral transmission; the further step enlightened by Bronkhorst (2016: 98) is represented by the "concern to preserve the texts in their phonologically correct form" and, consequently, by the development of the scientific reflection about phonetics which is manifested in the *Prātiśākhya*s with respect to each branch of the Vedas and in the *Śikṣā*, the study of phonetics and phonology.

As for the position of Pāṇini, Deshpande (2001) convincingly draws attention to an interesting clue emerging from A 1.1.16 *sambuddhau śākalyasyetau anārṣe*, a rule which assigns the technical term *pragṛhya* (11) to oT i.e. the vowel *o* (15) in case of a vocative (*sambuddhau*) occurring before a 'non Vedic'(*anārṣe*) *iti*, i.e. non belonging to the continuous utterance of the authentic form of the texts, according to Śākalya.[2] Evidence about phonetics shows that the text analysed by Śākalya, the author of the *Ṛgveda padapāṭha*,[3] is archaic if compared with the version of the *Saṃhitā* that is available to us today.[4] Pāṇini documents a phonetic behaviour proper to Śākalya's *padapāṭha*; thus, he was aware of its existence (as already established by Bronkhorst 1981: 4), even though he is not in tune with the analysis of his predecessor. Clearly, the *Aṣṭādhyāyī* should be chronologically set after the compilation of Śākalya's *padapāṭha* but, at the same time, before our version of the *Ṛgveda*, because the "applying his rules of sandhi leads in certain cases to a text that is older than the *Saṃhitāpāṭha*" (Bronkhorst 2016: 99; 444-458). Taken for granted that this assumption is correct, it is not possible to use the handed-down redaction of the *Ṛgveda Saṃhitā* as a consistent yardstick to investigate the underlying conception of Pāṇini as far as phonetics are concerned; however, no issue should force us to extend such a prohibition even to the analysis of *Ṛgvedic* lexical and syntactic data which are

[2] See Sharma (1987-2003): "*vāyo iti* (Śākalya) *vāyav iti* (non Śākalya)". Śākalya is mentioned four times in the *Aṣṭādhyāyī* (A 1.1.16, A 6.1.127, A 6.1.128, A 8.3.19)

[3] Even though, probably, he was not the definitive redactor (see Bronkhorst 1981).

[4] As for hints about phonetic problems of the original *Ṛgveda* with respect to Śākalya's *padapāṭha* and Pāṇini's rules, see Arnold (1905).

actually trustworthy, since the metric and poetic nature of this text often prevails on the standard structure of the language.

As Deshpande (2001: 44) vividly noted, and I consider the problem as crucial, "most of the literature upon which the traditional commentators base their understanding of the usage of Sanskrit is in fact substantially post-Pāṇinian. Thus, the traditional understanding of Pāṇini's rules is often based on the need to justify the post-Pāṇinian usage of Sanskrit, and not upon an intrinsic understanding of Pāṇini's grammar and its immediate linguistic environment".

As a man of his time, Pāṇini was deeply immersed in the Vedic culture. The language of the *Saṃhitā*s is one of the many elements emerging in that 'territory' which Kahrs (1998:184) compares to the language, while considering the similarities between a geographic map and Pāṇini's grammar: "if we have a map" he wrote "we may […] ask what features of the territory are represented on the map. If the territory is absolutely uniform, nothing would be represented on the map except the borders of the territory. Otherwise, what will be represented on a map is really *differences* of various kinds."

As such, when the boundaries between the many registers of the language need to be marked, they are overtly expressed in the *Aṣṭādhyāyī*; otherwise, the approach of the grammarian is the same of the ritualists: "the practices of various regions and towns vary widely. Here we will describe what is commonly shared by them" (tr. Deshpande 1993: 68), as explained in ĀśvGS 1.7.1-2.[5]

Likely, this was the model followed also by Pāṇini: he represents those grammatical facts which Deshpande (1993: 54) describes as "accepted by the social and linguistic élites of his time as being *sādhu*, 'correct' usages". The punctual study of the A reveals a panchronic conception of the language, i.e., kept outside of any temporal dimension; in the domain of this all-encompassing and timeless Sanskrit, Pāṇini sometimes singles out special fields of application for the taught forms and several degrees of optionality.[6] He "and his followers, like their other co-religionist colleagues, believed that the Vedic texts and the Sanskrit language were eternal entities" (Deshpande 1993: 67). Renou (1957) wrote that "*la langue enseignée par P. ne peut pas être le bhāṣā (opposée au chandas), comme on l'affirme ou le laisse entendre souvent. C'est une langue commune* […] *qui englobe le chandas au sens le plus large et la bhāṣa*".

[5] ĀśvGS 1.7.1-2: *atha khalūccāvacā janapadadharmā grāmadharmāś ca* […] *yat tu samānam tad vakṣyāmaḥ*. For more hints about the influence of the ritual literature over specific grammatical devices, see Pontillo 2003.

[6] See Kiparsky 1979.

The idea of a motionless language is not just a theoretical or philosophical matter, because such a conception clearly affected the way Indian grammarians and commentators represented the Sanskrit language through the centuries. Indeed, the mutual influence between linguistic changes and linguistic theories has been much debated by modern scholars: as noted by Deshpande (1985: 126-127), "the language actually did change somewhat, and […] the grammarians were aware of some changes, but also made some modifications in their linguistic theory. But they did not change their basic paradigm. They only added new epicycles to the old paradigm to accommodate the newly emerging situation".

The community of scholars is far from having reached a shared interpretation of the nature of the language targeted by Pāṇini. Bronkhorst (1982) pointed out that the language described by Pāṇini was closely connected with late-Vedic literature, in particular he mentions the *Aitareya Brāhmaṇa,* referring to a theory already proposed by Liebich (1891: 36-37), who also mentioned the *Bṛhadāraṇyaka Upaniṣad*, the *Āśvalāyana Gṛhyasūtra* and the *Pāraskara Gṛhyasūtra*. Deshpande (1983), whose position I tend to follow, emphasized the non-universal character of the *Aṣṭādhyāyī*, a text which was deep-rooted in the geographic area (and in the age) where it was composed. He argues, in short, that this grammar may refer to a variety of regional Sanskrit. Rau (1985) proposed to identify the language of the *Aṣṭādhyāyī* with the only linguistic material that, in the architecture of the grammar, does not fall under the domain of archaisms, nor in that of innovations. He clearly refers to the various semantic constraints provided by Pāṇini and called 'stylistic and regional variations' by Joshi-Bhate (1984). Cardona (1999) maintained that the language described by Pāṇini was current during the arc of his life, but still used in a diglossia context in the age of the early commentators. More recently, and after studies such as Whitney 1884, Cardona 2002, Cardona 2003; Cardona & Jain 2003, Kulikov (2013) comes back to the non-symmetry between grammatical literature and actual linguistic occurrences.

In this light, within a philological and linguistic perspective, it is mandatory to pay attention to the three different chronological levels of the so called three *vyākaraṇa-muni*s, starting with the modern studies of Kielhorn (1876): Pāṇini, the venerable *ācārya* who authored the *mūla*-text; Kātyāyana, whose cultural and scientific background already appears distant from several *Aṣṭādhyāyī*'s perspectives, author of the *vārttika*s to a limited selection of Pāṇini's rules; Patañjali, whose *Mahābhāṣya* represents a crucial authoritative source in the entire Indian grammatical tradition. Thieme (1935: 230) already stated that "no oral tradition connects Pāṇini with *Vārttikakāra*. Kātyāyana is by no means always sure of Pāṇini's meaning, and occasionally he even fails to understand him".

It is also mandatory to identify the boundaries of each scientific approach, reading the *Aṣṭādhyāyī* within the framework of the *Aṣṭādhyāyī* itself; then, one needs to study only the language which Pāṇini was acknowledged to in order to obtain an authentic awareness of his linguistic *repertoire*.

On the basis of a primarily textual approach, the present research aims at the study of the relationship between the Vedic language and the teachings of the *Aṣṭādhyāyī* with respect to the field of the nominal coordination.

A number of scholars mainly focused on the syntactic structures of Vedic and Sanskrit languages, included coordination, sometimes also resorting to Pāṇini's rules.[7] A close look to the coordinate conjunctions in the *Ṛgveda* is the core point of the fundamental work of Klein (1978, 1985). Viti (2006) devoted a Indoeuropean comparative approach to the topic.[8] A long-standing debate is represented by the hypothesis concerning the origins of *dvandva* compounds, either from the elliptic dual (see Delbrück 1900, Edgerton 1910, Brugmann 1922) or from both elliptic dual and asyndeton (see Macdonell 1910 and Wackernagel 1905). Cardona (1997) very briefly explains the nature of *dvandva* compounds in the *Aṣṭādhyāyī*; see also Bhandare (1995). A fundamental contribution is a paper by Kiparsky (2010) where he advances a fresh proposal for reading dual Vedic theonimic *dvandva*s (the type *índrāvaruṇā*) by interpreting the final *-ā* of the first constituent as an outcome of the reconstructed IE laryngeal *-h_1*, which stands for an instrumental nominal ending endowed with a comitative function ('Varuṇa with Indra'). As for the Vedic literature and theonymic *dvandva*s, Elizarenkova (1995: 163) and Ditrich (2016, 2018) explained that all coordinative devices do alternate even in the same hymn, likely due to a question of style.

Now, it is undeniable that poetry lays outside from both grammar and common language and there is no reason to treat it as a mere flow of linguistic data, neither it is conceivable to subject it under strict rules. However, there are still key points that the creative language shares with the common one; otherwise, it risks being unapt to reach its ultimate purpose, i.e., communication (clearly, in its brightest expression). As far as the coordination is concerned, the conception behind the devices we found in the *Saṃithā*s, and more general in the whole

[7] See, e.g., Speijer (1886 and 1896), Migron (2010), Lowe (2015), the contributors of the volumes 'Studies in Sanskrit Syntax' edited by Hock (1991) and 'Sanskrit Syntax' edited by Scharf (2015).

[8] Furthermore, the study of different types of coordination is the focus of a recent work of Wälchli (2005); Bauer (2008) recently focused on the typological classification of copulative compounds.

Vedic literature must have deeply influenced the mind of the worshippers, including grammarians and their theory of language.

As such, this thesis is conceived in two parts:

1. Analysis of the *sūtra*s devoted to the class of *dvandva* compounds and the relevant comment composed by Kātyāyana and then by Patañjali.
2. Analysis of a selection of Vedic texts considered familiar to Pāṇini.

For the purpose of this study, the following texts have been sample-analysed: the *Ṛgveda*, both the recension of the AV (only in § II 3) and, in accordance with the conclusions reached by Liebich (1891: 36-37), the *Aitareya Brāhmaṇa*, the *Bṛhadāraṇyaka Upaniṣad*, the *Āśvalāyana Gṛhyasūtra*.[9]

The present research has been organized as follows:

1. Full collection of instances of nominal coordination (*dvandva* compounds and coordinative syntactic strings not involving words explicitly denoting theonyms) from books 1, 2, 6 and 10 of the ṚV.
2. Subdivision of the material into semantic fields.
3. Identification of two main categories, i.e., 'Natural Pairings' and 'Non-natural pairings'.
4. Selection of the instances of nominal coordination according to the meaningfulness of their semantic sphere (in terms of cultural influence).
5. Extension to the whole ṚV of the research for the linguistic items collected in (1).
6. Study of the linguistic context of the selected material and of the relationship between the nouns involved in each case in terms of internal hierarchy.
7. Textual research in the Sanskrit and Vedic literary corpus with the aim of looking for attestations of *dvandva* compounds formed out of the combination of the nouns involved in the coordinative syntactic string.
8. Establishing a comparison between the teachings of the *Aṣṭādhyāyī* about *dvandva* compounds and the samples collected from the *Ṛgveda*. Given that the mentioned

[9] According to Brucker (1980: 58-59), the *Āśvalāyana Gṛhyasūtra* belongs to a group chronologically set before the group where the *Pāraskara Gṛhyasūtra* is collocated and as such has been selected for the present research. See Pontillo (2003: 19ff).

material is almost exclusively composed by coordinating syntactic strings, the word-order of the nouns has been observed in order to compare it to the *Aṣṭādhyāyī*.

9. Full collection of instances of *dvandva* compounds from books 1, 3, 6 and 8 of the *Aitareya Brāhmaṇa*.
10. Full collection of instances of *dvandva* compounds from books 1, 3, 6 of the *Bṛhadāraṇyaka Upaniṣad*.
11. Full collection of instances of *dvandva* compounds from books 1 and 2 of the *Āśvalāyana Gṛhyasūtra*.
12. Establishing a comparison between the teachings of the A about *dvandva* compounds and the samples collected from the literature subsequent to the *Ṛgveda*.
13. Study of the numerals comprised between 11 and 99 (collected both in compounds and in coordinative syntactic strings) in order to understand their behaviour in the textual context, in order to understand the reasons why Pāṇini classified them among the *dvandva* compounds.

PART ONE

1. *Aṣṭādhyāyī's* Rules Governing *dvandva* Compounds[10]

1. A 1.1.31 *dvandve ca* [*na* 29, *sarvādīni sarvanāmāni* 27]

And the class of nominal stems in the list beginning with *sarva* is not designated as *sarvanāman* when in a *dvandva* compound.

Traditional examples (KV):[11]

- *pūrvāparāṇām,* 'of the priors and the subsequents'.

[10] The following rules will be presented in the sequential order occupied in the grammar itself. Nonetheless, I have organized them on the basis of their topic below, in the Summary.

[11] I have exclusively recorded the examples quoted by the KV, so that when a given rule is not exemplified there, no example has been added in the present research.

Note that the compound *pūrvāpara-* is introduced as a *nipātana* (i.e., ready-made form) in rule A 2.4.12 (see below).

- *katarakatamānām* 'of which of two and which of many?'

2. A 1.1.32 *vibhāṣa jasi* [*sarvādīni sarvanāmāni* 27, *dvandve* 31]

The class of nominal stems in the list beginning with *sarva* is marginally designated as *sarvanāman* when in a *dvandva* compound before Jas (i.e., plural nominative ending).

3. A 1.2.63 *tiṣyapunarvasvor nakṣatradvandve bahuvacanasya dvivacanam nityam*[12]

In a *dvandva* denoting asterisms made up of the constituents *tiṣya* and *punarvasu* the dual number is mandatorily used in place of the plural.

4. A 2.2.29 *cārthe dvandvaḥ* [*samāsaḥ* 2.1.3, *saha supā* 2.1.4, *sup* 2.1.9, *anekam* 24, *vā* 2.1.18[13]]

Two or more inflected words preferably combine in the sense of 'and' to form a *dvandva*.

[12] Note that even if outside the domain of *dvandva* compounds A 1.2.61-62 also refer to asterisms with the specific constraint *chandasi*, which is here discontinued.

[13] See Kiparsky (1979) and Radicchi (1988). According to their interpretation, Candotti-Pontillo (2022: fn26) explain that the "overall interpretation of Pāṇini's compounding rules, in considering that the preferable option taught by *vā* in A 2.1.18 has to be continued in the following compounding rules. *vibhāṣā* 'marginally' is instead exclusively valid from A 2.1.11 to 2.1.17, where it is precisely dismissed by *vā*, and it is not to be continued in all the following compounding rules, as suggested by Patañjali, and commonly accepted – see e.g., Cardona (1997: 219). As a consequence, the majority of compounding rules preferably apply because they are grouped together under the scope of *vā* (A 2.1.18-2.2.9), instead of *vibhāṣā*".
Furthermore, such an optionality - which also consists of the relation between the compound and its source-phrase - has to be read under the domain of the *paribhāṣā* A 2.1.1. *samārthaḥ padavidhiḥ*, interpreted by Pontillo (2013) 'A provision which depends on inflected words denotes the same object [of the output of rule]'. The pattern is briefly resumed as follows by Mocci-Pontillo (2019: 8): "the analytical string (the combination of inflected *pada*s called *vigrahavākya*), which is enunciated or suggested by the formation rules and the newly-formed (and then inflected) compound pada, have to denote the same thing". On the same topic, but with a special focus on the relationship between *ekaṣeśa* and *dvandva* compounds, see also Borghero-Pontillo (2020: 68ff).

Traditional examples (KV):

- *plakṣanyagrodhau*, ‘the *plakṣa* and *nyagrodha* plants’.
- *dhavakhadirapalāśāḥ*, ‘the *dhava, khadira* and *palāśa* plants’.
- *vāktvacam*, ‘language and touch (as a singular)’
- *vāgdṛṣadam*, ‘language and mortar (as a singular)’

5. A 2.2.33 *dvandve ghi* [*pūrvam* 30]

The constituent denoting GHI (i.e., ending with the short vowels *-i* or *-u* -not only feminine in gender- and the feminine stems not included under the technical term *nadī* (A 1.4.3), with the exception of *sakhi-*) [is placed first] in a *dvandva* compound.

Traditional examples (KV):

- *paṭuguptau*, ‘cleverness and secretness’.[14]
- *mṛduguptau*, ‘cleverness and secretness’.

6. A 2.2.34 *ajādyadantam* [*pūrvam* 30, *dvandve* 32]

The constituent beginning with aC (any vowel) and ending with aT (the short vowel a) [is placed first in a *dvandva* compound].

Traditional examples (KV):

- *uṣṭrakharam*, ‘camels and donkeys (as a singular)’.

[14] The translation of the nouns involved in these compounds in their abstract sense in intended in order to not form a *samāmādhikāraṇa* compound according to rule A 1.2.42 *tatpuruṣaḥ samānādhikaraṇaḥ karmadhārayaḥ*, ‘a *tatpuruṣa* compound whose constituents share a common substratum is called *karmadhāraya*’. In other words, the constituents of a *dvandva* compound cannot simultaneously qualify more than one external referent.

Note that the compound *uṣṭrakharam* is introduced in the gaṇa *gavāśvādi* appended to rule A 2.4.11 (see below).

- *uṣtraśaśakam*, 'camels and rabbits (as a singular)'.

7. A 2.2.34 *alpāctaram* [*pūrvam* 30, *dvandve* 32]

The constituent that has fewer vowels (aC) [is placed first in a *dvandva* compound].

Traditional examples (KV):

- *dhavakhadirapalāśāḥ*, 'the *dhava*, the *khadira* and the *palāśā* plants'.

8. A 2.4.2 *dvandvaś ca prāṇitūryasenāṅgānām* [*ekavacanam* 1][15]

A *dvandva* made up of constituents denoting parts of a living being[16], a musical group, an army is also singular in number.

Traditional examples (KV):

- *pāṇipādam*, 'hands and feet (as a singular)'.
- *śirogrīvam*, 'the head and the neck (as a singular)'.
- *mārdaṅgikapāṇavikam*, 'players on the *mārdaṅga* and the *paṇava* (as a singular)'.
- *vīṇāvādakaparivādakam,* 'players of *vīṇā* and of lute (as a singular)'.
- *rathikāśvāroham*, 'charioteers and horsemen (as a singular)'.
- *rathikapādātam*, 'charioteers and infantrymen (as a singular)'.

[15] Even if the *dvandva* compounds inflected in the singular number and neuter gender are commonly termed *samāhāra*, it only occurs as a constraint in rule A 2.1.51, which is outside the domain of *dvandva*s. A further occurrence of the term *samāhāra* refers to a specific pitch accent in rule A 1.2.31. Note that the literal translation of *ekāvacana* is 'expression of one', i.e., 'a singularity'. I choose to translate as 'singular in number' to encompass both the etymological and morphological perspective, even though *eka-*, *dvi-*, *bahuvacana* are the term usually employed by Pāṇini (see, e.g., A 1.4.102) to account for the grammatical number category of a linguistic formation (see also fn 32).

[16] As for the oppositive categories *prāṇin* and *aprāṇin* with respect to the formation of *dvandva* compounds inflected in the singular number and neuter gender see below, § II. In this rule the semantic category *prāṇin* does not trigger any morphologic feature of the final complex formation since it only denotes the whole from which the *aṅga*s – which is the main category of this rule - are the parts taken into account.

9. A 2.4.3 *anuvāde caraṇānām* [*ekavacanam* 1, *dvandvaḥ* 2]

A *dvandva* made up of constituents denoting branches of Vedic schools is singular in number in the case of *anuvāda*, ‘repetiton, transmission’.

Traditional examples (KV):

- *udagād kaṭhakālāpam*, ‘the schools of Kaṭha and Kālāpin rose’.
- *pratyaṣṭhāt kaṭhakauthumam*, ‘the schools of Kaṭha and Kuthumin stood’.

10. A 2.4.4 *adhvaryukratur anapuṃsakam* [*ekavacanam* 1, *dvandvaḥ* 2]

[A *dvandva*] having non neuter constituents, denoting ritual sacrifice of the Adhvaryu [is singular in number].[17]

Traditional examples (KV):

- *arkāśvamedham*, ‘the *arka* and *aśvamedha* sacrifices (as a singular)’.
- *sāyāhnātirātram*, ‘the *sāyāhna* and *atirātra* sacrifices (as a singular)’.

11. A 2.4.5 *adhyayanato viprakṛṣṭākhyānām* [*ekavacanam* 1, *dvandvaḥ* 2]

[A *dvandva*] made of constituents denoting names not far from each other due to their study [is singular in number].

Traditional examples (KV):

[17] Due to the mention of the Adhvaryu priest, this rule is traditionally interpreted as referred to the Yajurvedic sacrifice. The specific domain of the YV is singled out elsewhere by Pāṇini through the use of specific constraints, such as *yajuṣi* or *mantreṣu* (see Joshi-Bhate 1984, Roodbergen 2008).

- *padakakramakam*, ‘men who know the *Padapāṭha* and men who know the *Kramapāṭha*’.
- *kramakavārtikam*, ‘men who know the *Kramapāṭha* and men who know the *Vārtikas*’.

12.A 2.4.6 *jātir aprāṇināṃ*[18] [*ekavacanam* 1, *dvandvaḥ* 2]

[A *dvandva*] of class names denoting non-living beings [is singular in number].

Traditional examples (KV):

- *ārāśastri,* ‘awls and knives (as a singular)’.
- *dhānāśaṣkuli*, ‘rice and barley (as a singular)’.

13.A 2.4.7 *viśiṣṭaliṅgo nadī deśo ‘grāmāḥ* [*ekavacanam* 1, *dvandvaḥ* 2]

[A *dvandva*] having (constituents) of different genders denoting a river and a place - but not settlements [is singular in number].

Traditional examples (KV):

- *gaṅgāśoṇam*, ‘the *gaṅgā* (f.) and the *śoṇa* (m.) rivers (as a singular)’.
- *kurukurujāṅgalam*, ‘the *kuru* (m.) and the *kurujāṅgala* (n.) regions (as a singular)’.

14.A 2.4.8 *kṣudrajantavaḥ* [*ekavacanam* 1, *dvandvaḥ* 2]

[A *dvandva*] having (constituents) denoting small creatures [is singular in number].

Traditional examples (KV):

- *daṃśamaśakam*, ‘stinging insects and mosquitos (as a singular)’.

[18] See fn 14. Here the main constraint, indeed, is *jātiḥ* and non *aprāṇin*.

- *yūkālikṣam*, ‘worms and ants (as a singular)’.

15.A 2.4.9 *yeṣāṃ ca virodhaḥ śāśvatikaḥ* [*ekavacanam* 1, *dvandvaḥ* 2]

And a *dvandva* denoting items between which there is everlasting enmity [is singular in number].

Traditional examples (KV):

- *mārjāramūṣakaṃ*, ‘cats and mice (as a group of enemies)’.
- *ahinakulam*, ‘snakes and mongooses (as a group of enemies)’.

16.A 2.4.10 *śūdrāṇām aniravasitānām* [*ekavacanam* 1, *dvandvaḥ* 2]

A *dvandva* is singular in number when it is made of constituents denoting *śudra*s who are not expelled.

17.A 2.4.11 *gavāśvaprabhṛtīni ca* [*ekavacanam* 1, *dvandvaḥ* 2]

And each *dvandva* of the list beginning with *gavāśvam* is also singular in number.

18.A 2.4.12 *vibhāṣā vṛkṣamṛgatṛṇadhānyavyañjanapaśuśakunyaśvavaḍava-pūrvāparādharottarāṇām* [*ekavacanam* 1, *dvandvaḥ* 2]

A *dvandva* is marginally singular in number when it is made up of constituents denoting trees, wild beasts, herbs, grains, condiments, domestic animals, birds, and in the case of *aśvavaḍava-* ‘a horse and a mare’, *pūrvāpara-* ‘the first and the subsequent’, *adharottara-* ‘the lower and the higher’.

Traditional examples (KV):

- *plakṣanyagrodham, plakṣanyagrodhāḥ* - ‘*plakṣa* and *nyagrodha* trees (as a singular)’, ‘*plakṣa* and *nyagrodha* trees’.

- *rurupṛṣatam, rurupṛṣatāḥ* - '*ruru* and *pṛṣata* deers (as a singular)', '*ruru* and *pṛṣata* deers'.
- *kuśakāśam, kuśakāśāḥ* - '*kuśa* and *kāśa* herbs (as a singular)', '*kuśa* and *kāśa* herbs'.
- *vrīhiyavam, vrīhiyavāḥ* - 'rice and barley (as a singular)', 'rice and barley'.
- *dadhighṛtam, dadhighṛte* - 'curds and ghee (as a singular)', 'the curd and the ghee'.
- *gomahiṣam, gomahiṣāḥ* - 'cows and buffaloes (as a singular)', 'cows and buffaloes'.
- *tittirikapiñjalam, tittirikapiñjalāḥ*, - 'partridges and heathcocks (as a singular)', 'partridges and heathcock'.
- *aśvavaḍavam, aśvavaḍavau* - 'horses and mares (as a singular)', 'horses and mares'.
- *pūrvāparam, pūrvāpare* - 'priors and subsequents (as a singular)', 'the prior and the subsequent'.
- *adharottaram, adharottare* – 'lowers and highers (as a singular)', 'the lower and the higher'.

19.A 2.4.13 *vipratiṣiddhaṃ cānadhikaraṇavāci* [*ekavacanam* 1, *dvandvaḥ* 2, *vibhāṣā* 12]

A *dvandva* of antonyms which are not expression of *adhikaraṇa*[19] is marginally also singular in number.

Traditional examples (KV):

- *śītoṣṇam, <u>śītoṣṇe</u>* - 'the hot and the cold (as a singular)', 'the hot and the cold'.
- *sukhaduḥkham, <u>sukhaduḥkhe</u>* - 'the pleasure and the pain (as a singular)', 'the pleasure and the pain'.
- *jīvitamaraṇam, <u>jīvitamaraṇe</u>* - 'the life and the death (as a singular)', 'the life and the death'.

[19] I.e., nominal compounds who does not denote an external referent (indeed, they are classified as *dvandva* s rather than as *karmadhārayas*). Regarding this specific term, I follow Mocci-Pontillo'reading (2020: 53 fn. 26): "In the A, *adhikaraṇa-* is the best candidate, in our opinion, to convey what is commonly called 'referent', even though, as is well known, *adhikaraṇa-* is also the name of a *kāraka* (A 1.4.45), explained as *ādhāra-*, i.e., 'substratum' or 'locus'. In fact, this notion of 'substratum' in the sense of 'the signified entity' seems to be conveyed in all eleven occurrences of the term *adhikaraṇa-* in the A, even when it seems easier to translate it as 'substance' (*dravya-*), as in A 2.4.13 (cf. Deshpande 1992: 15)".

20.A 2.4.14 *na dadhipayādīni* [*ekavacanam* 1, *dvandvaḥ* 2]

The class of *dvandva* compounds in the list beginning with *dadhipayasī* is not singular in number.

21.A 2.4.15 *adhikaraṇaitāvattve ca* [*ekavacanam* 1, *dvandvaḥ* 2, *na* 14]

And a *dvandva* compound is not singular in number when the constituents denote the quantity of *adhikaraṇa*s.

Traditional examples (KV):

- *daśa dantoṣṭhāḥ,* 'a set of ten teeth and mouths'.
- *daśa mārdaṅgikapāṇavikāḥ,* 'a set of ten *mārdaṅgika* and *pāṇavika* players'.

22.A 2.4.16 *vibhāṣā samīpe* [*ekavacanam* 1, *dvandvaḥ* 2, *adhikaraṇaitāvattve* 15]

A *dvandva* is marginally singular in number when denoting a proximate quantity of an *adhikaraṇa*.

Traditional examples (KV):

- *upadaśaṃ dantoṣṭham, upadaśāḥ dantoṣṭhāḥ* - 'a set of approximately ten teeth and mouths (as a singular)', 'a set of approximately ten teeth and mouths'.
- *upadaśaṃ mārdaṅgikapāṇavikam, upadaśā mārdaṅgikapāṇavikāḥ* - 'a set of approximately ten *mārdaṅgika* and *pāṇavika* players (as a singular)', 'a set of approximately ten *mārdaṅgika* and *pāṇavika* players'.

23.A 2.4.17 *sa napuṃsakam*

A *dvandva* compound in the singular number is inflected in the neuter gender.

24.A 2.4.26 *paraval liṇgam dvandva tatpuruṣayoḥ*

The gender of a *dvandva* and a *tatpuruṣa* compound is in accordance with the last constituent.

Traditional examples (KV):

- *kukkuṭamayūryāv ime*, ‘these (f.) cock (m.) and peacock (f.)’.
- *mayūrīkukkuṭāv imau*, ‘these (m) peacock (f.) and cock (m.)’.

25.A 2.4.27 *pūrvavad aśvavaḍavau*

The (gender of the) *dvandva* compound *aśvavaḍavau* is in accordance with the first constituent.

26.A 2.4.28 *hemantaśiśirav ahorātre ca chandasi* [*pūrvavad* 27]

And the *dvandvas hemantaśiśirau* and *ahorātre* are in accordance with the first constituent in the *chandas*.

Traditional examples (KV):

- *hemantaśiśirāvṛtūnāṃ prīṇāmi*, ‘of the seasons the winter and the cool I delight’. [20]
- *ahorātre idaṃ vrūmaḥ*, ‘day-and-night now we address’.[21]

27.A 2.4.68 *tikakitavādibhyo dvandve* [*luk* 58, *bahuṣu tenaivāstriyām* 62, *gotre* 63]

After *pada*s of the list beginning with *tikakitava-*, a *luk* (zero-replacement) (of the *taddhita* affix) denoting a *gotra* descendent occurs in the case of a *dvandva* if the plurality is signified precisely by it (i.e., by the *pada*s of the given compound, e.g., *tika-*, *kitava-*) and provided that it (i.e., the compound) denotes non-feminine items.

[20] TS 1.6.2.3. Tr. Keith 1914.
[21] ŚS 11.6.5.1. Tr. Withney 1905.

28.A 2.4.69 *upakādibhyo 'nyatarasyām advandve* [*luk* 58, *bahuṣu tenaivāstriyām* 62, *gotre* 63]

Optionally in a non-*dvandva*, there is *luk* in the case of a *gotra* affix to denote a plurality, provided that it (i.e., plurality) is conveyed by it (i.e., the *gotra* affix) and not in the case of a feminine after the stems of the *gaṇa* beginning with *upaka-*.

29.A 4.2.6 *dvandvāc chaḥ* [*taddhitāḥ* 4.1.76, *nakṣatreṇa yuktaṃ kālaḥ* 3]

The *taddhita* affix *cha* (*-īya-*) occurs after a *dvandva* compound in the sense of the time of conjunction with constellations (denoted by the *pada*s of the given compound).

Traditional examples (KV):

- *rādhānurādhīyā rātriḥ*, 'a night when the moon is in conjunction with the asterism of *rādhā* and *anurādhā*'.
- *tiṣyapunarvasavīyamahaḥ*, 'a day when the moon is in conjunction with the asterism of *tiṣya* and *punarvasu*'.

30.A 4.3.88 *śiśukrandayamasabhadvandvendrajananādibhyaś chaḥ* [*adhikṛtya kṛte granthe* 87]

The *taddhita* affix *-cha* is introduced after *śiśukranda-* 'a child's cry', *yamasabha-* 'Yama's assembly', a *dvandva* compound, and after the stems belonging to the *gaṇa*[22] beginning with *indrajanana-* 'Indra's birth' provided that the *taddhita* derivative word denotes a book written with reference to (them).

31.A 4.3.125 *dvandvād vun vairamaithunikayoḥ* [*tasyedam* 120]

The *taddhita* affix *vuN* is introduced after a *dvandva* compound provided that the meaning is X belongs to Y to express enmity or marriage between the *denotata* of the constituents.

[22] It is an *ākṛtigaṇa*.

Traditional examples (KV):

- *bābhravyaśālaṅkāyanikā*, '*bābhravya* and *śālaṅkāya* (as enemies)'.
- *kākolūkikā*, 'the crow and the owl (as enemies)'.
- *atribharadvājikā*, 'the intermarriage of Atri and Bharadvāja's families'
- *kutsakuśikikā*, 'the intermarriage of the Kutsa and Kuśika's families'.

32.A 5.1.133 *dvandva manojñādibhyaś ca* [*taddit̄aḥ* 4.1.76, *tasya bhāvaḥ* 119, *karmaṇi* 124, *vuñ* 132]

The *taddhita* affix *vuÑ* also occurs after a *dvandva* and the nominal stems of the list beginning with *manojña* to denote a state (*bhāva*) or an activity of X (*karman*).

Traditional examples (KV):

- *gopālapaśupālānāṃ bhāvaḥ karma vā gaupālapaśupālikā*, 'the condition and activity of cowherds and herdsmen [is called] *gaupālapaśupālikā*'.
- *śaiṣyopādhyāyikā*, 'the condition and activity of pupil and teacher',
- *kautsakuśikikā*, 'the condition and activity of Kutsa and Kuśika'.

33.A 5.2.128 *dvandvopatāpagarhyāt prāṇisthād iniḥ* [*taddit̄aḥ* 4.1.76, *tad asyāsty asmin* 94]

The *taddhita* affix *inI* (*-in*) occurs after a *dvandva* compound and nominal stems denoting *upatāpa-*, 'disease' and *garhya-*, 'contempts' whose denotatum stands on living beings in the sense of Y belonging to X or Y in X).

Traditional examples (KV):

- *kaṭakavalayinī*, ‘a woman having a bracelet and a ring’.
- *śaṅkhanūpuriṇī*, ‘a woman having a shell and an ornament for the ankle’.

34.A 5.4.106 *dvandvāc cudaṣahantāt samāhāre* [*tadditāḥ* 4.1.76, *samāsāntāḥ* 68, *ṭac* 91]

The *samāsānta taddhita* affix *ṬaC* (*-a*) occurs after a *dvandva* compound ending in *cU* (palatal phonemes), *-d*, *-ṣ* or *-ḥ* when denoting a group.

Traditional examples (KV):

- *vāktvacam*, ‘speech and touch (as a singular)’.
- *sraktvacam*, ‘garland and skin (as a singular)’.
- *śrīsrajam*, ‘fortune and garland (as a singular)’.
- *iḍūrjam*, ‘prayer and power (as a singular)’.
- *vāgūrjam*, ‘speech and power (as a singular)’.
- *samiddṛṣadam*, ‘kindling wood and mill-stone (as a singular)’.
- *sampadvipadam*, ‘success and misfortune (as a singular)’.
- *vāgvipruṣam*, ‘a word and a drop (as a singular)’.
- *chatropānaham*, ‘an umbrella and sandals (as a singular)’.
- *dhenugoduham*, ‘milk cow and milkman (as a singular)’.

35.A 6.2.34 *rājanyabahuvacanadvaṃdve ‘ndhakavṛṣṇiṣu* [*prakṛtyā pūrvapadam* 1]

In a *dvandva* compound made up of plural names of warriors, the first constituent retains its original accent provided that they belong to the *andhakas* family or to the *vṛṣnis* family.

Traditional examples (KV):

- *śvāphalkacaitrakāḥ*, ‘the warriors *śvāphalka* and *caitraka*’.
- *caitrakarodhakāḥ*, ‘the warriors *caitraka* and *rodhaka*’.
- *śinivāsudevāḥ*, ‘the warriors *śini* and *vāsudeva*’.

36.A 6.2.35 *saṃkhyā* [*prakṛtyā pūrvapadam* 1, *dvandve* 34]

In a *dvandva* compound the first constituent which is a *saṃkhyā* retains its original accent.

Traditional examples (KV):

- *ekādaśa*, ‘eleven’.
- *dvādaśa*, ‘twelve’.
- *trayodaśa*, ‘thirteen’.

37.A 6.2.36 *ācāryopasarjanaś cāntevāsī* [*prakṛtyā pūrvapadam* 1, *dvandve* 34]

In a *dvandva* compound the first constituent also retains its original accent when it is a noun denoting a student whose *upasarjana*[23] is the (name of the) teacher.

Traditional examples (KV):

- *āpiśalapāṇinīyāḥ*, ‘pupils of Apiśala and Pāṇini’.
- *pāṇinīyarauḍhīyāḥ*, ‘pupils of Pāṇini and Rūḍhi’.
- *rauḍhīyakāśakṛtsnāḥ*, ‘pupils of Rūḍhi and Kāśakṛtsna’.

38.A 6.2.37 *kārtakaujapādayaś ca* [*prakṛtyā pūrvapadam* 1, *dvandve* 34]

In a *dvandva* compound in the list beginning with *kārtakaujapau* the first constituent retains its original accent.

39.A 6.3.25 *ānaṅ ṛto dvandve* [*uttarapade* 1, *ṛto vidyāyonisambandhebhyaḥ* 22]

[23] I.e., non-head constituent. See Candotti-Pontillo 2019.

ānaṄ is introduced in place of ṛ before the last constituent in a *dvandva* compound after a nominal stem denoting an individual who is linked with the denotatum of the second constituent through relationships of knowledge or family.

Traditional examples (KV):

- *hotāpotārau,* 'the Hotṛ and the Potṛ'.
- *neṣṭodgātārau,* 'the Neṣṭṛ and the Udgātṛ'.
- *praśāstāpratihartārau,* 'the Praśastṛ and the Pratihartṛ'.

40.A 6.3.26 *devatādvandve ca* [*uttarapade* 1, *ānaṅ* 25][24]

In the case of a *dvandva* denoting a couple of divinities *ānAṄ* is also introduced (to replace the final sound – A 1.1.52-53) before the last constituent.

41.A 6.3.27 *īd agneḥ somavaruṇayoḥ* [*uttarapade* 1, *devatādvandve* 26]

In case of a *dvandva* denoting a couple of divinities *īT* (the long vowel ī) is introduced in place of (the final sound - A 1.1.52) of *agni-* before *soma-* and *varuṇa-* as last constituents.

Traditional examples (KV):o

- *agnīṣomau*, 'Agni and Soma'.
- *agnīvaruṇau,* Agni and Varuṇa'.

42.A 6.3.28 *id vṛddhau* [*uttarapade* 1, *devatādvandve* 26, *agneḥ* 27]

[24] Note that A 6.2.141-142, A 7.3.22-23 govern the correct placement of the accent in *devatādvandva*s.

In the case of a *dvandva* denoting a couple of divinities undergoing a *vṛddhi* replacement, the short vowel *-i* is introduced in place of (the final sound - A 1.1.52) of *agni-* before the last constituent.

43. A 6.3.29 *divo dyāvā* [*uttarapade* 1, *devatādvandve* 26]

In the case of *dvandva* denoting a couple of divinities *dyāvā* occurs in place of *div-* before the last constituent.

Traditional examples (KV):

- *dyāvākṣāmā*, 'heaven and earth'.
- *dyāvābhūmī*, 'heaven and earth'.

44. A 6.3.30 *divasaś ca pṛthivyām* [*uttarapade* 1, *devatādvandve* 26, *divo dyāvā* 29]

In the case of a *dvandva* denoting a couple of divinities, when *pṛthivi-* is the last constituent, also *divas-* occurs in place of *div-* (i.e., and not only *dyāvā*).

Traditional examples (KV):

- *divaspṛthivyau*, 'heaven and earth'.
- *dyāvāpṛthivyau*, 'heaven and earth'.

45. A 6.3.31 *uṣāsoṣasaḥ* [*uttarapade* 1, *devatādvandve* 26]

In the case of a *dvandva* denoting a couple of divinities *uṣāsā* is introduced in place of *uṣas-* before the last constituent.

Traditional examples (KV):

- *uṣāsāsūryam*, 'dawn and sun'.
- *uṣāsānaktā*, 'dawn and night'.

46.A 6.3.32 *mātarapitarau udīcām*

mātarapitarau (is introduced as a ready-made form) according to the northern grammarians.

47.A 6.3.33 *pitarāmātarā ca chandasi*

pitarāmātarā (is introduced as a ready-made form) according to the *chandas.*

Traditional examples (KV):

- *ā mā gantāṃ pitarāmātarā ca*, 'come to me, father and mother'.[25]

48.A 7.3.21 *devatādvandve ca* (*vṛddhiḥ* 7.2.114, *ñṇiti* 7.2.115, *taddhiteṣu acām ādeḥ* 7.2.117, *kiti ca* 7.2.118 *uttarapadasya*, 10 *pūrvapadasya ca* 19)

A *vṛddhi* substitute also replaces the first vowel of the second and the first constituent in a *devatādvandva* before a *taddhita* having Ñ, Ṇ or K as a marker.

Summary

[25] Tr. Keith 1914. This passage quoted by the KV (and originally by Patañjali), comes from the Yajurvedic tradition: consider TS 1.7.8.3.4 *ā́ mā gantām pitárā // mātárā cā́ mā sómo amṛtatvā́yagamyāt //* and the slightly different VSM 9.19.2 *ā́ mā gantāṃ pitárā mātárā cā́ mā sómo amrtatvéna gamyāt/*. The topic will be deepened *infra*, in the relevant section dealing with the M.

RULE	CONTENT	TOPIC
A 2.2.29	Combination of words in the sense of coordination are designated as *dvandva*.	Formation rule
A 2.2.33	Constituents ending with the short vowels *-i* or *-u* -not only feminine in gender- and the feminine stems not included under the technical term *nadī* (A 1.4.3), with the exception of *sakhi-* are placed first in a *dvandva* compounds.	Syntax: Word-order
A 2.2.34	Constituents beginning with a vowel and ending with the short vowel a are placed first in a *dvandva* compound.	Syntax: Word-order
A 2.2.35	Constituents having the lowest number of vowels are placed first in a *dvandva* compound.	Syntax: Word-order
A 1.1.31	Words belonging to the *gaṇa sarvādi* must not be designated as *sarvanāman* when used in *dvandva* compounds.	Morphologic rule
A 1.1.32	Words belonging to the *gaṇa sarvādi* are marginally designated as *sarvanāman* when used in *dvandva* compounds before plural nominative endings.	Morphologic rule
A 2.4.26	*dvandva* (and *tatpuruṣa*) compounds are inflected according to the gender of the last constituent.	Foundamental Morphology
A 2.4.27	The *dvandva* compound *aśvavaḍavau* is inflected according to the gender of the first constituent.	Grammatical gender
A 2.4.28	The *dvandva* compounds *hemantaśiśirau* and *ahorātre* are inflected according to the gender of the first constituent in the *chandas*.	Grammatical gender
A 2.4.2	X+ Y [parts of a living being + parts of a living being], X+Y [parts of a musical group + parts of a musical group] X+Y [parts of an army + parts of an army] → singular in number.	Morphologic rule: neuter + singular
A 2.4.3	X+Y [branches of Vedic schools + branches of Vedic schools] (in case of *anuvāda*) → singular in number.	Morphologic rule: neuter + singular

A 2.4.4	X+Y [ritual sacrifice performed by the *adhvaryu* + ritual sacrifice performed by the *adhvaryu*] (non neuter) → singular in number.	Morphologic rule: neuter + singular
A 2.4.5	X+Y [names derived from the study + names derived from the study] (close subjects) → singular in number.	Morphologic rule: neuter + singular
A 2.4.6	X+Y [non living being + non living being] → singular in number.	Morphologic rule: neuter + singular
A 2.4.7	X + Y [place + place], X + Y [river + river] (of different gender, no villages) → singular in number.	Morphologic rule: neuter + singular
A 2.4.8	X + Y [small creatures + small creatures] → singular in number.	Morphologic rule: neuter + singular
A 2.4.9	X + Y [enemies + enemies] → singular in number.	Morphologic rule: neuter + singular
A 2.4.10	X+Y [non expelled *śudra* + non expelled *śudra*] → singular in number.	Morphologic rule: neuter + singular
A 2.4.11	*dvandva* compounds belonging to the *gaṇa gavāśvam* → singular in number.	Morphologic rule: neuter + singular
A 2.4.12	X + Y [trees + trees], [wild beasts + wild beasts], [herbs + herbs], [grains + grains], [condiments + condiments], [domestic animals + domestic animals], [birds + birds], *aśvavaḍava-*, *pūrvāpara-* → singular in number (marginally).	Morphologic rule: neuter + singular
A 2.4.13	X + Y [antonyms not denoting an *adhikaraṇa* + antonyms not denoting an *adhikaraṇa*] → singular in number.	Morphologic rule: neuter + singular
A 2.4.14	*dvandva* compounds belonging to the *gaṇa dadhipayasī* → are not singular in number .	Morphologic rule: neuter + singular
A 2.4.15	*dvandva* compoounds denoting the quantity of an *adhikaraṇa* → are not singular in number .	Morphologic rule: neuter + singular
A 2.4.16	*dvandva* compounds denoting the approximate quantity of an *adhikaraṇa*→ is marginally singular in number.	Morphologic rule: neuter + singular
A 2.4.17	*dvandva* compounds singular in number are inflected in the neuter gender.	Morphologic rule: neuter + singular

A 2.4.68	*luk* of the *gotra* affix occurs after inflected words belonging to the *gaṇa tikakitavādi*, when they combine to form a *dvandva* compound which does not denote any feminine item.	Affixes
A 4.2.6	*dvandva* + cha → denotation of time (in conjunction with constellation).	Affixes
A 4.3.88	*dvandva* + cha → denotation of a book.	Affixes
A 4.3.125	*dvandva* (gen.) + vun → denotation of enmity or marriage with respect to the denotatum of the compound.	Affixes
A 5.1.133	*dvandva* (gen.) + vuñ → denotation of state or action (after nominal stems or compounds of the *gaṇa manojñādi*).	Affixes
A 5.2.128	*dvandva* + ini → denotation of possession or place (after nominal stems or *dvandva* compounds denoting disease and contempt).	Affixes
A 5.4.106	*dvandva* + TaC → denotation of a group (after *dvandva* compunds ending in cU, -d, -ṣ or -ḥ).	Affixes
A 6.3.25	X + Y (having a relationships of knowledge or family) → X [-ṛ > *ānaṄ*].	Phonologic substitutions
A 6.3.26	X + Y (denoting a couple of divinities) → X [final sound > *ānaṄ*].	Phonologic substitutions
A 6.3.27	X [*agni*-] + Y [*soma*-/*varuṇa*-] (denoting a couple of divinities) → X [*agni*- > *agnī*-].	Phonologic substitutions
A 6.3.28	X [*agni*-] + Y (denoting a couple of divinities and undergoing a *vṛddhi* derivation) → X [*agni*- > *agni*-] (no vowel lenghtening is taught).	Phonologic substitutions
A 6.3.29	X [*div*-] + Y [*pṛthivi*-] (denoting a couple of divinities) → X [*div*- > *dyāvā*-].	Phonologic substitutions
A 6.3.30	X [*div*-] + Y [*pṛthivi*-] (denoting a couple of divinities) → X [*div*- > *dyāvā*-/*divasa*-].	Phonologic substitutions
A 6.3.31	X [*uṣas*-] + Y (denoting a couple of divinities) → X [*uṣas*- > *uṣāsā*-].	Phonologic substitutions

A 7.3.21	X + Y (denoting a couple of divinities, with *taddhita* affixes having Ñ, Ṇ or K as markers) → X + Y [*vṛddhi* of the first vowel of both constituents]	*vṛddhi*

The main interests of the *Aṣṭādhyāyī* are, according to the frequency of the topic:[26]

a. The teaching of the correct employ of the combination of neuter gender and singular number, to form or not to form a *dvandva* implying a strict and specific relation between the constituents).
b. The teaching of the correct employ of specific affixes after the compound itself to convey a precise sense.
c. The teaching of the correct formation of the so-called *devatādvandva* s.
d. The teaching of the correct employ of the accent.
e. The teaching of the correct employ of the grammatical gender.
f. The teaching of the internal word-order.
g. The teaching of 2 *nipātana*s according to geographical and stylistic variations.
h. The teaching of the correct employ of the grammatical number.

a. *The teaching of the correct employ of the combination of neuter gender and singular number, to form or not to form a samāhāra*

The content of the this set of rules consist of the listing of classes of words whose combination output correspond to the type of *dvandva* compound called *samāhāra*, in this way:

- Words denoting parts of a living being with words denoting parts of a living being (A 2.4.2).
- Words denoting parts of a musical group with words denoting parts of a musical group (A 2.4.2).
- Words denoting parts of an army with words denoting parts of an army (A 2.4.2).

[26] Even if rule A 5.4.77 has not been dealt with in the present research, its textual content is interesting as far as the coordination is concerned, since it involves a list of pairs in use during the Pāṇinian age.

- Words denoting branches of Vedic schools with words denoting branches of Vedic schools – in case of *anuvāda* (A 2.4.3).
- Non-neuter words denoting ritual sacrifice with non-neuter words denoting ritual sacrifice (A 2.4.4).
- Words denoting names derived from the study with words denoting names derived from the study – closeness of subjects (A 2.4.5).
- Words denoting class names of non-livings being with words denoting class names of non-living beings (A 2.4.6).
- Words denoting names of rivers with words denoting names of rivers of different gender (A 2.4.7).
- Words denoting names of places with words denoting names of places of different gender (A 2.4.7).
- Words denoting small creatures with words denoting small creatures (A 2.4.8).
- Words denoting item 1 with words denoting item 2 provided that between them there is everlasting enmity (A 2.4.9).
- Words denoting non-expelled *śudras* with words denoting non-expelled *śudras* (A 2.4.10).
- Compounds belonging to the *gaṇa gavāśvam* (A 2.4.11).
- Words denoting trees with words denoting trees – *vibhāṣā* (A 2.4.12).
- Words denoting wild beasts with words denoting wild beasts – *vibhāṣā* (A 2.4.12).
- Words denoting herbs with words denoting herbs – *vibhāṣā* (A 2.4.12).
- Words denoting grains with words denoting grains – *vibhāṣā* (A 2.4.12).
- Words denoting condiments with words denoting condiments – *vibhāṣā* (A 2.4.12).
- Words denoting domestic animals with words denoting domestic animals – *vibhāṣā* (A 2.4.12).
- Words denoting birds with words denoting birds – *vibhāṣā* (A 2.4.12).
- The *nipātana*s *aśvavaḍava*- 'a horse and a mare', *pūrvāpara*- 'the first and the subsequent', *adharottara*- 'the lower and the higher' (2.4.12).
- Words denoting item 1 with words denoting item 2 – provided that they are non *adhikaraṇa* antonyms - marginally (A 2.4.13).
- Words denoting item 1 with words denoting item 2 – provided that the final compound denotes a proximate quantity of an *adhikaraṇa* – *vibhāṣa* (A 2.4.16).

A further series of teachings deals with combinations of words that do not form *dvandva* compounds of the *samāhāra* type:

- Compounds belonging to the *gaṇa dadhipayasī* (A 2.4.14).
- Words denoting item 1 with words denoting item 2 – provided that the final compound denotes a quantity of an *adhikaraṇa* (A 2.4.15).

b. *The teaching of the correct employ of specific affixes after the compound itself to convey a precise sense*

- *luk* of the *gotra* affix (i.e. of the affix denoting a *gotra* name) after the stems of the *gaṇa tikakitava* in case of a *dvandva* whose constituents convey a plurality and provided that the compound denotes a non-feminine item (A 2.4.68).
- Optional *luk* of the *gotra* affix after the *pada*s of the list beginning with *upaka-* in case of a non-*dvandva* whose constituents convey a plurality and provided that the compound denotes a non-feminine item.
- *cha* after a *dvandva* compound in the sense of the time of conjunction with the constellations (denoted by the *pada*s of the given compound) (A 4.2.6).
- *cha* after *śiśukranda-* 'cry of a child', *yamasabha-* 'assembly of Yama', a *dvandva* compound and after the stems belonging to the gaṇa *beginning* with *indrajanana-* 'birth of Indra' provided that the final output denotes a book referring to the items that constitute the *dvandva* compound (A 4.3.88).
- *vuN* after a *dvandva* compound, in the sense of possession to denote enmity or marriage (A 4.3.125).
- *vuÑ* after a *dvandva* compound and after a nominal stem belonging to the *gaṇa manojñādi* in the sense of the state or of the activity of the denotatum of the compound (A 5.1.133).
- *inI* after a *dvandva* compound and after nominal stems denoting *upatāpa-* 'disease' and *garhya-* 'contempt', whose denotatum stands on a living being in the sense of possession (A 5.2.128).
- *TaC* after a *dvandva* compound ending in cU (palatal phoneme), -d, -ṣ or -ḥ when denoting a group (A 5.4.106).

c. *The teaching of the correct formation of the so-called devatādvandva*s

The content of this set of rules mostly consists of phonetic and morphologic substitutions, as follows:

- *ānaṅ* in place of the final sound of the first constituent in a *devatādvandva* (A 6.3.26).
- *īT* in place of the final sound of *agni-* when occurring as the first constituent before *soma-* and *varuṇa-* occurring as the last constituents in a *devatādvandva* (A 6.3.27).
- *iT* in place of the last sound of *agni-* when occurring as the first constituent in a *devatādvandva* undergoing a *vṛddhi* derivation (A 6.3.28).
- *dyāvā* in place of *div-* when occurring as the first constituent in a *devatādvandva* (A 6.3.29).
- *divasa* + *dyāvā* in the place of *div-* when occurring as the first constituent if the last constituent is *pṛthivi-* (A 6.3.30).
- *uṣāsā* in the place of *uṣas-* when occurring as the first constituent in a *devatādvandva* (A 6.3.29).

d. *The teaching of the correct employ of the accent*

The content of this set of rules consists of instructions for the retention of the accent on the first constituents of the given *dvandva* compound:

- If the constituents are plural names of warrior belonging to the clan of *andhaka* or *vṛṣṇi* (A 6.2.24).
- If the first constituent is designated as *saṃkhyā* (A 6.3.25).
- If the first constituent is a name of a student derived from the name of his teacher (note that the latter is termed *upasarjana*) (A 6.3.26).
- If the given compound belongs to the *gaṇa kārtakaujapādi*.

e. *The teaching of the correct employ of the grammatical gender*

The main rule regarding the grammatical gender of *dvandva*s and *tatpuruṣa*s is A 2.4.26, which teaches that the grammatical gender of the mentioned class of compounds is in accordance with the last constituent. Two exceptions are taught after this rule. As far as *dvandva*s are concerned, the grammatical gender is in accordance with the first constituent in:

- *aśvavadavau,* 'horse and mare'.
- *hemantaśiśirau*, 'winter and cool season', in the *chandas*.

- *ahorātre,* ‘day and night’, in the *chandas*.

f. *The teaching of the internal word-order*

It is placed first in a *dvandva*:

- The constituent designated as GHI (A 2.2.33).
- The constituent beginning with aC (any vowel) and ending with aT (the vowel a) (A 2.2.34).
- The constituent that has fewer vowels (A 2.2.35).

g. *The teaching of two nipātanas according to geographical and stylistic variations*

- *mātapitarau*, ‘mother and father’, is introduced as a ready-made form according to the northern usage.
- *pitarāmātarā*, ‘father and mother’, is introduced as a ready-made form according to the *chandas*.

h. *The teaching of the correct employ of the grammatical number*

- *tiṣyapunarvasū*, ‘the tiṣya and the punarvasu asterisms’, is inflected in the dual number and not in the plural.

2. The *Mahābhāṣya* on rules governing *dvandva* compounds

1. A 1.1.32 *vibhāṣā jasi* [*sarvādīni sarvanāmāni* 27, *dvandve* 31]

The class of nominal stems in the list beginning with *sarva* is marginally designated as *sarvanāman* when in a *dvandva* compound before Jas (i.e., plural nominative endings).

jasaḥ kāryam prati vibhāṣā akac hi na bhavati |

Optionally with respect to the operation (of substitution) of the nominative plural ending, indeed (the affix) *akaC* (which is taught before the syllable beginning with the last vowel of

indeclinables and pronominal stems according to A 5.3.71 *avyayasarvanāmnām akac prāk ṭeḥ*) does not occur.

2. A 1.2.63 *tiṣyapunarvasvor nakṣatradvandve bahuvacanasya dvivacanam nityam*

In a *dvandva* denoting asterisms made up of the constituents *tiṣya* and *punarvasu* the dual number is mandatorily used in place of the plural.

tiṣyapunarvasvor iti kim artham | kṛttikārohiṇyaḥ || nakṣatra iti kim artham | tiṣyaś ca māṇavakaḥ punarvasū ca māṇavako tiṣyapunarvasavaḥ || atha nakṣatra iti vartamāne punar nakṣatragrahaṇaṃ kim artham | ayaṃ tiṣyapunarvasuśabdo 'sty eva jyotiṣi vartate | asti ca kālavācī | tadyathā | bahavas tiṣyapunarvasavo 'tikrāntāḥ |katareṇa tiṣyeṇa gata iti | tad yo jyotiṣi vartate tasyedaṃ grahaṇam || atha vā nakṣatra iti vartamāne punar nakṣatragrahaṇasyaitat prayojanaṃ videśastham api tiṣyapunarvasvoḥ kāryaṃ tad api nakṣatrasyaiva yathā syāt | tiṣyapuṣyayor nakṣatrāṇi yalopo vaktavya iti nakṣatragrahaṇaṃ na kartavyaṃ bhavati || atha vā nakṣatra iti vartamāne punar nakṣatragrahaṇasyaitat prayojanaṃ tiṣyapunarvasuparyāyavācinām api yathā syāt | puṣyapunarvasū sidhyapunarvasū || atha dvandva iti kim artham | yas tiṣyas tau punarvasū yeṣāṃ ta ime tiṣyapunarvasava unmugdhāḥ || bahuvacanasyeti kim artham | uditaṃ tiṣyapunarvasu | kathaṃ cātraikavacanam | jātidvandva ekavadbhavatīti | aprāṇinām iti pratiṣedhaḥ prāpnoti | evaṃ tarhi siddhe sati yad bahuvacanagrahaṇaṃ karoti taj jñāpayaty ācāryaḥ sarvo dvandvo vibhāṣaikavadbhavati iti |kim etasya jñāpane prayojanam | bābhravaśālaṅkāyanam bābhravaśālaṅkāyanā ityetat siddhaṃ bhavati || athavā nātra bhavantaḥ prāṇināḥ prāṇā evātra bhavantaḥ ||

Why is it taught 'of *tiṣya* and *punarvasu*'? [For instance:] *kṛttikārohiṇyaḥ* (f.pl.) '*kṛttikā* (f.pl) and *rohiṇī* (f.s.)'.[27] Why is it taught '*nakṣatre*' (i.e., 'provided that an asterism is denoted')?

[27] According to *The Purāṇa Index* (Cologne Digital Sanskrit Dictionaries), *s.v. kṛttika*, there are various meanings for this term. Probably, that the proper one in this context is 'Pleiades', "a constellation containing six stars". As noted in *The Purāṇa Index*, the latter definition is supported by textual evidence, e.g., in *Vāyu-purāṇa* (66. 48. 82. 2). On the other hand, out of the many definitions given for *rohiṇī* in the same dictionary, the one that best fits the

Because the single boy is *tiṣya* and the two boys *punarvasū* are (called) *tiṣyapunarvasavaḥ* (m.pl.).[28] Therefore, why is there again the mention of *nakṣatra*, even if '*nakṣatre*' is continued by *anuvṛtti*?[29] There is the word-form *tiṣyapunarvasu-* and it is used indeed in the sense of asterism.[30] [The same word-form] is also an expression of time. [31] For instance: 'many *tiṣyapunarvasu-* (pl.) have passed'. [For instance:] 'under which *tiṣya* has he gone?' Hence there is that mention (about which we are inquiring after) of this [word form (i.e., *nakṣatra*)] which is used in the sense of asterism. Or rather, that is why *nakṣatra* is mentioned again, even if '*nakṣatre*' is continued by *anuvṛtti*: that the operation taught even elsewhere for *tiṣyapunarvasū* (du.) works only about asterisms; the mention of *nakṣatra* is not to be done when it is said '*lopa* of *ya* should be taught for the *nakṣatras tiṣya* and *puṣya*'.[32] Or rather, that is why *nakṣatra* is mentioned again, even if '*nakṣatre*' is continued by *anuvṛtti*: so that [this rule] also applies to the synonyms of *tiṣya* and *punarvasū*, [see, e.g.,] *puṣyapunarvasū* '*puṣya* and *punarvasu*', *sidhyapunarvasū* '*sidhya* and *punarvasu*'. Therefore, why is it taught '*dvandve*'? Ignorant people are the *tiṣyapunarvasavaḥ* (m.pl.)[33], i.e., those [who think that] the *tisya* is the *punarvasū* (du.). Why is it taught *bahuvacanasya* (in place of the plural)? [For

present case seems to be "a constellation important for *śrāddha* performance", according, at least, to *Brahmāṇḍa-purāṇa* (III. 18. 3); *Matsya-purāṇa* (17. 3; 54. 9); *Vāyu-purāṇa* (82. 3). See also Padmanabhan (2014: 23) "The *Rohini* asterism, according to Indian traditional texts, comprises five visible stars with southern latitudes in the constellation of *Vrsabha* (Taurus)". The same source (Padmanabhan 2014:17, 23) also makes it clear that there is an equivalence between the *rohiṇī* and Aldebaran. As is well known, the etymology of this word is linked to the Arabic language since it derives from الدبران (*ad-dabarān*) which literally means 'the follower' with reference to its apparent proximity to the Pleiades star cluster (see, e.g., Falkner 2011).

[28] *tiṣya* also stands for boys born under the asterism *tiṣya* or *puṣya* i.e., γ, δ, and θ Cancri, while *punarvasū* for people born under the asterism *punarvasū* i.e., α and β Geminorum (as for the astronomical references, see Basham 1954: 490 ff.).

[29] In fact, *nakṣatre* is continued by *anuvṛtti* from A 1.2.60 (*phalgunīproṣṭhapadānāṃ ca nakṣatre*). Even though its repetition in this rule, which is actually very close to A 1.2.60, could sound superfluous and redundant, it is not void of meaning at all. The output of this rule does not denote another *nakṣatra*, it simply stands for the combination of *tiṣya* and *punarvasu*. Even though Patañjali will stress the potential ambiguity between the pure astronomic field with that of, e.g., the measurement of time, it seems that there is, moreover, a conceptual difference between the *nakṣatre* of 1.2.60 (which does express the output of that rule) and the *nakṣatre* of 1.2.63, since here the purpose is to specify the nature of the constituents in the compound. So, the present rule sounds like: 'a *dvandva* made of word-forms x and y when denoting nakṣatras': this is clearly an input constraint.

[30] i.e., light, brightness and even star, by extension (consider, e.g., the *jyotiṣavedāṅga*, from *jyotiṣa-*, the technical term for the study of the astronomy).

[31] As for the reference to the expression of time (*kālavācī*), see A 4.2.3 (*nakṣatreṇa yuktaḥ kālaḥ*), which teaches a *taddhita* derivation for stems denoting asterisms to express the time of conjunction with the moon (see also the extension to *dvandva* compounds in A 4.2.6).

[32] It is *vt.* 7 (*tiṣyapuṣyayoḥ nakṣatrāṇi*) *ad* A 6.4.149 (*sūryatiṣyāgastyamatsyānāṃ yaḥ upadhāyāḥ*). Patañjali argues that, since the mention of the proper field of application has already been done once as far as *tiṣya* and *punarvasu* are concerned, no need to mention it again when those specific words are involved (*jñāpaka*).

[33] I.e., a *bahuvrihi* compound.

instance:] ‘*tiṣyapunarvasu* (sg.) is risen’. And how can it have the denotatum of a singularity here? According to (the teaching that) ‘a *dvandva* of names of species is treated as denoting one’. Since it is taught ‘*aprāṇinām’* (‘not in case of inanimate objects’)[34], due to such a restriction, the prohibition [of the singular] is obtained. Then, if it has been so established, the teacher makes it known that he makes the mention of the plural number so that all *dvandva*s are optionally treated as denoting singularity.[35] What is the purpose in making this known? This is realized when ‘*ābhravaśālaṅkāyanam’* (sg.), ‘*bābhravaśālaṅkāyanāḥ*’ (pl.) are used.[36] Or rather, here there are no animate beings.[37] In fact, here they are breaths.[38]

3. A 2.2.29 *cārthe dvandvaḥ* [*samāsaḥ* 2.1.3, *saha supā* 2.1.4, *sup* 2.1.9, *anekam* 24, *vā* 2.1.18]

Two or more inflected words preferably combine in the sense of ‘and’ to form a *dvandva*.

cārtha ity ucyate caś cāvyayam tena samāsasyāvyayasaṃjñā prāpnoti | *naiṣa doṣaḥ* | *pāṭhena avyayasaṃjñā kriyate na ca samāsas tatra paṭhyate* || *pāṭhenāpy avyayasaṃjñāyāṃ satyām abhideyaval liṅgavacanāni bhavanti yaś cehārtho ’bhidhīyate na tasya liṅgasaṅkhyābhyāṃ yogo’sti* || *nedaṃ vācanikam aliṅgatāsaṅkhyatā vā* | *kiṃ tarhi* | *svābhāvikam etat* | *tadyathā* |*samānam īhamānānāṃ ca adhīyānānāṃś ca kecid arthair yujyante ‘pare na* | *na cedānīṃ kaścid arthavān iti kṛtvā sarvair arthavadbhiḥ śakyaṃ bhavituṃ kaścid anarthaka iti sarvair anarthakaiḥ* | *tatra kim asmābhiḥ śakyaṃ kartum* | *yat prāk samāsāc cārthasya liṅgasaṅkhyābhyāṃ yogo nāsti samāse ca bhavati svābhāvikam etat*|| *athavāśrayato liṅgavacanāni bhaviṣyanti* | *guṇavacanānāṃ hi śabdānām āśrayato*

[34] See A 2.4.6 (*jātir aprāṇinām*), which teaches to form a *samahāra dvandva* provided that the constituents denote names of species of inanimate beings.

[35] The *paribhāṣā sarvo dvandvo vibhāṣaikavad bhavati* ‘all *dvandva* s are optionally treated as denoting singularity’ makes it possible to denote the singular number (*ekavat*) which is different from the usual *ekavacana*. According to Tokunaga 1981, *Bṛhaddevatā* 4.107 (that is dependent on *Nirukta* 2.24) features the following terms: *ekavat*- ‘singular’, *dvivat*- ‘dual’, and *bahuvat*- ‘plural’. See also Chatterji (1964: 151).

[36] “the descendants of Babhru and the descendants of Śalaṅka” see Candotti-Pontillo (2018: 551ff), respectively noted as sg. and pl. In the same article, they give some hints about the *paribhāṣā* quoted by Patañjali in the passage above (*sarvaḥ dvandvaḥ vibhāṣā ekavad bhavati* ‘all *dvandva*s are optionally treated as denoting singularity’) “Thus here, more than being a problem-solving device, the pbh is a problem in itself, as it denies (at least in a first step) the usefulness of a well-established set of Pāṇini rules”.

[37] And, as a consequence, the singular would be admitted according to A 2.4.6.

[38] In conclusion, with reference to A 2.4.6, Patañjali maintains that stars are not animate beings, but they are *prāṇi*s in themselves. The singular is thus established which is consistent with the grammar.

liṅgavacanāni bhavanti | *tadyathā* | *śuklaṃ vastraṃ śuklā śāṭī śuklaḥ kambalaḥ śuklau kambalau śuklāḥ kambalā iti* | *yad asau dravyaṃ śrito bhavati guṇas tasya yalliṅgaṃ vacanaṃ ca tad guṇasyāpi bhavati* || *evam ihāpi yad asau dravyaṃ śrito bhavati samāsas tasya yalliṅgaṃ vacanaṃ ca tat samāsasyāpi bhaviṣyati* || *atheha kasmān na bhavati* | *yājñikaś cāyaṃ vaiyākaraṇaś ca* | *kaṭhaś ca ayaṃ bahvṛcaś ca* | *aukthikaś ca ayaṃ mīmāṃsakaś ceti* | *śeṣa iti vartate 'śeṣatvān na bhaviṣyati* || *yadi śeṣa iti vartate –*

upāsnātaṃ sthūlasiktaṃ tūṣṇīṅgaṅgaṃ mahāhradam |

droṇaṃ ced aśako gantuṃ mā tvā tāptāṃ kṛtākṛte ||

ity etan na sidhyati | *naiṣa doṣaḥ* | *anyad dhi kṛtam anyad akṛtam* ||

It is taught *cārthe*, and *ca* is *avyaya*. In this way, the designation as *avyaya*[39] is obtained for the *samāsa*. There is no flaw. The designation *avyaya* is determined by a list[40] and the *samāsa* is not listed there. Even if the designation *avyaya* is [assigned] by a list, gender and number[41] agree with the *denotatum*; there is no connection to the gender and number of that which is the *artha* here denoted. This, i.e., the absence of gender and number, is not *vācanika*[42]. What follows? This is *svābhāvika* (i.e., "grounded on its intrinsic condition").[43] For instance, among people who aim and study the same, some achieve their goal, while others do not. And now, it is not that if one has attained his goal all the others can obtain it or that if one has not obtained

[39] a*vyaya*, i.e., indeclinable. As a technical term it is introduced in the *sūtra*s 1.1.37 of the *Aṣṭādhyāyī.* The author is clearly hinting at that class of compounds which is termed *avyayībhāva*, see A 1.1.41.

[40] The list which Patañjali refers to is the *gaṇa cādi* appended to A 1.4.57 ([*nipātaḥ*] *cādayo 'sattve*, "the members of *cādi* are called *nipāta* when a non-entity is denoted); in this rule, *nipāta* comes down by *anuvṛtti* from A 1.4.56). The technical term *avyaya* is applied to all the *nipātas* (in which group *cādi* is included) by A 1.1.37 (*svarādinipātam avyayam*, "the members of *svarādi* and of *nipāta* are called *avyaya*").

[41] Patañjali uses *vacana*- in order to mean "grammatical number" (M 1.227, ll. 5-6 *ad* A 1.2.51; M 1.227, ll. 7-10; l. 22 *ad* Vt 3 *ad* A 1.2.51) *vyaktivacane* is paraphrased as *liṅgasaṃkhye*, but such a term is questioned in M 1.227, ll. 1-2 *ad* A 1.2.51. This specific sense of the term does not belong to Pāṇini's usage: actually, Kātyāyana himself begins to employ it in his *Vārttikas* (M 1.422, l. 10 Vt 7 *ad* A 2.2.24 and here M 1.430 l. 10 *ad* A 2.2.29) and Patañjali follows his tradition. Indeed, such a misreading could have occurred due to a wrong segmentation of *ekavacana* "singular", *dvivacana* "dual", *bahuvacana* "plural"; through these terms, verbal and nominal terminations are denoted by A 1.4.21-22; 102-103. Cf. Scharfe 1965.

[42] See Candotti-Pontillo (2015: fn 43) : "*vācānika* thus means 'mentioned explicitly' and only entails the fact that this explicit mention is likely to be taught by a rule."

[43] Candotti-Pontillo (2015: 98). As for more hints about the pair *vācanika/svābhāvika,* see Candotti-Pontillo 2010.

it nobody can.[44] Here, what can we do? Since there is no connection with the gender and number of the *artha* of *ca* before the compound, even in the compound it is so (i.e., there is no connection with the gender and the number of the *artha* of *ca*): this is *svābhāvika*. Otherwise, gender and number will agree with the referent[45]. Indeed, the gender and number of those *śabda*s which denote a quality agree with their referent. For instance: *śuklam vastram* 'a white garment' (n.), *śuklā śāṭī* 'a white robe' (f.), *śuklaḥ kambalaḥ* 'a white shawl' (m.), *śuklau kambalau* 'two white shawls' (du.), *śuklāḥ kambalāḥ* 'white shawls' (pl.). The gender and the number of this which is the *dravya*[46] to which the quality refers also become proper to that [given] quality. And also here, the gender and the number of this which is the *dravya* to which the compound refers also become proper to the compound. Thus, why does it[47] not happen in the following cases? *yājṇikaś cāyaṃ*[48] *vaiyākaraṇaś ca* 'this one who is both a ritualist and a grammarian',[49] *kaṭhaś cāyaṃ bahvṛcaś ca* 'this one, who is both a pupil of the Kaṭha and a pupil of the Bahvṛc',[50]*aukthikaś cāyaṃ mīmāṃsakaś ca* 'this one, who is both a hymnologist

[44] As for the translation of this first section, see Candotti-Pontillo 2015. As for the syntactic construction of *śak-* and infinitive, cf. Speijer (1988: §388). In this passage, note the unusual use of two instrumentals (i.e., agent and object) rather than the nominative/instrumental and accusative (i.e., agent and object).

[45] Both *āśrayataḥ* and *śritaḥ* share the etymological derivation from the verbal root *śri-* and the sense is that of lying, depending upon something. In this context, the idea conveyed is that of the linguistic reference (lying, depending on a given item).

[46] *dravya*, i.e., the referent, see Roodbergen (2008 *s.v.*) "individual, non linguistic item/entity, a thing". *dravya* does not occur as a technical term in the A (cf. e.g. A 5.1.51; A 5.3.104). The use of this term in Patañjali's commentary, calls for a more comprehensive and specific study in the future.

[47] In other words, the problem is about the non-application of the dual number in the compound matching the mentioned phrase. Moreover, Patañjali is reasoning about the agreement between qualifier and qualificand due to the transference of those properties of the *dravya* (gender and number) to the given quality which depends on it. This is not the case of *cārtha*, since the internal relationship between the constituents (and their linguistic status) does not imply grammatical agreement between them). As for the present interpretation, cf. Roodbergen (1974:144): according to his reading, the understood object of this sentence is 'the formation of a *dvandva* compound'. However, Patañjali is still reflecting on the problem of the grammatical agreement that emerged just a few lines before and any other integration seems instead to be an *a posteriori* view of the problem.

[48] The relationship between qualifier and qualificand or, to use Patañjali's words, between *guṇa* and *dravya*, is represented here. The core point is that each example features more than one *guṇa* (e.g., *yājṇikaś ca vaiyākaraṇaś ca*) depending on the same *dravya* (*ayam*). Clearly, there is grammatical agreement between a *dravya* and its *guṇa*s.

[49] The SK, and then Katre and Sharma, uses this as a counterexample to A 2.4.5 ([*ekavacanam* 2.4.1] *adhyayanato viprakṛṣṭākhyānām*). The rule teaches that when the constituents of a *dvandva* denote names of scholars derived from similar study subjects, the compound is treated as denoting a single thing, i.e., it is a *samāhāra*. But a *yājñikaḥ* and a *vaiyākaraṇaḥ* are scholars of subjects that are quite different, and thus a *samāhāra* is not permitted, while an *itaretarayoga*, namely *yājñikavaiyākaraṇau* 'a man versed in sacrifice and a man versed in grammar', is correct. However, in the present case there is a single referent for the compound (*ayam*) to which both *yājñikaḥ* and *vaiyākaraṇaḥ* refer. Since they share the same frame of reference (i.e., *substratum*), only a *karmadhāraya* can be properly formed according to A 1.2.42 (*tatpuruṣaḥ samānādhikaraṇaḥ karmadhārayaḥ*).

[50]Patañjali seems to bear in mind A 2.4.3 (*anuvāde caraṇānām*), which allows for a *dvandva samāhāra* in the case of scholars belonging to different branches (i.e., *śākhā*) of Vedic schools in the case of the denotation of

and a Vedic exegete'.[51] '*śeṣa*' continues [by *anuvṛtti*]; since [the agreement between *dravya* and quality] is not *śeṣa*[52] it will not occur [here i.e., in A 2.2.29]. If *śeṣaḥ* continues [by *anuvṛtti*], this [which follows] does not work: 'Should you have been able to reach Upasnāta, Sthulasakita, Tūṣṇīṁgaṅga, Mahāhrada and Droṇa, may what has been done (*kṛtākṛte*) and what has not been done not hurt you'.[53] There is no flaw. Here *kṛtam* is one thing, *akṛtam* is something else.[54]

'recitation' (*anuvāde*); however, this specific constraint is missed here and the whole statement does not cover the present case. In fact, the problem is like the previous one.

[51] As for the imagery that lies behind these examples, the nouns introduced in A 4.3.129 (*chandogāukthikayājñikabahvṛcanaṭāt Ñyaḥ*) i.e., *aukthika yājñika bahvṛca* represent an indication of the cultural milieu with which both Pāṇini and Patañali were familiar albeit in different ages. They could also be a sort of 'unavoidable' reminiscence.

[52] I.e., it is not under the domain of *śeṣa* (that is to say, it is not 'residual material'). In fact, compounds involving qualifier and qualificand were already dealt with in the section about *samānādhikaraṇa* (see A 2.1.57). Patañjali assumes that *śeṣa* continues in A 2.2.29 by *anuvṛtti* (from 2.2.23). Therefore, the material covered up to A 2.2.23 is not *śeṣa* i.e., it has already been dealt with and thus there is no sense in doing so again. On the contrary, the term *śeṣa* denotes that material which has yet to be dealt with (e.g., *cārthe*). In fact, there is no *anuvṛtti* of *śeṣa* in A 2.2.29, because it is blocked by *anekam* (A 2.2.24) which is also a nominative and shares the technical definition of *uddeśya*, i.e., that item about which something is predicated. In A 2.2.23 *bahuvrīhiḥ* is the predication of *śeṣaḥ*, i.e., *śeṣaḥ* is *bahuvrīhiḥ*. The role played by this sort of predicative noun (i.e., *bahuvrīhiḥ*) is that of a *vidheya*, and its function is not limited within the boundaries of the single *sūtra*: in actual fact, the *anekam*, in the following one, is also a *bahuvrīhiḥ*. The main point is that *bahuvrihi* compounds do indeed represent the 'residual material' with respect to what has been taught till then, that is to say, compounds whose structure is based on a case-relationship between the constituents. This is not the case of A 2.2.29, i.e., *dvandva* compounds are not a kind of appendix to *tatpuruṣa*s and the material covered by them is not 'residual' at all. See, as regards this, Joshi-Bhate (1984: 177) where A 2.1.23 *śeṣo bahuvrīhiḥ* and A 2.2.29 *cārte dandvaḥ* are described in themselves as 'special *adhikāra*s […] which may function as modifiers in connection with the designation *samāsa*'.

[53] As for the explanation of this unidentified verse, see Kaiyaṭa in Roodbergen (1974:147) "Upasnāta, etc., are five different holy places. If you could have visited them, *kṛtākṛte*, (i.e.,) *sukṛtaduṣkṛte*: 'good deeds and bad deeds', would not trouble you. This is the meaning (of the verse). This is a recommendation of taking a bath at a holy place. *kṛta*: '(meritorious) act', when it becomes *kṣīṇa*: 'deprived of effectiveness', causes harm, but *akṛta*: 'evil act' (causes harm) by producing harmful results".

[54] *kṛtākṛtam* was taught in A 2.1.60 as a *karmadhāraya* since the constraint is the *samānādhikaraṇa* relation between the two constituents. Patañjali's explanation for justifying the *itaretarayoga* (*kṛtākṛte*) states that in this case, there is no common reference since *kṛta* and *akṛta* are two different things and a *dvandva* is thus allowed.
As far as the boundary between *karmadhāraya*s and *dvandva* s is concerned, consider Bhartṛhari's reflection on the matter: VP 3.14.23: *saṃs tu rūparasādinām āśrayo nābhidhīyate | dravyābhidhānena vinā tatas te dvandva bhāvinaḥ* || 'Even though the substratum (*āśraya*) of the words conveying *rūpa* (i.e., visible appearance), *rasa* (i.e., taste) and so on does exist, it is not expressed. Without the expression of the substance (*dravya*), therefore, they will be (considered) *dvandva* s'. Helārāja introduces this passage with an enlightening commentarial explanation: *yatra tu dravyābhidhānaṃ nāsti, kevalaguṇābhidhānam, tatra nāntarīyakadravyākṣepe'pi viśeṣaṇaviśeṣyabhāvābhāvāt samānādhikaraṇasamāsābhāva ity āha*, 'it is said that where there is the denotation of the sole *guṇa* but the denotation of the *dravya* does not occur, there, due to the absence of the relationship between qualifier and qualificand also in the implication of an inseparable *dravya*, there is absence of the compound involving (as a constraint) the *samānādhikaraṇa* (relationship between the constituents)'. In other words, the nature of the given compound falls under the domain of *dvandva* s even when, qualities are denoted, a fact that implies the existence of a *dravya*, which is not expressed in the compound. Indeed, according to this

Vt. 1. *cārthe dvandva vacane 'samāse 'pi cārthasampratyayād aniṣṭaprasaṅgaḥ*

1. Given that the rule is 'Two or more inflected words preferably combine in the sense of 'and' to form a *dvandva* , [there could be] an undesired automatic involvement [of it, i.e. of the extension of the designation as *dvandva*] because of the comprehension of the *artha* of *ca* even in a non-compound.[55]

cārthe dvandvavacane 'samāse 'pi cārthasampratyayād aniṣṭaṃ prāpnoti ‖ ahar ahar nayamāno gām aśvaṃ puruṣaṃ paśum ‖ vaivasvato na tṛpyati surāyā iva durmadī ‖ ‖ indras tvaṣṭā varuṇo vāyur āditya iti ‖

Given that the rule is (formulated as) '*dvandva* [is the name of a combination of two inflected words] provided that its *artha* is *ca*', an undesired [automatic involvement] is obtained because of the comprehension of the *artha* of *ca* even in a non-compound. [For instance:] (unknown quotation) 'Even though every day he leads a cow, a horse, a man and a *paśu* [to the altar], Vaivasvata is never satisfied like a drunkard [is never satisfied] with the *surā'*;[56] Indra, Tvaṣṭṛ, Varuṇa, Vāyu, Āditya.[57]

Vt. 2. *siddhaṃ tu yugapadadhikaraṇavacane dvandva vacanāt*

conception of the *karmadhāraya*s, it happens that the internal relationship between the constituents is that of a qualifier (which is the *guṇa*) and a qualificand (which is the *dravya*).

[55] Cf. Roodbergen (1974:149). In his interpretation the 'undesired automatic involvement' (*aniṣṭaprasaṅgaḥ*) is the "compound-formation", while in the present reading the problem refers to the risk of overextending A 2.2.29 (i.e., the name '*dvandva'*) even to syntactic string which share some common feature with the corresponding compound. As Patañjali made manifest in his examples, there could be an ambiguity with the asyndeton, due to the absence of the particle *ca* despite the presence of its *artha*.

[56] But cf. Roodbergen (1974: 149) "just as a person who does not become easily drunk (is not satisfied with a small amount of) liquor, (so also) Vaivasvata is not satisfied, even if he daily carries off a cow, a horse, a man (and) a sheep". The reason for quoting this verse is the asyndeton (*gām aśvaṃ puruṣaṃ paśum*) which, bearing the *artha* of *ca*, could wrongly be labelled as a *dvandva*. See also an analogous passage in *Taittirīya Āraṇyaka* 6.5.12: *áhar ahar náyamāno gắm áśvaṃ púruṣaṃ jágat ‖ vaívasvato ná tṛpyati páñcabhir mắnavair yamáḥ*, and the translation given by Shrikant Jamadagni: 'Vaivasvata Yama accompanied by five messengers is not satisfied by carrying away the cows, horses, men in movement everyday'. Roodbergen underlines (1974: fn 606) the fact that the meaning of *páñcabhir mắnavair* is not clear.

[57] Same problem as above.

2. However, this is settled by expressing [the rule about] *dvandva* [compounds in this way]: '*yugapadadhikaraṇavacane*'[58] (in the case of the expression of joint referents).[59]

siddham etat | *katham* |*yugapadadhikaraṇavacane dvandvo bhavati iti vaktavyam* | |

In fact, it is settled. How? It has to be said: '*yugapadadhikaraṇavacane dvandvaḥ*'.

Vt. 3. *tatra puṃvadbhāvapratiṣedhaḥ*

3. In this case, the prohibition of the treatment (of the compound) as a masculine [should be provided].[60]

tatraitasmiṃl lakṣaṇe puṃvadbhāvasya pratiṣedho vaktavyaḥ | *paṭvīmṛdvyau* | *samānādhikaraṇalakṣaṇaḥ puṃvadbhāvaḥ prāpnoti* | |

In this case, the prohibition of the treatment (of the compound) as a masculine must be provided in this rule.[61] [For instance:] *paṭvīmṛdvyau* 'a strong woman and a faint woman'. The treatment

[58] I.e., by rephrasing the rule this way. Kātyāyana's *usus sribendi* as far as the rephrasing of pāṇinian *sūtra*s is concerned deserves more detailed research.

[59] I.e., the expression in a single utterance. But this is not Roodbergen's reading; he states: "*yugapadadhikaraṇavacane dvandvaḥ*: 'A *dvandva* is (formed), when the items meant are simultaneously referred to (by each single constituent)'". Up to this point, the syntax of the vt. and a non-*a priori* approach, could lead us to interpret the compound *yugapadadhikaraṇavacane* as the 'expression of joint referents'. Moreover, *yugapad* in connection with *adhikaraṇa* (rather than with *vacana*) is easily misunderstood with the risk of overextending an operation taught for the *samānādhikaraṇe* constraint. From vt. 5 onwards, Kātyāyana tends to consider reality as determined by the language (and no *viceversa*): *śabdapaurvāparyaprayogād arthapaurvāparyābhidhānam*, 'the denotation of a sequence of *artha*s is due to the usage of a sequence of *śabda*s'. In fact, in vt. 6, he uses the variant *yugapadvacanaṃ*. However, such a distinction cannot be grasped in the relevant commentary by Patañjali.

[60]Kātyāyana needs such a prohibition because of A 6.3.34 (*striyāḥ puṃvadbhāṣitapuṃskādanūṄ samānādhikaraṇe striyām apūraṇīpriyādiṣu*) 'a feminine form endowed with an uttered masculine form, when it does not end in (the affix) -*ū* and when it is followed by a feminine with the same frame of reference, is treated as the correspondent masculine. This does not happen in the case of ordinal numbers - still of feminine gender – and in cases of a word belonging to that *gaṇa* which starts with the word *priya* (*priyādi*)'. The *sāmānādhikaraṇya* is in a sense perceived as a synonym for *yugapadadhikaraṇavacanam*; As a results, it seemed necessary to prohibit the unwanted treatment as a masculine, since it is triggered by that specific idea which was added to A 2.2.29 as a constraint.

[61] As for the translation of *lakṣaṇa* in the sense of operation, see Roodbergen 2008: "'grammatical operation applicable to…' *Vt.* 2 on P. 2.4.45".

(of the compound) as a masculine, which is proper of a rule [about *samānādhikaraṇa*][62] is obtained.

4. *vipratiṣiddheṣu cānupapattiḥ*

vt. 4. And there is a non-accomplishment in the case of antonyms.

vipratiṣiddheṣu yugapadadhikaraṇavacatāyā anupapattiḥ|*śītoṣṇe sukhaduḥkhe jananamaraṇe*|*kiṃ kāraṇam*|*sukhapratighātena hi duḥkhaṃ duḥkapratighātena ca sukham*||*yat tāvad ucyate tatra puṃvadbhāva pratiṣedha iti*|*idaṃ tāvad ayaṃ praṣṭavyaḥ*|*atheha kasmān na bhavati*|*darśanīyāyā mātā darśanīyāmāteti*|*atha matam etat prāk samāsād yatra sāmānādhikaraṇyaṃ tatra puṃvadbhāvo bhavatītīha api na doṣo bhavati*||*yad apy ucyate vipratiṣiddheṣu cānupapattir iti*|*sarva eva hi śabdā vipratiṣiddhāḥ*|*ihāpi plakṣanyagrodhav iti plakṣaśabdaḥ prayujyamānaḥ plakṣārthaṃ sampratyāyayati nyagrodhārthaṃ nivartayati nyagrodhaśabdaḥ prayujyamāno nyagrodhārthaṃ sampratyāyayati plakṣārthaṃ nivartayati*|*atra ced yuktā yugapadadhikaraṇvacanatā dṛśyata ihāpi yuktā dṛśyatām*||*evam api śabdapaurvāparyaprayogād arthapaurvāparyābhidhānam*|*śabdapaurvāparyaprayogād arthapaurvāparyābhidhānaṃ prāpnoti*|*ataḥ kim*|*yugapadadhikaraṇavacanatāyā anupapattiḥ*|*plakṣanyagrodhau plakṣanyagrodhā iti*|*yathaiva hi śabdānāṃ paurvāparyaṃ tadvad arthānām api bhavitavyam*|

There is a non-accomplishment in the case of antonyms with regards to the joint expression of referents.[63] [For instance:] *śītoṣṇe* 'hot and cold', *sukhaduḥkhe* 'pleasure and pain',

[62] Due to the semantic constraint of A 6.3.34, see above.

[63] The problem with antonyms is, in fact, a *contradictio in terminis*. Note that, if the rephrasing of the rule is accepted, A 2.2.29 will be something like *yugapadadhikaraṇavacane dvandvaḥ*' (a *dvandva* [is formed] in the case of a joint expression of referents). Now, the point referred to by Patañjali is expressed by rule 2.4.13 (*vipratiṣiddhaṃ cānadhikaraṇavāci*), which teaches to marginally treat a *dvandva* (by *anuvṛtti* from 2.4.2) of antonyms as singular provided that no referents are expressed (*anadhikaraṇa*). Thus, if a *dvandva* is formed when there is joint expression of referents, how can it be involved in an operation which has a constraint that obliges the non-expression of referents? As for the interpretation of the meaning of *adhikaraṇa*, see (Mocci-Pontillo 2020: fn.26) "In the A, *adhikaraṇa*- is the best candidate, in our opinion, to convey what is commonly called 'referent', even though, as is well known, *adhikaraṇa*- is also the name of a *kāraka* (A 1.4.45), explained as *ādhāra*-, i.e., 'substratum' or 'locus'. In fact, this notion of 'substratum' in the sense of 'the signified entity' seems to be

jananamaraṇe ‘birth and death’. Why? Because pain arises when pleasure is extinguished, just as pleasure arises for being the opposite of pain.[64] What has been maintained so far, namely that the prohibition of the treatment as a masculine [should be provided] in that passage (i.e., vt. 3), begs the following question: why does [that rule] not occur in this case: *darśanīyāmātā* ‘mother (*mātā*) of a beautiful [daughter] (*darśanīyāyāḥ*)’? Once it is understood that treatment as a masculine occurs when the substratum is the same even before compounding, here there is also no flaw. Even though it has been said that [the joint expression of referents] is not realized in [the specific] case of antonyms, all *śabdas* are in fact antonyms. Even here: *plakṣanyagrodhau* ‘a *plakṣa-* and a *nyagrodha-’* (i.e., a *Ficus Infectoria* and a *Ficus Indica*)*;* when it is used, the word-form *plakṣa-* causes the *artha* of *plakṣa-* to be understood, and the exclusion of the *artha* of *nyagrodha-;* when it is used, the word-form *nyagrodha*, causes the *artha* of *nyagrodha-* to be understood, and the exclusion of the *artha* of *plakṣa-*. If the idea of the joint expression of referents seemed appropriate in that passage (vt. 2), then let it be appropriate also in this case. Also in this way, the denotation of a sequence of *artha*s is due to the usage of a sequence of *śabda*s. The denotation of a sequence of *artha*s is obtained due to the usage of a sequence of *śabda*s. What follows? The idea of the joint expression of referents is not realized. [For instance:] *plakṣanyagrodhau* (du.); *plakṣanyagrodhāḥ* (pl.).[65] Thus, [the sequence] of *artha*s has to be exactly like the sequence of *śabdas*.

5. *śabdapaurvāparyaprayogād arthapaurvāparyābhidhānam iti ced dvivacanabahuvacanānupapattiḥ*

Vt. 5. If it is maintained that the denotation in sequence of *arthas* is due to the usage of a sequence of *śabdas*, the dual and the plural are not realized.

śabdapaurvāparyaprayogād arthapaurvāparyābhidhānam iti ced dvivacanabahuvacanānupapattiḥ | *plakṣanyagrodhau plakṣanyagrodhā iti* | *plakṣaśabdaḥ*

conveyed in all eleven occurrences of the term *adhikaraṇa-* in the A, even when it seems easier to translate it as ‘substance’ (*dravya-*), as in A 2.4.13 (cf. Deshpande 1992: 15)”.

[64] In other words, if the rephrasing of the rule were accepted (i.e., the idea of the joint expression of referents), there would be no chance for A 2.4.13 to be applied.

[65] Basically, the problem here regards the assignment of more than one *artha* to a single word-form. In fact, the compound happens to be a single word and, nonetheless, it conveys the meaning of each constituent.

sārthako nivṛtto nyagrodhaśabda upasthita ekārthas tasya ekārthatvād ekavacanam eva prāpnoti ||

If it is maintained that the denotation of sequence of *artha*s is due to the usage of sequence of *śabda*s, the dual and the plural are not realized. [For instance:] *plakṣanyagrodhau* (du.); *plakṣanyagrodhāḥ* (pl.). The word-form *plakṣa-* is excluded along with its *artha*, and the word-form *nyagrodha-*, with an *artha* which is a single item, supervenes; due to the possession of an *artha* which is a single item, the (undesired) singular is obtained.[66]

6. *vigrahe tu yugapadvacanaṃ jñāpakaṃ yugapadvacanasya*

Vt. 6. However, it is the joint expression in the *vigraha*[67] (that provides) the clue of the joint expression [in the compound].

vigrahe khalv api yugapadvacanatā dṛśyate | dyavā ha kṣamā | dyavā cid asmai pṛthivī namete iti | kim etat | yugapadadhikaraṇavacanatāyā upodbalakam | vigrahe kila nāma yugapadadhikaraṇavacanatā syāt kiṃ punaḥ samāse || samudāyāt siddham[68] *| samudāyāt*

[66] This is undesired, since dual and plural are the intended forms. The following point must thus be taken into consideration: for the *artha*s of both *plakṣa-* and the *nyagrodha-* to be understood, a specific grammatical number is needed (not the singular, of course). The correct use of the latter allows the comprehension of the first *śabda* along with its *artha*: it means that the affix which conveys the grammatical number is an entity in its own right; indeed, the last constituent tends to also maintain the *artha* of those *śabda*s to which no suffixes are added just because their *arthas* settle down in the grammatical number affix. The *yugapadadhikaraṇavacanam* can be accepted, because of the rejection of the singular, as Kaiyaṭa eventually states.

[67] Patañjali seems to employ the term *vigraha* here in its non-technical meaning (*laukika*). For further hints on its usages, see Pontillo (2018: 132): '[…] *laukikavigrahavākya*, i.e., a meaning paraphrase, matching a sentence actually included in the everyday linguistic usage or rather an *a-laukika-* or *śāstrīya-vigrahavākya*, i.e., a technical constituent analysis […]'.

[68] This statement, i.e., *samudāyāt siddhaṃ*, could be maybe considered a vt., even if Kielhorn did not include it in his critical edition of the M. As for his method, see Kielhorn (1876). The following enlightening passage is from the same source: "So far as we know at present, the *Vārttika*s of Kātyāyana do not exist separately in MS. MSS. which profess to give the *Śrīmadbhagavat-Kātyāyanavirachita-vārttikapāṭha* are indeed to be met with in different and widely distant parts of India, but a very superficial examination is sufficient to prove that the *Vārttikapāṭha* which they contain, has been compiled and, I have no hesitation in saying, very carelessly compiled from the *Mahābhāṣya* at a comparatively modern date. Nor do the commentators on the *Mahābhāṣya*, or other scholars who have written on Pāṇini, render us any very great assistance in reconstructing the work of Kātyāyana, for they only occasionally contrast the views of Patañjali with those of the *Vārttikakāra*, and they tell us only incidentally that a particular statement is a Vārttika or belongs to Kātyāyana. And Patañjali himself, the author of the Great Commentary, is even more reticent" (Kielhorn 1876: 6,7). The problem of the attribution of the various

siddham etat │kim etat samudāyāt siddham iti │ dvivacanabahuvacanaprasiddhir iti coditaṃ tasyāyaṃ parihāraḥ │

Indeed, it is obvious that joint expressions are observed also in the *vigraha*. [For instance:] *dyavā ha kṣamā* 'heaven and earth';[69] *dyavā cit asmai pṛthivī namete* 'even heaven and earth bow down before him'.[70]

What is [the purpose of] this? To confirm the idea of the joint expression of referents. If in the *vigraha* that which is called *yugapadadhikaraṇavacanatā* certainly occurs, how much more [it occurs] in the compound![71] It is settled since they make a group.[72] This is settled since they make a group.

Why is it said that it is settled since they make a group? Inquiries have been made into the accomplishment of dual and plural.[73] This is the resolution of [the objection to] this.

7. *samudāyāt siddham iti cet na ekārthatvāt samudāyasya*

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passage in the text merits further and more profound research. In the *Mahābhāṣya* there are several passages which feature the same ambiguity as above.

[69] ṚV 10.12.1. In this verse both *dyavā* and *kṣamā* are duals whose grammatical number suffixes are clearly redundant. The asyndeton signifies coordination, as is usual in the Vedic *Saṃhitās*. Consider, also, VP 3.14.36: *samudāyam upakramya padaṃ tasyāṃ prayujyate | vibhāgena samākhyāne tatas tad dvyartham ucyate* ‖'after resorting to the combination (*samudāyam upakramya*), the *pada* is used in this [simultaneous expression]. Therefore, in the explanation through the analysis [i.e., in the *vigraha*] this [*pada*] having two meanings is uttered'.

[70] I.e., Indra, ṚV 2, 12, 13 a. *dyavā* and *pṛthivī* are elliptical duals.

[71] See, on this matter, VP 3.14.30: *itaretarayogas tu bhinnasaṅghābhidhāyinām | pratyekaṃ ca samūho 'sau samūhiṣu samāpyate* ‖ 'Now, the *itaretarayoga* is made up of [*pada*s] expressing the combination of separated parts, and such an aggregate (*samūha*) is obtained in every single [part, i.e., *pada*] which forms the aggregate'.

[72] I. e. the comitative idea, the conception of grouping things together as far as the language is concerned. Note that in VP 3.14.3, Bhartṛhari seems to hint at this passage from the M: *vyāpārasamudāyasya yathādhiśrayaṇādiṣu |pratyekaṃ jātivad vṛttis tathā dvandva padeṣv api* ‖ 'As (*yathā*) in [all those single actions] starting with putting [a pot] on [the fire][72] every single one (i.e., every single action) is like (*-vat*) the [specific] class (*jāti-*)[72] made up of the combination of *vyāpāras*, in the same way as the complex formation (*vṛtti*) is also within the *pada*s of the *dvandva* '. In a process of activities, composed of a series of minor actions, each one of these actions resemble the primary one, which is the action of 'cooking'. Here, Bhartṛhari draws a parallel between (a) the single actions (*vyāpāra*s) comprised in a primary one and (b) the *pada*s forming a *dvandva* compound. He then states as a basis of comparison that (a_1) the primary action permeates each single action and that (b_1) the combination of *pada*s permeates each single *pada*.

[73] Which has been questioned because of the fact that it occurs in sequences of *śabda*s and *artha*s (cf. vt. 5 '*dvivacanabahuvacanānupapattiḥ*').

7. If it is maintained that [the joint expression][74] is realized because they make a group, [the reply is] 'no!', because it is proper to a group to refer to a single *artha.*

samudāyāt siddham iti cet tan na | *kiṃ kāraṇam* | *ekārthatvāt samudāyasya* |*ekārthā hi samudāyā bhavanti* |*tad yathā* | *śataṃ yūthaṃ vanam iti* || *naikārthyam* | *nāyam ekārthaḥ* | *kiṃ tarhi* | *dvyartho bahvarthaś ca* | *plakṣo 'pi dvyartho nyagrodho 'pi dvyarthaḥ* | *yadi tarhi plakṣo 'pi dvyartho nyagrodho 'pi dvyarthas tayor anekārthatvād bahuvacanaprasaṅgaḥ* | *tayor anekārthatvād bahuṣu bahuvacanam iti bahuvacanaṃ prāpnoti* |

If it is maintained that it is realized because they make a group, [the reply is] 'no!' Why? Because it is proper to a group to have an *artha* which is a single item. In fact, groups have *artha*s which are a single item. For instance: *śatam* 'one hundred'*, yūtham* 'a herd', *vanam* 'a forest'. There is no possession of an *artha* which is a single item. This does not have an *artha* which is a single item. What, then? Its *artha* consists of two items, its *artha* consists of many items. Even *plakṣa-* has an *artha* which is two items, and *nyagrodha-* too has an *artha* which is two items. Even if *plakṣa-* has an *artha* which is two items, and *nyagrodha-* too has an *artha* which is two items, there is an automatic involvement of the plural, since they have an *artha* which is not a single item. The plural is obtained according to (A 1.4.21) *bahuṣu bahuvacanam*[75] since it is proper to these two to have an *artha* which is not a single item.

8. *tayor anekārthatvād bahuvacanaprasaṅga iti cen na bahutvābhāvāt*

Vt. 8. If it is maintained that there is an automatic involvement of the plural since they have an *artha* which is more than single item, [the reply] is 'no!'; because of the absence of plurality.

tayor anekārthatvād bahuvacanaprasaṅga iti cet tan na | *kim kāraṇam* | *bahutvābhāvāt* |*nātra bahutvam asti* | *kim ucyate bahutvābhāvāt iti yadedānīm eva uktaṃ plakṣo 'pi dvyartho nyagrodho 'pi dvyarthaḥ iti* | *yābhyām evātraikaḥ dvyarthas tābhyām eva*

[74] The uninterrupted reading of the vtt. suggests that the integration in here should be coherent with the previous topic.

[75] A 1.4.21 (*bahuṣu bahuvacanam*) "a *bahuvacana* (ending) occurs if there are many [items to be denoted]", which prescribes the plural when the idea of plurality is conveyed.

aparo'pi ‖ yady evam anyavācakenānyasya vacanānupapattiḥ | anyavācakena śabdenānyasya vacanam nopapadyate |

If it is maintained that the plural is automatically involved since their denotatum is more than one (is not one), [the reply] is "no!" Why? Because there is an absence of plurality; there is no plurality here. Since it has just been said that *plakṣa* has the denotatum of two and even *nyagrodha* has the denotatum of two, why is it said that it is due to the absence of plurality? Here [there is an absence of plurality because] the one has two as its denotatum by means of the [same] two [constituents] for which the other one [denotes two]. Thus, if there is no realization of the denotation of another item by means of a [word form] denoting another item, [the reply is that] the expression of another thing by means of a word form denoting another item is not realised.

9. *anyavācakenānyasya vacanānupapattir iti cet plakṣasya nyagrodhatvān nyagrodhasya plakṣatvāt svaśabdena abhidhānam*

Vt. 9. If it is maintained that there is no realisation of the denotation of another item by means of a word form denoting another item, [the reply is that] the denotation of the *plakṣa-* [is realized] by means of its own word itself (i.e., the matching form)[76] due to its being a *nyagrodha-*, and [the denotation] of the *nyagrodha-* due to its being a *plakṣa-*.

anyavācakenānyasya vacanānupapattir iti cet ucyate tan na |kim kāraṇam |plakṣasya nyagrodhatvān nyagrodhasya plakṣatvāt svaśabdena abhidhānam bhaviṣyati |plakṣo 'pi nyagrodho nyagrodho 'pi plakṣaḥ ‖katham punaḥ plakṣo 'pi nyagrodho nyagrodho 'pi plakṣaḥ syād yāvatā kāraṇād dravye śabdaniveśaḥ |

If it is maintained that there is no realization of the denotation of another thing by means of a word form denoting another item [the reply] is: ''no!" Why? Because a denotation is realized by means of its own word itself; indeed, the denotation of the *plakṣa-* [is realized] by means of the word itself due to its being a *nyagrodha-*, and [the denotation] of the *nyagrodha-* due to its being a *plakṣa-*, *nyagrodha-* could also [stand for] *plakṣa-* and *plakṣa-* could also [stand for]

[76] I.e., by the word whose own meaning matches the desired denotation.

nyagrodha-. But how can *nyagrodha-* also [stand for] *plakṣa-* and *plakṣa-* also [stand for] *nyagrodha-* since the application of a [given] *śabda* to a [given] *dravya* [occurs] since it is due to a given *kāraṇa*[77]?

10. *kāraṇād dravye śabdaniveśa iti cet tulyakāraṇatvāt siddham*

Vt. 10. If it is maintained that the application of a [given] *śabda* to a [given] *dravya*[78] [must be due to] a specific *kāraṇa*, [the reply is that] this is settled on the basis of the equivalence of the *kāraṇa*.

kāraṇād dravye śabdaniveśa iti ced evam ucyate tan na │tulyakāraṇatvāt siddham │ tulyaṃ hi kāraṇam │ yadi tāvat prakṣarati iti plakṣaḥ syān nyagrodhe 'pi etat bhavati │tathā yadi nyag rohati iti nyagrodhaḥ plakṣe 'pi etad bhavati ││ darśanaṃ vai hetur na ca nyagrodhe plakṣa śabdo dṛśyate ││

If it is maintained that the application of a [given] *śabda* to a [given] *dravya* [must be due to] a specific *kāraṇa*, [the reply is]: 'no!'; this is settled on the basis of the equivalence of the *kāraṇa*. Indeed, their *kāraṇa* is equivalent. If the *plakṣa-* [tree is so called] since it truly drops down, it also works this way in the case of the *nyragrodha-* [tree]. If, likewise, the *nyragrodha-* [tree is so called because it] grows downwards it also works this way in the case of the *plakṣa-*

[77] 'Reason, cause' in the etymological sense. In a nutshell, the *kāraṇa* is some sort of trigger of connection between entities and their representation in the language; in a way this causality is deep-rooted in the object of signification, whose essence is suggested by a non-passive activity which determines the subsequent linguistic codification.
[78] What exactly do Kātyāyana and Patañjali mean by using the idea of *dravya*? Their intention is still unclear since it seems to be on the border between linguistic and phenomenological levels. Roodbergen's (2008: *s.v.*) definition is: "individual, non-linguistic item/entity, a thing".

[tree][79]. The perception[80] is actually the cause (by which a given *śabda* applies to a given *dravya*) and the word-form *plakṣa-* is not perceived in the case of the *nyagrodha-*.

11. *darśanaṃ hetur iti cet tulyam*

Vt.11. If it is maintained that perception is indeed the impulse[81] by which (a given *śabda* applies to a given *dravya*, the reply is that) it is comparable.

darśanaṃ hetur iti cet tulyam etad bhavati │ plakṣe 'pi nyagrodhaśabdo dṛśyatām │ tulyaṃ hi kāraṇam ││ na vai loka eṣaḥ sampratyayo bhavati │ na hi plakṣa ānīyatām ity ukte nyagrodha ānīyate │

If it is maintained that perception is indeed the impulse [the reply in this case is that] it is comparable. The word *nyagrodha-* must also be perceived in the meaning of *plakṣa-*. Indeed, the *kāraṇa* is comparable. However, such a way of grasping a meaning does not exist in the everyday language. Indeed, when it is said 'let a *plakṣa-* be brought' a *nyagrodha-* is not brought.

[79] The second etymology, unlike the first one, seems to be well grounded in linguistic facts – cf. Monier Williams *s.v. prakṣarati* which means 'to ooze' in Roodbergen's view. Furthermore, in Kaiyaṭa's contribution *prakṣaraṇam* is translated as 'spreading all over'. In my opinion these two connotations are not suitable for the *nyragrodhaḥ* tree, which is why I have choosen the 'grows downwards' alternative; in a way, Patañjali tries to justify the *kāraṇa* turning to etymology – cf. Roodbergen (1974: fn. 676): which is why I have tried to make the two explanations correspond to each other as much as possible. After all, it cannot be denied that these two trees share both *genus* and *subgenus*; as such, Patañjali may have wished to underline their common features by forcing the first etymology, given that their aerial roots are perhaps their most evident and attractive quality, to which at least the second etymology seems to refer – *ny-añc + rudh*. Eggeling (1978[2] [1900]: 317, fn. 1): "[…] This refers to the habit of the Indian fig-tree, of sending down from the branches numerous slender roots which afterwards become fresh stems […]". *Śatapatha-Brāhmaṇa* 13.2.7.3: *nyagródhaś camasair íti yátra vaí deva yajñenā́yajanta tá etā́ṃś camasān nyaùbjaṃs te nyáñco nyagródhā rohanti,* "'the Nyagrodha with cups' – for when the gods were performing sacrifice, they tilted over these Soma-cups and, turned downwards, they took root, whence the Nyagrodhas (*ficus indica*), when turned downwards (*nyac-*), take root (*roha-*)" (Eggeling 1900: 317) cf. *Aitareya-Brāhmaṇa* 7.30.

[80] I.e., perception (*darśana*) in its absolute sense, free from any contextual reference.

[81] The translation of *hetuḥ* with 'impulse' is due to the generic meaning of this term with respect to *karaṇa*, which denotes a rather 'technical cause' (see Roodbergen 2008). For further hints about the difference between these terms, see Joshi-Roodbergen (1998: vol. VII - A 2.2.23).

12. *tadviṣayaṃ ca*

Vt.12. And it is characterized by this domain.

tadviṣayaṃ caitad draṣṭavyam plakṣasya nyagrodhatvam | *kiṃviṣayam* | *dvandvaviṣayam* || *yuktaṃ punar yat niyataviṣayā nāma śabdāḥ syuḥ* | *bāḍhaṃ yuktam* |

And this *nyagrodha*-essence of a *plaksa*- should be perceived as being characterized by this domain. Which is the domain (by which this perception is characterized)? [Such a perception] is characterized by the domain of *dvandvas*. Is it nevertheless correct[82] that word forms should be in themselves characterized by a restricted domain? It is definitely correct.

13. *anyatra api tadviṣayadarśanāt*

Vt.13. Since elsewhere perception is also characterized by a restricted domain.

anyatrāpi hi niyataviṣayāḥ śabdā dṛśyante | *tadyathā* | *samāne rakte varṇe gau lohitaḥ iti bhavaty āsvaḥ śoṇaḥiti* | *samāne ca kālo varne gauḥ kṛṣṇa iti bhavaty aśvo hema iti* |*samāne ca śukle varṇe gauḥ śveta iti bhavaty aśvaḥ karka iti* || *yadi tarhi plakṣo 'pi nyagrodho nyagrodho 'pi plakṣa ekenoktatvād aparasya prayogo 'nupapannaḥ* | *ekenoktatvāt tasya arthasya aparasya prayogo na upapadyate* | *plakṣeṇa nyagrodhasya nyagrodhaprayogaḥ* |

Indeed, *śabda*s as characterized by a restricted domain can also be observed elsewhere. For instance, even though the red colour is the same, [it is said]: *gauḥ lohitaḥ* 'the cow is scarlet', *āsvaḥ śoṇaḥ* 'the horse is crimson'. And even though the dark colour is the same, [it is said] *gauḥ kṛṣṇa* 'the cow is black', *aśvo hema* 'the horse is dark-brown'. And even though the white colour is the same, [it is said]: *gauḥ śvetaḥ* 'the cow is hoary', *aśvaḥ karkaḥ* 'the horse is silver'. Then, if *plakṣa*- also [means] *nyagrodha*- and also *nyagrodha*- [means] *plakṣa*-, since it has been conveyed by one [word-form], the use of the other [word-form] is not realized. The use of the other [word-form] does not arise, because its *artha* has been expressed by the one [word-

[82] The formula *yuktam punaḥ yat* is attested eight times in the M. The interrogative sense is triggered by the optative *syuḥ*.

form]. The use of *nyagrodha-* [does not arise because the *artha*] of *nyagrodha-* [has been expressed] by *plakṣa-*.[83]

14. *ekenoktatvād aparasya prayogo 'nupapannaḥ iti cet anuktatvāt plakṣeṇa nyagrodhasya nyagrodhaprayogaḥ*

Vt.14. If it is maintained that due to the expression by means of one, the use of the other is not realized, [the reply is that] due to the non-expression of *nyagrodha-* by means of *plakṣa-*, the word *nyagrodha-* is used.

ekenoktatvād aparasya prayogo 'nupapannaḥ iti cet tan na │ kiṃ kāraṇam │ anuktatvāt plakṣeṇa nyagrodhasya nyagrodhaprayogaḥ │ anuktaḥ plakṣeṇa nyagrodhārtha iti kṛtvā nyagrodhaśabdaḥ prayujyate │ katham anukto yāvatedānīm evoktam plakṣo 'pi nyagrodho nyagrodho 'pi plakṣa iti │ sahabhūtāv etau anyonyasya artham āhatur na pṛthagbhūtau │ kiṃ punaḥ kāraṇaṃ sahabhūtāv etau anyonyasya artham āhatuḥ na punaḥ pṛthagbhūtau │

If it is maintained that - due to the expression by means of the one, the use of the other is not realized, [the reply is:] no! Why? Due to the non-expression of *nyagrodha-* by means of *plakṣa-* there is the use of *nyagrodha-*. After having realized that the *artha* of *nyagrodha* is not expressed by means of *plakṣa*, the word *nyagrodha* is used. But how can it not be expressed since [it has] just [been maintained that] *nyagrodha-* could also [stand for] *plakṣa-* and *plakṣa-* could also [stand for] *nyagrodha-*? Both convey the meaning of each other when they (du.) are combined, with each other not when they (du.) occur separated. Why do both convey the meaning of each other when they occur combined, and yet not when they occur separated?

15. *abhidhānam punaḥ svābhāvikam*

[83] It seems that Patañjali glosses the previous statement, as it is usual in the commentarial genre. (i.e., *ekena uktatvāt tasya arthasya aparasya prayogaḥ na upapadyate* and the glossa *plakṣeṇa nyagrodhasya nyagrodhaprayogaḥ*, where *ekena* is specified by *plakṣeṇa*, *tasya arthasya* by *nyagrodhasya* and *aparasya prayogaḥ* by *nyagrodhaprayogaḥ*. The latter compound is probably conceived as a *variatio* (with respect to *nyagrodhasya prayogaḥ*) to avoid the repetition of another genitive inflection of *nyagrodha-* which would have been formally identical to the preceding one (*plakṣeṇa nyagrodhasya nyagrodhaprayogaḥ*).

Vt.15. Moreover, the denotation is grounded in its intrinsic conditions.[84]

svābhāvikam abhidhānam ‖ athaveha kau cit prāthamakalpikau plakṣanyagrodhau kau cit kriyayā vā guṇena vā plakṣa ivāyaṃ plakṣo nyagrodha ivāyaṃ nyagrodha iti ‖ tatra plakṣav ity ukte sandehaḥ syāt kim imau plakṣau āhosvit plakṣanyagrodhau iti ‖ tatra asandehārthaṃ nyagrodhaśabdaḥ prayujyate ‖ iyaṃ yugapadadhikaraṇavacanatā nāma duḥkhā ca durupapādā ca ‖ yac cāpi asyā nibandhanam uktaṃ dyāvā ha kṣāmeti tad api chāndasaṃ tatra supāṃ supo bhavantīty eva siddham ‖ sūtraṃ ca bhidyate ‖ yathānyāsam evāstu ‖ nanu coktam cārthe dvandva vacane 'samāse 'pi cārthasampratyayād aniṣṭaprasaṅga iti ‖naiṣaḥ doṣaḥ ‖iha ce dvandva itīyatā siddham ‖kathaṃ punaś ce nāma vṛttiḥ syāt ‖śabdo hy eṣaḥ śabde 'sambhavād arthe kāryaṃ vijñāsyate ‖ so 'yam evaṃ siddhe sati yadarthagrahaṇam karoti tasya etat prayojanam evaṃ yathā vijñāyeta cena kṛto 'rthaś cārthaḥ iti ‖ kaḥ punaś cena kṛto 'rthaḥ ‖ samuccayo anvācaya itaretarayogaḥ samāhāra iti ‖ samuccayaḥ ‖plakṣaś cety ukte gamyata etan nyagrodhaś ca iti ‖ anvācayaḥ ‖plakṣaś cety ukte gamyata etat sāpekṣo 'yam prayujyata iti ‖ itaretarayogaḥ ‖plakṣaś ca nyagrodhaś cety ukte gamyata etat plakṣo 'pi nyagrodhasahāyo nyagrodho 'pi plakṣasahāya iti ‖samāhāre 'pi kriyate plakṣanyagrodham iti ‖ tatrāyam apy artho dvandvaikavadbhāvo na paṭhitavyo bhavati ‖samāhārasyaikatvād eva siddham ‖‖ekādaśa dvādaśeti ko 'yam samāsaḥ ‖ekādīnāṃ daśādibhir dvandvaḥ ‖ekādīnāṃ daśādibhir dvandvaḥ samāsaḥ ‖

The denotation is grounded in its intrinsic conditions. Otherwise, there are some *plakṣanyagrodhau* which stand for the objects that are primarily conceived as they (du.) are, others which stand for some activity or quality of these objects. For instance, as far as *plakṣa-* is concerned, this is similar to a *plakṣa-* [85]; as far as *nyagrodha-*, is concerned, this is similar to a *nyagrodha-*.[86] Yet, if it is taught *plakṣau*,[87] there may be a doubt: [are we talking about] two *plakṣa*s or [rather about] one *plakṣa-* and one *nyagrodha-*? To remove any doubts, the word *nyagrodha-* is used there. This joint expression of referents is awkward and difficult to

[84] I.e., it is autonomous.

[85] I.e., even if one says *plakṣa* he means 'like a *plakṣa*' indeed.

[86] Same as above.

[87] In this second usage, a word may be used to denote an object other than its own or to compare an object to another. Thus, the dual *plakṣau* may convey either the meaning of two *plakṣa-* or of one *plakṣa-* and one *nyagrodha-*. To clarify the meaning, the *dvandva plakṣa-nyagrodhau* is used.

demonstrate.[88] Moreover, it is the same with the instance provided to support it, that is to say: *dyāvā ha kṣāmā* 'heaven and earth' which comes from the Vedas. In that case, *supāṃ supo bhavanti* [case endings in place of other case endings][89] can be truly realized. But the *sūtra* is split.[90] Let it be kept as it has been handed down. Given that the *dvandva* has been taught in the sense of *ca*, has it not recently been maintained that there may be the chance for an undesired involvement, since the *artha* of *ca* is understood even in a non-compound? There is no flaw. [The *sūtra*] is realized this way: *ce dvandvaḥ* 'when *ca* occurs, a *dvandva* is formed'.[91] Nevertheless, how could a linguistic complex formation be formed when *ca* occurs? Indeed, this is a *śabda*[92] but since such an operation is impossible in the case of the *śabda* [*ca*], it will be considered as in the case of [its] *artha*. Now, even if it can also exist in the same way realized [above], he (Pāṇini) makes mention of *artha*, so that it can be understood it in this way, namely: *cena kṛtaḥ arthaḥ cārthaḥ* '*cārtha*- is the *artha* realized by means of *ca*'.[93] However, what is (exactly) this *artha* realized by means of ca? [It is] *samuccaya, anvācaya, itaretarayoga and samāhāra.* [This is] *samuccaya*: when it is said *plakṣaś ca* 'the *plakṣa*- tree as well' it is understood *nyagrodhaś ca* 'the *nyagrodha*- tree as well' is understood. [This is] *anvācaya*: when it is said *plakṣaś ca* 'and even the *plakṣa*- tree' it is understood that it is used as depending on [another word]. [This is] *itaretarayoga*: when it is taught *plakṣaś ca nyagrodhaś ca* 'both the *plakṣa*- and *nyagrodha*- trees' this is understood: with the *plakṣa*- tree, the *nyagrodha*- tree goes as a companion [and therefore] with the *nyagrodha*- tree, the *plakṣa*- tree goes as a companion. In the case of a *samāhāra* too [a *dvandva*] is obtained: *plakṣanyagrodha*- 'both the *plakṣa*- and *nyagrodha*- trees'. Thus, 'the condition of treatment as one (*ekavadbhāva*) for a *dvandva*' does not have to be taught; indeed, it is realized because singularity is proper to a group. What (kind of) compound is this: *ekādaśa*- 'eleven', *dvādaśa*- 'twelve'? The combination of items beginning with *eka*- 'one' with items beginning with *daśa*- 'ten' is a

[88] Note that Bhartṛhari refers to this passage in VP 3.14.35: *duḥkhā durupapādā ca tasmād bhāṣye 'py udāhṛtā | yugapadvācitā sā tu vyavahārārtham āśritā* || 'Therefore, the simultaneous signification (*yugapadvācitā*) [on the part of both the constituents] has been defined as difficult and hard to demonstrate (*duḥkhā durupapādā*) even in the *bhāṣya* (i.e., by Patañjali) but it has been resorted to for practical reasons'.

[89] Cf. Roodbergen (1974: fn. 701).

[90] i.e, A 2.2.29.

[91] It seems that *ce* instead of *carthe* implies the manifest involvement of *ca* in the syntactic string.

[92] i.e., a word-form (instead of an *artha*). Thus, it will go subject to A 1.1.68, which teaches the autonymous usage of words within the grammar: *svaṃ rūpaṃ śabdasya aśabdasaṃjñā*, "The form itself is used in place of a linguistic unit, except for a name of other linguistic forms" (Candotti 2021: 522). See also Candotti (2006 : 281): "Un élément linguistique se fait connaître lui-même à moins qu'il ne s'agisse d'une *śabdasaṃjñā*".

[93] Since *ca* is a *śabda* and the constraint of A 2.2.29 clearly refers to the occurrence of a specific *artha*, one may wonder whether underlying idea is rather similar to that conveyed by *sam*.

dvandva. A compound formed by the combination of items beginning with *eka*- 'one' with items beginning with *daśa*- 'ten' is a *dvandva*.

16. *ekādīnaṃ daśādibhir dvandva iti ced viṃśatyādiṣu vacanaprasaṅgaḥ*

Vt.16. If it is maintained that the combination of items beginning with *eka*- 'one' with items beginning with *daśa*- 'ten' is a *dvandva*, there is the automatic involvement of the (unpredicted) grammatical number in case of [numerals] beginning with *viṃśati*- 'twenty'.

ekādīnāṃ daśādibhir dvandva iti ced viṃśatyādiṣu vacanaṃ prāpnoti │ ekaviṃśatir dvāviṃśatiḥ ││

If it is maintained that the combination of items beginning with *eka*- 'one' with items beginning with *daśa*- 'ten' is a *dvandva*, the [undesired] grammatical number is obtained the case of [numerals] beginning with *viṃśati*- 'twenty'; [that is to say dual or plural:] *ekaviṃśati*- 'twenty-one', *dvāviṃśati*- 'twenty-two' (s.f.).

17. *siddhaṃ tv adhikāntā saṅkhyā saṅkhyayā samānādhikaraṇādhikāre 'dhikalopaś ca*

Vt.17. But this is established [by reading] the combination of a numeral ending with *adhika* with (another) numeral within the domain of the *adhikāra* which teaches the co-referentiality of the constituents and *adhika*- is zero-replaced.[94]

siddham etat │ katham │ samānādhikaraṇādhikāre vaktavyam adhikāntā saṅkhya saṅkhyayā saha samasyate 'dhikaśabdasya ca lopo bhavatīti │ ekādhikā viṃśatir ekaviṃśatiḥ │

[94] It seems worth anticipating a concept that will be deal with later: the so-called *padalopa* is not a pāṇinian expedient and there is only one instance of such an operation in the whole corpus of the *Aṣṭādhyāyī*, i.e., A 5.3.82, according to which the lexeme *ajina*- "skin", used as a second constituent of compounds (to which the affix *-ka*- applies), is subjected to *lopa*, - ex. **vyāghrājina*- > *vyāghraka*- "The poor 'Tiger-skinned'". Instead, commentators often highlight the fact that each unit of meaning requires a unit for its signification according to a currently presupposed one-to-one symmetry between the semantic and the phono-morphological level of language and *madhyamapada*- and *uttarapada-lopa*s are often proposed.

dvyadhikā viṃśatir dvāviṃśatiḥ ‖ yadi samānādhikaraṇaḥ svaro na sidhyati ‖yad dhi tat saṅkhyā pūrvapadaṃ prakṛtisvaraṃ bhavatīti dvandva iti tat ‖ kiṃ punaḥ kāraṇaṃ dvandva iti evaṃ tat ‖iha mā bhūt ‖ śatasahasram iti ‖‖astu tarhi dvandva ḥ ‖ nanu coktam ekādīnāṃ daśādibhir dvandva iti ced viṃśatyādiṣu vacanaprasaṅga iti ‖ naiṣa doṣaḥ ‖sarvo dvandvo vibhāṣā ekavad bhavati ‖ yadā tarhy ekavacanaṃ tadā napuṃsakaliṅgaṃ prāpnoti ‖liṅgam aśiṣyaṃ lokāśrayatvāl liṅgasya ‖‖

This is settled. How? One must include under the *adhikāra* that teaches the co-referentiality that a numeral ending with *adhika-* forms a compound with (another) numeral; then, zero-replacement of the word-form *adhika-* occurs. [For instance:] *ekādhikā viṃśatiḥ ekaviṃśatiḥ* "*ekaviṃśatiḥ* is *viṃśati-* 'twenty' whose extra is *eka-* 'one', *dvyadhikā viṃśatiḥ dvāviṃśatiḥ* "*dvāviṃśatiḥ* is *viṃśati-* 'twenty' whose extra is *dvi-* 'two'. If [the compound] is *samānādhikaraṇa*,[95] the (proper) accent cannot be realized. Indeed, [the constraint by which] a first-placed numeral retains its original accent is *dvandve* 'in the case of a *dvandva*'.[96] However, why [it has been stated]: *dvandve* 'in the case of a *dvandva* '? So that it should not be realized here:[97] *śatasahasram* 'one hundred thousand'. Then, let [the combination of items beginning with *eka-* 'one' with items beginning with *daśa-* 'ten'] be a *dvandva* . But if it has just been taught that the combination of items beginning with *eka-* 'one' with items beginning with daśa- 'ten' is a *dvandva*, there is the automatic involvement of the [undesired] grammatical number in the case of [numerals] beginning with *viṃśati-* 'twenty'? There is no flaw. Every *dvandva* is optionally treated as one. Then, whenever the singular [occurs] there is the chance to obtain the neuter gender.

Gender does not have to be taught, since it is dependent on its own common usage.[98]

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[95] That is to say, if it is a *karmadhāraya*.

[96] According to A 6.2.34.

[97] If *dvandve* as a constraint had not been continued from A 6.2.33 by *anuvṛtti* in A 6.2.34 (*saṃkhyā*) which teaches to keep the original accent on the first constituent, its preservation would also have been put into operation in this type of numeral compounds; nonetheless, it is undesired, since *śatasahasram* is traditionally interpreted as a genitive *tatpuruṣa* (with the accent on its last constituent). Thus, according to Nāgeśa, this compound should be isolated: *sahasrāṇām śatam* ''one hundred of thousands''; in fact, Kayaṭa also maintaines that this is a *tatpuruṣa*. However, it seems that the specific mention of this kind of numerals directly hints at the complex formations ruled by A 2.2.25.

[98] Patañjali is thinking about A 1.2.53 (*tad aśiṣyaṃ saṃjñāpramāṇatvāt*), that is to say that gender and number (51) do not need to be taught because they are based on common usage. Wezler (1976: 366): "This is the first of - altogether - five *sūtras* that apparently do not go back to Pāṇini, and it is the only one of them which was already known to Patañjali (M I, 229, 6-8)"; then see Palsule (1949: 144), who proposes that the relative passage in the M is to be considered as spurious: "(1)The traditional view that Pāṅini refutes in *sūtras* 1.2.53-57 the views of his predecessors cannot be accepted because (a) it cannot be reconciled with Pāṇini's own view regarding proper

4. A 2.2.33 *dvandve ghi* [*pūrvam* 30] [99]

The constituent termed as GHI (i.e., which ends with the short vowels *-i* or *-u* - not only feminine in gender- and the feminine stems not included under the technical term *nadī* (A 1.4.3), with the exception of *sakhi-*) [is placed first] in a *dvandva* compound.

5. A 2.2.34 *ajādyadantam* [*pūrvam* 30, *dvandve* 32] [100]

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names, and their treatment in grammar in regard to with their gender and number, and because (b) it also runs counter to Pāṇini's usual practice of allowing option whenever there is a difference of opinion. (2) Consequently, we must regard the present *sūtras* as later interpolations, which is corroborated by the circumstance that Kātyāyana, and also Patañjali, if we agree to consider the *Bhāṣya* on i.2.53 as spurious are quite ignorant of them. (3) Because these *sūtras* are later interpolations, no inference can legitimately be drawn from them reading the principle that Pāṇini might have observed in dealing with grammatical technical terms". However, Cf. Scharfe (1977: 105) "The *Liṅgānuśāsana* 'Instruction about gender' sometimes attributed to Pāṇini (e.g., Appendix to the *Siddhanta-kaumudi*) is probably much later than Patañjali. It is not mentioned in the *Māhābhaṣya* and Patañjali's thesis *liṅgam aśiṣyam lokāśrayatvāl liṅgasya* "The gender need not be taught because it is based on usage" (*Māhābhaṣya* 1390,18 f. and often) speaks against the existence of an authoritative work on gender in his time. The composition of gender manuals was probably inspired by the lexica which often have a special section on gender".

[99] The *Cāndravṛtti ad* C 2.2.48 *cārthe* comments on this teaching thus: *tatra kvacid idudantaṁ pūrvaṁ nipatati*, 'there [in the compound conveying the sense of *ca*] sometimes the word ending with the short vowel -i or -u occurs first'. [e.g.], *agnivātau*, 'Agni and Vāta', *paṭuguptau*, 'cleverness and secretness'. *kvacit paraṁ nipatati*, 'sometimes it occurs after'. [e.g.], *citrāsvātī*, 'Citrā and Svāti', *bhāryāpatī*, 'husband and wife', *jaṁpatī*, 'husband and wife', *dampatī*, 'a wife and a husband' (note that *dampatī* is an elliptic dual. The word *dampati* means 'the lord of the house'; the present *tatpuruṣa* has been interpreted as a *dvandva* compound (with *dam-* meaning 'wife' as the result of a wrong segmentation), *putrapatī*, 'the son and the lord' (a reminiscence of A 6.1.13?) *putrapaśū* 'a son and a domestic animal' (see BĀU 6.4.12.5), *keśaśmaśru*, 'hair and beard', *śirovidu*, 'head and he hollow between the frontal globes'. *kvacid aniyamaḥ*, 'sometimes there is no restriction', *sarpirmadhuni, madhusarpiṣī*, 'clarified butter and honey', 'honey and clarified butter', *antādī, ādyantau,* 'the end and the beginning', 'the beginning and the end', *guṇavṛddhī, vṛddhiguṇau*, '*guṇa* and *vṛddhi*', '*vṛddhi* and *guṇa*', *paṭumṛduśuklāḥ, paṭuśuklamṛdavaḥ* "sharpness, softness and whiteness". Note that the main source of the examples quoted by Candragomin seems to be the *gaṇa ad* A 2.2.31 (*rājadantādi*). The perception of this later commentator with respect to rule A 2.2.32 is weak, and the comment itself bears witness to the fact that the language tends to evolve towards a less strict observance of the teaching of the rule (or, perhaps, the fact that Candra does not have a prescriptive intention). As for the *vivakṣā* in the *Cāndravyākaraṇa*, see Radicchi 1993. Also note that the pāṇinian technical term GHI is here replaced with the less specific *idudantam* (cf. the next footnote).

[100] The *Cāndravṛtti ad* C 2.2.48 *cārthe* comments on this teaching thus: *kvacid ajādyadantaṁ pūrvaṁ nipatati*, 'sometimes the word beginning with a vowel and ending in -a takes place first', [e.g.], *aśvakharam*, 'a horse and a donkey', *uṣṭrakharam*, 'a camel and a donkey'. *kvacid viparyayo 'pi dṛśyate*, 'sometimes the inverted order is also observed', [e.g.], *śūdrāryam, āryaśūdram*, 'a *śūdra* and an *ārya*', 'an *ārya* and a *śūdra*', *avantyaśmakam*, 'the Avantis and the Aśmakas', *viṣvaksenārjunau*, 'Viṣvaksena and Arjuna'. *kvacid aniyamaḥ*, 'sometimes there is no restriction', [e.g.], *dharmārthau, arthadharmau*, '*artha* and *dharma*', '*dharma* and *artha*'. *śabdārthau, arthaśabdau,* '*śabda* and *artha*', '*artha* and *śabda*', *kāmārthau, arthakāmau, candrārkau, arkacandrau*, 'the moon and the sun', 'the sun and the moon'. *indrāgnī, agnīndrau,* 'Indra and Agni', 'Agni and Indra',

The constituent beginning with *aC* (any vowel) and ending with *aT* (the short vowel *-a*) [is placed first in a *dvandva* compound].

6. A 2.2.34 *alpāctaram* [*pūrvam* 30, *dvandve* 32][101]

The constituent that has fewer vowels (aC) [is placed first in a *dvandva* compound].

kim ayaṃ tantraṃ taranirdeśāhosvid atantram | *kiṃ cātaḥ* | *yadi tantraṃ dvayor niyamo bahuṣv aniyamaḥ* | *tatra ko doṣaḥ* | *śaṅkhadundubhivīṇānām iti na sidhyati* | *dundubhiśabdasyāpi pūrvanipātaḥ prāpnoti* | *athātantram mṛdaṅgaśaṅkhatūṇavāḥ pṛthaṅ nadanti saṃsadi prāsāde dhanapatirāmakeśavānām iti etan na sidhyati* | *yathecchasi tathāstu* || *astu tāvat tantram* | *nanu coktam dvayor niyamo bahuṣv aniyamaḥ iti tatra śaṅkhadundubhivīṇānām iti na sidhyati dundubhiśabdasyāpi pūrvanipātaḥ prāpnotīti* | *naiṣa doṣaḥ* | *yad etad alpāctaram iti tad alpāc iti vakṣyāmi* || *athavā punar astv atantram* | *nanu coktam mṛdaṅgaśaṅkhatūṇavāḥ pṛthaṅ nadanti saṃsadi prāsāde dhanapatirāmakeśavānām ity etan na sidhyatīti* |

Is the specific mention of *-tara* a basic part of the rule or perhaps not a basic part of the rule?[102] What is the consequence? If it is the basic part of the rule, there is a restriction in the case of two [constituents] and there is no restriction in the case of many [constituents].[103] In this case what is the flaw? [For instance:] (the desired form) *śaṅkhadundubhivīṇānām* 'the conch, the drum and the lute' is not realized. The (irregular) first slot made of the word *dundubhi* is also

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candrārkendrāḥ, arkacandrendrāḥ, indrārkacandrāḥ. Also in this case, Candragomin is weak, and the comment itself bears witness to the fact that the language tends to evolve toward a less strict observance of the teaching of the rule.

[101] The *Cāndravṛtti ad* C 2.2.48 *cārthe* comments on this teaching thus: *kvacid alpākṣaraṁ pūrvaṁ nipatati*, 'sometimes the word with the fewest syllables occurs first', [e.g.], *plakṣanyagrodhau*, 'the *plakṣa* and the *nyagrodha* tree', *dhavakhadirau*, 'the *dhava* and the *kadhira* tree'. *kvacid viparyayaḥ*, 'sometimes there is the inverted order', [e.g.], *ulūkhalamusale*, 'the mortar and the pestle', *taṇḍulakiṇvam*, 'grain and ferment', *citrarathabāhlīkau, snātakarājānau, akṣibhruvam*, 'the eye and the eyebrows', *dāragavam*, 'wife and cows'. *kvacid aniyamaḥ*, 'sometimes there is no restriction', *dhanapatirāmakeśavāḥ. vipūyavinīyajitya muñjakalkahaliṣu* (Pan. III, 1, 117). Note the different terminology employed here by Candragomin: while the A uses the technical aT (any vowel), in C 2.2.48 the word *akṣara* is introduced the word *akṣara-*, commonly used to signify 'syllable'.

[102] As for the difference between (a) *tantra* and (b) *atantra*, see Roodbergen (1974:206, fn. 817): (a) *pramāṇa* 'that which has authority to teach us', (b) 'what lacks authority to teach us'. As far as the mention of *-tara* is concerned, there are two possibilities, namely that (a) it is *prakarṣa*, (b) it is *svārtha*. In the case of (a) *-tara* expresses a comparative degree according to A 5.3.57; in the case of (b) it is pleonastic.

[103] If *-tara* is *tantra*, it only involves compounds made up of two constituents. Otherwise, no restrictions must be applied.

obtained.[104] Then [-*tara*] is not the object of the rule. [For instance:] (the desired expression) *mṛdaṅgaśaṅkhatūṇavāḥ pṛthaṅ nadanti saṃsadi prāsāde dhanapatirāmakeśavānām*[105] 'During the assembly, the *mṛdaṅga* 'the drum', the *śaṅkha* 'the conch' and the *tūṇava* 'the flute' sound separately in the palace of Dhanapati, Rāma and Keśavā', is not realized.[106] Let it be as you want. Let [-*tara*] be a basic part of the rule, now. It has just been maintained that there is a restriction in the case of two [constituents] and there is no restriction in the case of many [constituents]. There *śaṅkhadundubhivīṇānām* 'the conch, the drum and the lute' is not realized. The first slot made up of the word *dundubhi* 'the drum' is also obtained.

There is no flaw. I will say that *alpāctaram* is *alpāc*. Or, therefore let [-*tara*] be a basic part of the rule.

It has just been said that when one says *mṛdaṅgaśaṅkhatūṇavāḥ pṛthaṅ nadanti saṃsadi prāsāde dhanapatirāmakeśavānām* 'During the assembly, the *mṛdaṅga* 'the drum', the *śaṅkha* 'the conch' and the *tūṇava* 'the flute' sound separately in the palace of Dhanapati, Rāma and Keśavā', [the rule] is not realized.

1. *atantre taranirdeśe śaṅkhatūṇavayor mṛdaṅgena samāsaḥ*

Vt.1. If the specific mention of -*tara* is not the object of the rule, the compound is made up of *śaṅkhatūṇava* [combined] with *mṛḍaṅga*.

atantre taranirdeśe śaṅkhatūṇavayor mṛdaṅgena samāsaḥ kariṣyate | *śaṅkhaś ca tūṇavaś ca śaṇkhatūṇavau* | *mṛdaṅgaś ca śaṇkhatūṇavau ca mṛdaṅgaśaṅkhatūṇavāḥ* | *rāmaś ca keśavaś ca rāmakeśavau* | *dhanapatiś ca rāmakeśavau ca dhanapatirāmakeśavās teṣām dhanapatirāmakeśavānām iti* || *atha yatra bahūnāṃ pūrvanipātaprasaṅgaḥ kiṃ tatraikasya niyamo bhavati ahosvid aviśeṣeṇa*|

[104] If -*tara* were *tantra* (so with no restrictions for more than two constituents), the word *dundubhi*, although it is the longest one, could have been placed first in the present *dvandva* ; however, as Roodbergen (1974: 207-208) underlines, "as for what is desired and what not, we are completely dependent on Patañjali, since there is no means to check his statements from actual literary usage".

[105] Roodbergen 1974 and Sastri (2012-2014), based on the layout of Kielhorn's edition feature two phrases instead of one: (a) *mṛdaṅgaśaṅkhatūṇavāḥ pṛthaṅ nadanti saṃsadi* (b) *prāsāde dhanapatirāmakeśavānām*; as for variant readings of this passage (i.e., the absence of (a) *saṃsadi*), see Roodbergen (1974: fn. 826). There is *daṇḍa* between them and since the source of the example is unknown, a single expression could be understood. In any case, there is no difference as far as the scope of the examples (i.e., the two *dvandva* compounds) is concerned.

[106] According to this passage -*tara* should be *atantra* in order to ensure the formation of the quoted compounds which seem to violate A 2.2.34.

If the specific mention of *-tara* is not the object of the rule, the compound will be made up of *śaṅkhatūṇava* [combined] with *mṛḍaṅga*.[107] *śaṅkhaḥ* and *tūṇavaḥ* combine to form *śaṇkhatūṇavau*; *mṛḍaṅgaḥ* and *śaṇkhatūṇavau* combine to form *mṛḍaṅgaśaṅkhatūṇavāḥ*. *rāmaḥ* and *keśavaḥ* combine to form *rāmakeśavau; dhanapatiḥ* and *rāmakeśavau* combine to form *dhanapatirāmakeśavāḥ* i.e., *dhanapatirāmakeśavānām* 'In the palace of Dhanapati, Rāma and Keśavā'. Therefore, where there is automatic involvement for the (irregular) first slot of many [constituents], does the restriction to one occur in those cases, or perhaps (does it apply) without distinction?[108]

2. *anekaprāptav ekasya niyamo aniyamaḥ śeṣeṣu*

Vt.2. The restriction to one happens in the case of the occurrence of more than one [constituent]; there is no restriction in the remaining ones.

anekaprāptav ekasya niyamo aniyamaḥ śeṣeṣu | *paṭumṛduśuklāḥ paṭuśuklamṛdava iti* ||

The restriction to one happens in the case of occurrences of more than one [constituent]; there is no restriction in the remaining ones. [For instance]: *paṭumṛduśuklāḥ* 'cleverness, softness and whiteness', *paṭuśuklamṛdavaḥ* 'cleverness, whiteness and softness'.

3. *ṛtunakṣatrāṇām ānupūrvyeṇa samānākṣarāṇām*

Vt.3. [Constituents] denoting *ṛtu*s and *nakṣatra*s having the same number of syllables appear according to the natural order.

ṛtunakṣatrāṇām ānupūrvyeṇa samānākṣarāṇām pūrvanipāto vaktavyaḥ | *śiśiravasantau udagayanasthau* | *kṛttikārohiṇyaḥ* ||

[107] The structure here proposed (*śaṅkhatūṇavayor* + *mṛḍaṅgena* = nominative + instrumental) partly follows that of A 2.1.4. However, both Kātyāyana and Patañjali do not take into account the problem of the *upasarjana*, which should be expressed in the nominative case ending: in fact, in his explanation it results as being inflected in the instrumental. The present model superficially reflects the general idea which lies behind every nominal composition.

[108] I.e., is there a way to fix the first slot in a copulative compound?

The first slot has to be taught according to the natural order [for constituents] denoting *ṛtu* and *nakṣatra*s having the same number of syllables. [For instance:] *śiśiravasantau udagayanasthau* 'winter and spring, occurring during the [sun's] northern path'[109], *kṛttikārohiṇyaḥ* '*kṛttikā* and *rohiṇi*'.

4. *abhyarhitam*

Vt.4. [A constituent denoting] the greatly honoured [is placed first].

abhyarhitaṃ pūrvaṃ nipatatīti vaktavyam | *mātāpitarau śraddhāmedhe* ||

It has to be said that the [constituent standing for] the greatly honoured is placed first. [For instance:] *mātāpitarau* 'mother and father', *śraddhāmedhe* 'faith and wisdom'.

5. *laghvakṣaram*

Vt.5. [A constituent] having short syllables [is placed first].

laghvakṣaraṃ pūrvaṃ nipatatīti vaktavyam | *kuśakāśam śaraśīryam* || *apara āha* | *sarvatraiva abhyarhitaṃ pūrvaṃ nipatatīti vaktavyam* | *laghvakṣarād apīti* | *śraddhātapasī* | *dīkṣātapasī* ||

It has to be said that [the constituent] having short syllables is placed first. [For instance:] *kuśakāśam* '*kuśa* and *kāśa* herbs', *śaraśīryam* '*śara* and *sīrya* reeds'. Another says: it has to be said that [the constituent standing for] the greatly honoured is placed first in any case indeed. Even with respect to [constituents] having short syllables. [For instance:] *śraddhātapasī* 'faith and religious austerity', *dīkṣātapasī* 'self-devotion and religious austerity'.

6. *varṇānām ānupūrvyeṇa*

Vt.6. [Constituents denoting] social classes appear according to the natural order.

[109] i.e., the time between the winter and the summer solstices, characterized in the Boreal Hemisphere by the sun apparently moving toward the north (from the Tropic of Capricorn to the tropic of Cancer).

varṇānām ānupūrvyeṇa pūrvanipāto bhavatīti vaktavyam ⎪ *brāhmaṇakṣatriyaviṭśūdrāḥ* ⎪⎪

It has to be said that [constituents denoting] social classes appear according to the natural order. [For instance:] *brāhmaṇakṣatriyaviṭśūdrāḥ* 'Brāhmaṇa, Kṣatriya, Vaiśya and Śūdra'.

7. *bhrātuś ca jyāyasaḥ*
Vt.7. Also [a constituent] denoting the elder brother [(is placed first) according to the natural order].

bhrātuś ca jyāyasaḥ pūrvanipāto bhavatīti vaktavyam ⎪ *yudhiṣṭhirārjunau* ⎪⎪

It has to be said that also [a constituent] denoting the elder brother [(is placed first) according to the natural order]. [For instance:] *yudhiṣṭhirārjunau* 'Yudhiṣṭhira and Arjuna'.

8. *saṅkhyāyālpīyasaḥ*
Vt.8. [A constituent] denoting the lowest number [is placed first].[110]

saṅkhyāyālpīyasaḥ pūrvanipāto vaktavyaḥ ⎪ *ekādaśa dvādaśa* ⎪⎪

The first place has to be taught [for the constituent denoting] the lowest number. [For instance:] *ekādaśa* 'eleven'*, dvādaśa* 'twelve'.

9. *dharmādiṣu ubhayam*
Vt.9. Both [constituents] in the case of *dharma* and so on [can be placed first].

dharmādiṣu ubhayaṃ pūrvaṃ nipatatīti vaktavyam ⎪ *dharmārthau arthadharmau* ⎪ *kāmārthau arthakāmau* ⎪ *guṇavṛddhī vṛddhiguṇau* ⎪ *ādyantau antādī* ⎪⎪

It has to be said that both [constituents] are placed first in the case of *dharma* and so on. [For instance:] *dharmārthau arthadharmau* '*dharma* and *artha*' '*artha* and *dharma*',

[110] According to the *gaṇa* appended to A 2.2.31.

kāmārthau arthakāmau '*kāma* and *artha*' '*artha* and *kāma*', *guṇavṛddhī vṛddhiguṇau 'guṇa* and *vṛddhi' 'vṛddhi* and *guṇa'*, *ādyantau antādī* 'beginning and end' 'end and beginning'.

7. A 2.4.2 *dvandvaś ca prāṇitūryasenāṅgānām* [*ekavacanam* 1]

A *dvandva* made up of constituents denoting parts of a living being, a musical group, an army is also singular in number.

1. *prāṇitūryasenāṅgānām tatpūrvapadottarapadagrahaṇam*

Vt.1. There is the mention of parts of a living being, parts of a musical group, parts of an army made by its (i.e., the compound's) first and by the second constituent.

prāṇitūryasenāṅgānām tatpūrvapadottarapadagrahaṇam kartavyam | *prāṇyaṅgānām prāṇyaṅgair iti vaktavyam* | *tūryāṅgāṇāṃ tūryāṅgaiḥ* | *senāṅgānām senāṅgair iti*| *kim prayojanam* | *vyatikaro mā bhūd iti* || *tat tarhi vaktavyam* | *na vaktavyam* |

Mention of the parts of a living being, the parts of a musical group, the parts of an army must be made by its (i.e., the compound's) first and by the second constituent. It has to be taught: of parts of living beings with parts of living beings, of parts of a musical group with parts of a musical group, of parts of an army with parts of an army. [111] What is the purpose? [It serves to teach that] a mixture must not subsist. Then, it must be said. It must not be said.

2. *yogavibhāgād siddhaṃ*

[111] By means of this statement, Patañjali makes explicit mention of the nature of both constituents of the copulative compound. In fact, the order of the noun combinations follows that of the *sūtra.* The aim seems to be the disambiguation of the nature of *pūrvapada* and *uttarapada*, which must both consist of word-forms standing for components belonging to the same given field (i.e., to a *prāṇin*, to a *tūrya*, to a *seṇā*.)

Vt.2. It is realised due to a *yogavibhāga*.[112]

yogavibhāgaḥ kariṣyate | *dvandvaś ca prāṇyaṅgānām* | *tatas tūryāṅgānām* | *tataḥ senāṅgānāmiti* || *sa tarhi yogavibhāgaḥ kartavyaḥ* | *na kartavyaḥ* | *pratyekam aṅgaśabdaḥ parisamāpyate* ||

A *yogavibhāga* will be done: 'And also a *dvandva* composed of the parts of living beings'. Then 'made of parts of a musical group'. Then 'made of parts of an army'.[113] Therefore, the rule must be split. It must not be done. The word *aṅga* is fully applied to every single one.

8. A 2.4.3 *anuvāde caraṇānām* [*ekavacanam* 1, *dvandvaḥ* 2][114]

A *dvandva* made up of constituents denoting branches of Vedic schools is singular in number in the case of *anuvāda*, 'repetition, transmission'.

iha kasmān na bhavati | *nandantu kaṭhakālāpāḥ* | *vardhantām kaṭhakauthumāḥ* |

Why does it not happen here?[115] *nandantu kaṭhakālāpāḥ* 'Let the pupils of *kaṭha* and *kālāpāḥ* rejoice'. (pl.). *vardhantām kaṭhakauthumāḥ* 'Let the pupils of *kaṭha* and *kauthuma* increase'. (pl.)

1. *stheṇoḥ*
Vt.1. [It has the *denotatum* of one] in the case of [the verbal bases] *sthā-* and *i-*.

stheṇoriti vaktavyam || *evam api tiṣṭhantu kaṭhakālāpāḥ ity atrāpi prāpnoti* |

[112] As is well known, the *yogavibhāga* procedure represents the extreme solution to which the commentators of the *Aṣṭādhyāyī* recurs in order to avoid inconsistencies or difficulties in the derivational process. It consists of the splitting of a given rule.
[113] In this passage there is the practical demonstration of the effects of the *yogavibhāga*, i.e., of the splitting of A 3.4.2 into three *sūtra*s.
[114] It seems proper to recall that the term *anuvāda* does not signify a mere 'repetition': in fact, it denotes the activity of those who transmit a given knowledge (the Vedic one in the present case, see *caraṇa*).
[115] The indeclinable *iha* is often cataphoric in Patañjali's *usus scribendi*.

It has to be said that [it is treated as if denoted a single thing] in the case of [the verbal bases] *sthā-* and *i-*.[116] However: *tiṣṭhantu kaṭhakālāpāḥ* 'Let that pupils of *kaṭha* and *kālāpāḥ* stand'.[117] (pl.). Even here [the plural] is obtained.

2. *adyatanyām ca*
Vt.2. And when an aorist is signified [it has the *denotatum* of one].

adyatanyām ceti vaktavyam | *udagāt kaṭhakāpālam* | *pratyaṣṭhāt kaṭhakauthumam* | *udagāt maudapaippalādam* ||

It has to be said that when the aorist tense is signified [the *dvandva* is treated as if denoted a single thing]. *udagāt kaṭhakāpālam* 'The pupils of *kaṭha* and *kālāpāḥ* (sg.) have gone out'. *pratyaṣṭhāt kaṭhakauthumam* 'The pupils of *kaṭha* and *kauthuma* (sg.) have prospered'. *udagāt maudapaippalādam* 'The pupil of *mauda* and *paippalāda* (sg.) has gone out'.[118]

9. A 2.4.7 *viśiṣṭaliṅgo nadī deśo 'grāmāḥ*[119] [*ekavacanam* 1, *dvandvaḥ* 2]

[A *dvandva*] having (constituents) of different genders denoting a river and a place - but not settlements [is singular in number].

1. *grāmapratiṣedhe nagarapratiṣedhaḥ*
Vt.1. There is the prohibition of *nagara* in the prohibition of *grāma*.[120]

agrāmā ity atrānagarāṇām iti vaktavyam | *iha mā bhūt* | *mathurāpāṭaliputram iti* |

[116] The quoted *anubhandha Ṇ* is the same in the *dhātupāṭha*.
[117] i.e., *tiṣṭhantu*, from *sthā-*.
[118] Patañjali accepts both Kātyāyana's *vārtika*s. Moreover, Candragomin merges the *sūtra* with them (2.2.50 *anuvāde caraṇānām stheṇor luṅi*).
[119] A far as agreement of the grammatical number is concerned, the syntax of the trimember asyndeton is quite peculiar. Could this perhaps be an instance of textual corruption?
[120] i.e., when there is a prohibition in the case of *grāma*, it does not work in the case of *nāgara*s. According to Agrawala (1963: 63ff) Pāṇini "uses the term *grāma* in a generic sense to include all centres of population (4.2.117 and 4.2.109)" when talking about settlements in the Vāhika and in the Udīcya regions. On the contrary, there is a more detailed definition when he talks about the East (A 7.3.14 *prācām grāmanagarāṇam*).

It has to be said that *agrāmāḥ* here does not comprehend cities. So that it is not realized here: *mathurāpāṭaliputram* (i.e., two *nagara*s) ‘Mathurā and Pāṭaliputram’ (n. sg).

2. *ubhayataś ca grāmāṇām*
Vt.2. And in both cases[121], with respect to the [names of] villages.

ubhayataś ca grāmāṇām pratiṣedho vaktavyaḥ │ iha mā bhūt │ śauryam ca ketavatā ca śauryaketavate │ jāmbavaṃ[122] *ca śālukinī ca jāmbavaśālukinyau ││*

And in both cases, with respect to the [names of] villages a prohibition must be stated. So that it is not realized here: *śauryaketavate* (du.) - from *śauryam* and *ketavatā*; *jāmbavaśālukinyau* (du.) - from *jāmbavam* (*nagara*) and *śālukinī* (*grāma*).

10.A 2.4.8 *kṣudrajantavaḥ* [*ekavacanam* 1, *dvandvaḥ* 2]

[A *dvandva*] denoting small creatures [is singular in number].

kṣudrajantava ity ucyate ke punaḥ kṣudrajantavaḥ │ kṣottavyā jantavaḥ │ yady evaṃ yūkālikṣam kīṭapipīlikam iti na sidhyati ││ evam tarhy anasthikāḥ kṣudrajantavaḥ │ atha vā yeṣāṃ svaṃ śoṇitam nāsti te kṣudrajantavaḥ │ atha vā yeṣām ā sahasrād añjalir na pūryate te kṣudrajantavaḥ │ atha vā yeṣāṃ gocarmamātram rāśiṃ hatvā na patito bhavati te kṣudrajantavaḥ │ atha vā nakulaparyantāḥ kṣudrajantavaḥ ││

It is said *kṣudrajantavaḥ*: what are the *kṣudrajantava*s? They are creatures to be crushed. If this is so, *yūkālikṣam* ‘a louse and its egg’ (n.sg), *kīṭapipīlikam* (n.sg) ‘a worm and an ant’ are not realized.[123]
Thus, *kṣudrajantava*s are boneless. Or perhaps *kṣudrajantava*s are those [creatures] which have no blood. Or perhaps *kṣudrajantava*s are those which do not fill a hand not even with a thousand [of them]. Or perhaps *kṣudrajantava*s are those which after the killing of a multitude of the

[121] i.e., ‘when both are *grāma*s or either of the two is a *grāma*’. See Sastri (2012-2015: 147).
[122] Cf. KV *jāmbavaś ca* […].
[123] Cf. this translation of *yūkālikṣam* with the one which consider it as a *tatpuruṣa*: ‘the egg of a louse’, a measurement of length.

measure of a *gocarma* one does not fall [from the caste]. Or perhaps the *kṣudrajantavas* have an extension up to that which is proper to the mongoose.[124]

11.A 2.4.9 *yeṣāṃ ca virodhaḥ śāśvatikaḥ* [*ekavacanam* 1, *dvandvaḥ* 2][125]

And a *dvandva* denoting items between which there is everlasting enmity [is singular in number].

kimarthaś cakāraḥ │ evakārārthaś cakāraḥ │ yeṣāṃ virodhaḥ śāśvatiko teṣām dvandva ekavacanam eva yathā syād anyat prāpnoti tan mā bhūd iti │ kiṃ cānyat prāpnoti │ paśuśakunidvandve virodhināṃ pūrvavipratiṣiddham ity uktaṃ sa pūrvavipratiṣedho na vaktavyo bhavati ││

Why is there the utterance of *ca*? The utterance of *ca* is in the sense of the utterance of *eva*. To make the singular occur in the case of a *dvandva* made up of those [constituents denoting items] between which there is perennial enmity, may anything else that applies not be realised. And what else is obtained? The conflict between the two rules in which the former prevails must not to be taught (even though in the vt. 2 *ad* A 2.4.12) it is said that in the case of a *dvandva* made up of [the names of] domestic animals and birds between which there is everlasting enmity, there is the prevalence (as far as the degree of optionality is concerned) of the former one (i.e., the present rule) in a conflict between the two rules (namely A 2.4.9 vs A 2.4.12).

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[124] Consider the relevant passage in the KV, where it is explained that the right lesson (*smṛtiḥ pramāṇam*) corresponds to the last one given by Patañjali, i.e., the one involving the physical extension of the mongoose. The explanation is somewhat odd: *itarāsāṃ tadvirodhāt* 'due to the incompatibility of this one with the others'. See also Joshi-Roodbergen (2000).

[125] It is worth noting that the pronoun *yeṣām* does not refer to the previous *sūtra* (A 2.4.8). This rule allows a new category of *dvandva* inflected in the singular number to be introduced. Joshi-Bhate (1983: 225) note that this *ca* has to be considered a 'redundant' one. However, A 2.4.12 (see in particular vt.2) teaches a marginal optionality with respect to the formation of singular copulative compounds also in the case of *paśu*s and *śakuni*s. The direct consequence is the risk of a conflict between that rule (which should not prevail due to the principle of *pūrvavipratiṣedha*) and this one. According to Joshi-Roodbergen (2000: vol.8, 16) the present *ca* has "no demonstrable purpose" because A 2.4.9 is an *apavāda* with respect to A 2.4.12. On the other hand, according to the KV, "*ca* here serves to indicate that in case of everlasting enmity between animals the corresponding *dvandva* is to be used in the sg. ntr. only" (Joshi-Roodbergen 2000: vol.8, 16). So, this is indeed the sense when one says *kimarthaś cakāraḥ │ evakārārthaś cakāraḥ │*. Finally, no conflict can be detected between A 2.4.8 and A 2.4.12 since in the latter rule there are no special statements or semantic constraints as far as the given categories are concerned.

12.A 2.4.10 *śūdrāṇām aniravasitānām* [*ekavacanam* 1, *dvandvaḥ* 2]

A *dvandva* is singular in number when it is made of constituents denoting *śudra*s who are not expelled.

aniravasitānām iti ucyate kuto aniravasitānām │ āryāvartād aniravasitānām │ kaḥ punar āryāvartaḥ │ prāg ādarśāt pratyak kālakavanād dakṣiṇena himavantam uttareṇa pāriyātram │ yady evam kiṣkindhagandikaṃ śakayavanam śauryakrauñcam iti na sidhyati ││ evam tarhy āryanivāsād aniravasitānām │ kaḥ punaḥ āryanivāsaḥ │ grāmo ghoṣo nagaram saṃvāha iti │ evam api yaite mahāntaḥ saṃstyāyās teṣv abhyantarāś caṇḍālā mṛtapāś ca vasanti tatra caṇḍālamṛtapā iti na sidhyati ││ evam tarhi yājñāt karmaṇo 'niravasitānām │ evam api takṣāyaskāram rajakatantuvāyam iti na sidhyati ││ evam tarhi pātrād aniravasitānām │ yair bhukte pātram saṃskāreṇa śudhyati te aniravasitāḥ │ yair bhukte pātram saṃskāreṇa api na śudhyati te niravasitāḥ │

It is said *aniravasitānām* 'of the not expelled' [*śūdra*s]; of the not expelled [*śūdra*s] from where? Of the not expelled [*śūdra*s] from the *āryāvarta* 'the abode of the excellent ones'. Again, what is the *āryāvarta*?[126] [That which is] to the east of *ādarśa*, to the west of *kālakavana*, to the south of *himavanta*, to the north of *pāriyātra*. If it is so, it is not realized [for the compounds] *kiṣkindhagandikam* 'the Kiṣkindhas and the Gandikas', *śakayavanam* 'the Scythians and the Greeks', *śauryakrauñcam* 'Śaurya and Krauñca'.[127] Then, it will be in this way: 'of those (*śudra*s) not excluded from the abode of the *āryan*s'. Again, what is the abode

[126] See Bronkhorst (2021: 3): "Deshpande expresses surprise that the region of Āryāvarta "does not extend to cover even Pāṇini's birthplace of Śalātura, or even his Udīcya region." This observation reminds us that Pāṇini's birthplace and other regions, though thoroughly Brahmanical at the time of Pāṇini, had undergone major changes by the time of Patañjali. Gandhāra in particular (which is where Pāṇini had lived) had become virtually emptied of Brahmins, partly as a result of invasions by Scythians and Greeks, precisely the populations that were expelled (*niravasita*) from Āryāvarta according to the first passage from the *Mahābhāṣya* […]. Political developments clearly had played a role in defining the boundaries of Patañjali's Āryāvarta."

[127] The compounds mentioned by Patañjali are inflected in the singular number and they denote groups of *śūdra*s who, intuitively, live outside the so-called *āryāvarta.* In other words, this is a counter-example proving that the temporary explanation of the meaning of the rule is invalid. As for the names of people, I follow the translations given by Bronkhorst 2021. In the same article, he advances a new hypothesis about the nature of the *āryāvarta*.

of the *āryans*? The village, the station of herdsmen,[128] the city, the market-place. Then, *caṇḍālamṛtapā* (pl.) is not realized [when denoting] the *caṇḍāl*ās and the *mṛtapā*s who live there (in the village, in the settlement of herdsmen, in the city, in the market-place), inside those which are great habitations.[129] Then, it will be in this way: 'of the not excluded [*śūdra*s] from the sacrificial action'. Then, it is not realized [for the compounds] *takṣāyaskāram* 'carpenters and blacksmiths' *rajakatantuvāyam* 'washermen and weavers'. Then, it will be in this way: 'of the not excluded [*śūdra*s] from the dish'. The not-excluded are those for whom the dish is purified with the *saṃskāra*[130] during the act of eating. The excluded are those for whom the dish it is not purified, not even with the *saṃskāra* during the act of eating.

13.A 2.4.11 *gavāśvaprabhṛtīni ca* [*ekavacanam* 1, *dvandvaḥ* 2]

And each *dvandva* of the list beginning with *gavāśvam* is also singular in number.

1. *gavāśvaprabhṛtiṣu yathoccāritam dvandvavṛttam*
Vt.1. The behaviour of the *dvandva* [131] is according to the fact of being pronounced in [the *gaṇa*] beginning with *gavāśvam*.

avāśvaprabhṛtiṣu yathoccāritam dvandvavṛttam draṣṭavyam| *gavāśvam gavāvikam gavaiḍakam* |

The behaviour of the *dvandva* has to be perceived according to the fact of being pronounced in [in the *gaṇa*] beginning with *gavāśvam: gavāśvam* 'cattle and horses'; *gavāvikam* 'cattle and sheep'; *gavaiḍakam* 'kine and sheep'.[132]

14.A 2.4.12 *vibhāṣā vṛkṣamṛgatṛṇadhānyavyañjanapaśuśakunyaśvavaḍava-pūrvāparādharottarāṇām* [*ekavacanam* 1, *dvandvaḥ* 2]

[128] A "settlement of the milkmen" according to Sircar 1966 *s.v.*
[129] Since it is inflected in the plural number; as such, it should denote people who are actually excluded from the *āryāvarta*.
[130] The purificatory rites.
[131] "Grammatical operations applied to the *dvandva*s listed are as stated in the *gaṇa*". Joshi and Roodbergen (2000: vol 8, 18).
[132] These compounds are the first three of the mentioned *gaṇa*. The present rule can only be applied to the forms taught up therein (in fact, it is a list of *pada*s, not of *prātipadika*s).

A *dvandva* is marginally singular in number when it is made up of constituents denoting trees, wild beasts, herbs, grains, condiments, domestic animals, birds, and in the case of *aśvavaḍava-* ‘a horse and a mare’, *pūrvāpara-* ‘the first and the subsequent’, *adharottara-* ‘the lower and the higher’.

1. *bahuprakṛtiḥ phalasenāvanaspatimṛgaśakuntakṣudrajantudhānyatṛṇānām*
Vt.1. [A *dvandva*] whose nominal stems convey the sense of plurality [is treated as a singular] when it is made up of [names of] fruits, armies, forest trees, wild beasts, birds, small animals, grains, herbs.

phalasenāvanaspatimṛgaśakuntkṣudrajantudhānyatṛṇānām dvandvo vibhāṣaikavadbhavati bahuprakṛtir iti vaktavyam|*phala* |*badarāmalakam badarāmalakāni* |*senā* | *hastyaśvam hastyaśvāḥ* | *vanaspati* | *plakṣanyagrodham plakṣanyagrodhāḥ* | *mṛga* | *rurupṛṣatam rurupṛṣatāḥ* | *śakunta* | *haṃsacakravākam haṃsacakravākāḥ* | *kṣudrajantu* | *yūkālikṣam yūkālikṣāḥ* | *dhānya* | *vrīhiyavam vrīhiyavāḥ* | *māṣatilam māṣatilāḥ* | *tṛṇa* | *kuśakāśam kuśakāśāḥ* | *śaraśīryam śaraśīryāḥ* |*kiṃ prayojanam* | *bahuprakṛtir eva yas tatra yathā syāt* | *kva mā bhūt* | *badarāmalake tiṣṭhataḥ* | | *kiṃ punar anena yā prāptiḥ sā niyamyata āhosvid aviśeṣeṇa* | *kiṃ cātaḥ* | *yady anena yā prāptiḥ sā niyamyate plakṣanyagrodhau jātir aprāṇinām iti nityo dvandva ikavadbhāvaḥ prāpnoti* | *athāviśeṣeṇa na doṣo bhavati* | *yathā na doṣas tathāstu* | |

It has to be taught that a *dvandva* formed by nominal stems whose denotatum is a plurality is treated as a singular when it is made up of [the names of] fruits, armies, forest trees, wild beasts, birds, small creatures, grains, herbs. (As for) fruits (one can choose between) *badarāmalakam* ‘the group of *badara* and *amalaka* fruits’ (and) *badarāmalakāni* ‘*badara* and *amalaka* fruits’. (As for) armies (one can choose between) *hastyaśvam* ‘the group of elephants and horses (in an army)’ (and) *hastyaśvāḥ* ‘elephants and horses (in an army)’. (As for) forest trees (one can choose between) *plakṣanyagrodham* ‘the group of *plakṣa* and *nyagrodha* trees’ (and) *plakṣanyagrodhāḥ* ‘*plakṣa* and *nyagrodha* trees’. (As for) wild beasts (one can choose between) *rurupṛṣatam* ‘the group of *ruru* and *pṛṣta* deers’ (and) *rurupṛṣatāḥ* ‘ruru and pṛṣta deers’. (As for) birds (one can choose between) *haṃsacakravākam* ‘the group of *haṃsa* and *cakravāka* birds’ (and) *haṃsacakravākāḥ* ‘*haṃsa* and *cakravāka* birds’. (As for) small

creatures (one can choose between) *yūkālikṣam* ‘the group of worms and ants’ (and) *yūkālikṣāḥ* ‘worms and ants’.[133] (As for) grains (one can choose between) *vrīhiyavam* ‘the group of rice and barley’ (and) *vrīhiyavāḥ* ‘rice and barley’; (one can choose between) *māṣatilam* ‘the group of beans and sesamum seeds’ (and) *māṣatilāḥ* ‘beans and sesamum seeds’. (As for) herbs (one can choose between) *kuśakāśam* ‘the group of *kuśa* and *kāśa* herbs’ (and) *kuśakāśāḥ* ‘*kuśa* and *kāśa* herbs’; (there is the option to choose between) *śaraśīryam* ‘the group of *śara* and *sirya* reeds’ (and) *śaraśīryāḥ* ‘*śara* and *sirya* reeds’. What is the purpose? So that in this case it can only be for the [*dvandva*] formed by nominal stems whose denotatum is plurality. Where is this not the case? [For instance:] *badarāmalake tiṣṭhataḥ* ‘the *badara* fruit and the *āmalaka* fruit stand’. Is the application [of the optional singular form] restricted[134] by means of this rule or is it without a specific domain? And what follows? If the application [of the optional singular form] is restricted by means of this rule, the obligatory condition for the treatment of a *dvandva* as a singular is obtained, then *plakṣanyagrodhau* is taught according to *jātir aprāṇinām*.[135] If [the application of the optional singular form] is without a specific domain, there is no flaw. As there is no flaw, so let it be (without a specific domain).

2. *paśuśakunidvandve virodhinām pūrvavipratiṣiddham*

Vt.2. There is a conflict between two rules in which the first one prevails with regards to [items between which] there is everlasting enmity in the case of a *dvandva* denoting domestic animals and birds.

paśuśakunidvandve yeṣām ca virodhaḥ śāśvatikaḥ [2.4.9] *ity etad bhavati pūrvavipratiṣedhena* | *paśuśakunidvandvasyāvakāśaḥ* | *mahājorabhram mahājorabhrāḥ* | *haṃsacakravākam haṃsacakravākāḥ* | *yeṣām ca virodha ity asyāvakāśaḥ* | *śramaṇabrāhmaṇam* | *ihobhayam prāpnoti* | *kākolūkam śvaśṛgālam iti* | *yeṣām ca virodha ity etad bhavati pūrvavipratiṣedhena* || *sa tarhi pūrvavipratiṣedho vaktavyaḥ* | *na vaktavyaḥ* | *uktam tatra cakārakaraṇasya prayojanam yeṣām ca virodhaḥ śāśvatikas teṣām dvandva ekavacanameva yathā syād anyat yat prāpnoti tat mā bhūditi* ||

[133] See A 2.4.8.

[134] I.e., does it work as a *niyama* or is it in perfect autonomy with respect to the other rules in the section?

[135] I.e., A 2.4.6, which teaches without optionality to treat a *dvandva* compound as a *samāhāra* if it denotes the names of species of beings that are not alive.

In the case of a *dvandva* made up of (constituents denoting) domestic animals and birds [A 2.4.9] *yeṣām ca virodhaḥ śāśvatikaḥ* applies due to the conflict between the two rules in which the first one prevails.[136] There is the possibility (to form) a *dvandva* denoting domestic animals and birds. [For instance:] *mahājorabhram* 'a group of he goats and rams', *mahājorabhrāḥ* 'he goats and rams'; *haṃsacakravākam* 'the group of *haṃsa* and *cakravāka* birds', *haṃsacakravākāḥ* '*haṃsa* and *cakravāka* birds'. There is the possibility of [A 2.4.9] *yeṣām ca virodhaḥ* for *śramaṇabrāhmaṇam*, 'renunciants and brahmins'. In this case either way is obtained, [for instance:] *kākolūkam*, 'the crow and the owl', *śvaśṛgālam* 'a dog and a jackal'.[137] [A 2.4.9] *yeṣām ca virodhaḥ* applies due to the conflict between two rules in which the first one prevails. Then a conflict between two rules in which the first one prevails has to be stated. It must not be stated. There it is said that the purpose of the use of the utterance of *ca*[138] is to let the singular only occur in the case of a *dvandva* made up of those [constituents denoting items] between which there is perennial enmities (A 2.4.9) so that anything else which is obtained is realised.

3. *aśvavaḍavayoḥ pūrvaliṅgatvād paśudvandva napuṃsakam*

Vt. 3. The neuter gender [has to be taught] for a *dvandva* made up of [constituents denoting] domestic animals because of the (rule that prescribes that the) gender (must be) in accordance with the first constituent in the case of *aśvavaḍavau*, 'a horse and a mare' (according to A 2.4.27).[139]

aśvavaḍavayoḥ pūrvaliṅgatvād paśudvandva napuṃsakam bhavati pūrvavipratiṣedhena | *aśvavaḍavayoḥ pūrvaliṅgatvasyāvakāśaḥ* | *vibhāṣā paśudvandva napuṃsakam yadā na paśudvandva napuṃsakam so 'vakāśaḥ* | *aśvavaḍavau* | *paśudvandva napuṃsakasyāvakāśaḥ* | *anye paśudvandvāḥ* | *mahājorabhram mahājorabhrāḥ* | *paśudvandva napuṃsakaprasaṅge*

[136] So that there is no place for the optionality, i.e., the plural number cannot be applied to the compound.

[137] In this case there is everlasting enmity between the animals in question, and A 2.4.9 prevails leaving no place for any optionality as far as the number is concerned. As for the quoted compounds, see Mbh 7.20.37 *kravyādagaṇasaṃghuṣṭāṃ* ***śvaśṛgāla****gaṇāyutām*.

[138] See Patañjali's comment on A 2.4.9.

[139] Note that the same compound is quoted in the present *sūtra*. The problem is the undesired superimposition of the two rules with a prevalence of the former one.

ubhayam prāpnoti | *aśvavaḍavam* | *paśudvandva napuṃsakam bhavati pūrvavipratiṣedhena* || *sa tarhi pūrvavipratiṣedho vaktavyaḥ* | *na vaktavyaḥ* |

Due to the conflict between the two rules in which the first one prevails, the neuter gender [has to be taught] for a *dvandva* made up of [constituents denoting] domestic animals, because of the (rule that prescribes that the) gender (must be) in accordance with the first constituent in the case of *aśvavaḍavau*, 'a horse and a mare' (according to A 2.4.27). There is the possibility for the gender of the first [constituent to occur] in case of *aśvavaḍavau* 'a horse and a mare' (du.m.).[140] There is the optionality of the neuter gender of a *dvandva* made up of [constituents denoting] domestic animals, when there is no neuter gender of a *dvandva* made up of [constituents denoting] domestic animals. (Then) here exists this possibility (i.e., for the gender according to the first constituent as taught in A 2.4.27), e.g., *aśvavaḍavau* 'a horse and a mare'[141]: there is the possibility with respect to the neuter gender of *dvandva* made of [constituents denoting] domestic animals. There are other *dvandva*s made up of [constituents denoting] domestic animals, [for instance:] *mahājorabhram* 'a group of he-goats and rams', *mahājorabhrāḥ* 'he-goats and rams'. Both possibilities are obtained in the case of automatic involvement of the neuter gender of a *dvandva* made up of [constituents denoting] domestic animals: *aśvavaḍavam* 'a horse and a mare'(s.n.). [142] There is the neuter gender of a *dvandva* made up of [constituents denoting] domestic animals due to the conflict between two rules in which the first one prevails. Then the conflict between the two rules in which the first one prevails has to be stated. It must not be stated.[143]

4. *pratipadavidhānāt siddham*

Vt.4. It is realized since there is the literal teaching (in the phrasing of A 2.4.12 itself).

pratipadam atra napuṃsakam vidhīyate | *aśvavaḍavapūrvāpareti* ||

[140] I.e., the other possibility is the masculine gender taught in A 2.4.27 (which does not undergo any degree of optionality).

[141] I.e., when the neuter optionality is not in force, there is the possibility for the application of the gender according to the first constituent.

[142] Which is an option formed in accordance with A 2.4.12.

[143] It is only a matter of optionality. Note however that the condition of vt. 1 (*bahuprakṛtiḥ*) does not work in A 2.4.27.

Here the neuter gender is expressly taught: *aśvavaḍava-*, *pūrvāpara-*.[144]

5. *ekavacanam anarthakam samāhāraikatvāt*

Vt.5. Due to the singularity of the *samāhāra*, (the teaching of) the singular is useless (from A 2.4.1).

ekavadbhāvo 'narthakaḥ | *kim kāraṇam* | *samāhāraikatvāt* | *eko 'yam arthaḥ samāhāro nāma tasyaikatvād ekavacanam bhaviṣyati* || *idam tarhi prayojanam* | *etaj jñāsyāmīha nityo vidhir iha vibhāṣeti* | *naitad asti prayojanam* | *ācāryapravṛttir jñāpayati sarvo dvandvo vibhāṣaikavad bhavatīti yad ayam tiṣyapunarvasvor nakṣatradvandve bahuvacanasya dvivacanam nityam ityāha* ||*idam tarhi prayojanam* | *sa napuṃsakam iti vakṣyāmīti* | *etad api nāsti prayojanam* | *liṅgam aśiṣyam lokāśrayatvāl liṅgasya* || *na tarhīdānīm idam vaktavyam* | *vaktavyam ca* | *kim prayojanam* | *pūrvatra nityārtham uttaratra vyabhicārārtham vibhāṣā vṛkṣamṛgeti* |

The condition of treatment as a singular is useless. Why? Due to the singularity of the *samāhāra*. That which has a single *artha* is called *samāhāra*. The singular will be due to the singularity of it. So this is the purpose. This I will declare: the *vidhi* is in that case necessary (before A 2.4.12), in this case it is optional (i.e., in A 2.4.12 there is a chance for the *itaretarayoga*). This is not the purpose. The *usus* of the Master makes it clear that every *dvandva* is optionally treated as a singular. He said that is necessary (to apply) the dual in place of the plural in the case of a *dvandva* [denoting the names of] asterisms of *tiṣyapunarvasū*. So this is the purpose. I will say 'this (i.e., the compound) is neuter in gender (i.e., A 2.4.17 *sa napuṃsakam*)[145]. Even this is not the purpose. The gender need not to be taught due to the condition of the gender being dependent on the common world (i.e., on the everyday language). So, this does not need to be stated now. However, it must be stated. What is the purpose (in teaching the singular number here – from A 2.4.1)? In the preceding part the purpose is [to teach the singular as] necessary, in what follows the purpose is [to teach] the irregularity, i.e., *vibhāṣā vṛkṣamṛga* etc. (A 2.4.12).

[144] See A 2.4.27, which teaches the gender of *aśvavadavau* by consistently using the preferred dual form.

[145] This rule teaches that dvigu (A 2.4.1) and *dvandva* (A 2.4.2) compound inflected in the singular number are neuter in gender according to A 2.4.1.

15.A 2.4.16 *vibhāṣā samīpe* [*ekavacanam* 1, *dvandvaḥ* 2, *adhikaraṇaitāvattve* 15]

A *dvandva* is marginally singular in number when denoting a proximate quantity of a substratum.

kim udāharaṇam | *upadaśaṃ pāṇipādam* | *upadaśāḥ pāṇipādāḥ* | *naitad asti prayojanam* | *ayam dvandvaikavadbhāva ārabhyate tatra kaḥ prasaṅgo yadanuprayogasya syāt* || *evaṃ tarhy avyayasya saṃkhyayā avyayībhāvo 'py ārabhyate bahuvrīhir api* | *tad yadā tāvad ekavacanaṃ tadāvyayībhāvo 'nuprayujyata ekārthasya ekārtha iti* | *yadā bahuvacanam tadā bahuvrīhir anuprayujyate bahvarthasya bahvartha iti* ||

What is the example? (a) *upadaśam pāṇipādam*, (b) *upadaśāḥ pāṇipādāḥ* 'nearly ten hands and feet' [(a)sg., (b)pl.]. This is not the purpose. There, the condition as a singular of the *dvandva* is undertaken; what could be (the purpose of) the automatic involvement of an additional use? If it is so, both an *avyayībhāva* and a *bahuvrīhi* are undertaken from [the combination of] an *avyaya* and a *saṃkhyā*.[146] Wherever it is singular, the *avyayībhāva* is consistently used because conveying a single *artha* is proper of what has a single *artha*. Wherever it is plural, the *bahuvrīhi* is consistently used because conveying the sense of many *artha*s is proper of what has many *artha*s.

16.A 2.4.69 *upakādibhyo 'nyatarasyām advandve* [*luk* 58, *bahuṣu tenaivāstriyām* 62, *gotre* 63]

Optionally in a non-*dvandva*, there is *luk* in the case of a *gotra* affix to denote a plurality, provided that it (i.e., plurality) is conveyed by it (i.e., the *gotra* affix) and not in the case of a feminine after the stems of the *gaṇa* beginning with *upaka-*.

kimartham advandva ity ucyate | *dvandve mā bhūd iti* | *naitad asti prayojanam* | *iṣyata eva dvandve bhraṣṭaka kapiṣṭhalā bhrāṣṭakikāpiṣṭhalaya iti* || *atottaram paṭhati* |

Why is it said *advandve*? It must not be so in the case of a *dvandva*. This is not the purpose. In fact, *dvandve* (i.e., in the case of a *dvandva*) is desired. [For instance:] (a) *bhraṣṭakakapiṣṭhalāḥ*

[146] Respectively: *upadaśam (pāṇipādam)*, *upadaśāḥ (pāṇipādāḥ)*.

(b) *bhrāṣṭakikāpiṣṭhalayaḥ*[147], 'The descendants of Bhraṣṭaka and Kapiṣṭhala' [(a) *luk*, (b) *aluk*]. Therefore, he[148] recites this last one:

1. *advandva iti dvandvādhikāranivṛttyartham*

Vt.1. *advandve* (i.e., in the case of a non-*dvandva*) in the sense of discontinuation of the *adhikāra dvandve.*[149]

advandva ity ucyate dvandvādhikāranivṛttyartham | *dvandvādhikāro nivartyate* | *tasminnivṛtte aviśeṣeṇa dvandve cādvandve ca bhaviṣyati* ||

It is taught *dvandve* (in the case of a non-*dvandva*) in the sense of discontinuation of the governing rule *dvandve*. The topic *dvandve* does not continue (by *anuvṛtti*). Given this discontinuation, it will indifferently be both *dvandve* and *advandve*.[150]

17.A 4.3.88 *śiśukrandayamasabhadvandvendrajananādibhyaś chaḥ* [*adhikṛtya kṛte granthe* 87]

The *taddhita* affix *-cha* is introduced after *śiśukranda-* 'a child's cry', *yamasabha-* 'Yama's assembly', a *dvandva* compound and after the stems belonging to the *gaṇa* beginning with *indrajanana-* 'Indra's birth' provided that the *taddhita* derivative word denotes a book written with reference to (them).

[147] This example shows the optionality of the application of the *gotra* affix and, therefore, the validity of this rule also in the domain of *dvandva* compounds.

[148] I.e., Kātyāyana.

[149] I.e., A 2.4.68 *tikakitavādibhyo dvandve*. As for the translation of *adhikāra*, see the Kayaṭa's comment on this *vārttika* (see Shastri 1938): […] *adhikāraśabdenā 'tra śāstrīyo 'dhikāraḥ svaritasvanimitto na gṛhyate, na hi pūrvasūtropātto dvandva śabda āsaktasvaritaḥ* […] 'In this passage, by means of the (use of the) word *adhikāra,* (that) *adhikāra* which belongs to the śastra and which is marked by a *svarita* accent is not taken into account: indeed, the word *dvandva* employed in the previous sūtra is not endowed with a *svarita* accent'. The term *adhikāra* is not used in the technical sense of 'governing rule' of the A. In fact, it merely hints at the wording of the previous rule. See Roodbergen 2008 *s.v.*, where *adhikāra* is also intended as a synonym of *anuvṛtta*: "a word which is to be continued in a following rule".

[150] I.e., they are both valid, since the present rule is teaching a degree of optionality. In fact, *dvandve* "is not used to disallow the optional *luk* under the condition of the lack of a *dvandva* compound. It is simply used to state that in situations of non-*dvandva*, the deletion is optional in the context of the bases denoted by *upakādi*" (Sharma 1995).

1. *dvandve devāsurādibhyaḥ pratiṣedhaḥ*

Vt.1. There is a prohibition in the case of a *dvandva* after *devāsura* and so on.

dvandve devāsurādibhyaḥ pratiṣedho vaktavyaḥ | *daivāsuram rākṣosuram* | *daivāsurī rākṣosurī* ||

A prohibition in the case of a *dvandva* after *devāsura* and so son has to be taught.[151] [For instance, from the *dvandva* compounds] *daivāsuram*, *rākṣosuram*, [the derived forms will be] *daivāsurī rākṣosurī*.[152]

18.A 4.3.125 *dvandvād vun vairamaithunikayoḥ* [*tasyedam* 120]

The *taddhita* affix *vuN* is introduced after a *dvandva* compound provided that the meaning is X belongs to Y to express enmity or marriage between the *denotata* of the constituents.

1. *vaire devāsurādibhyaḥ pratiṣedhaḥ*

Vt.1. There is a prohibition in the case of enmities after *devāsura* and so on.

vaire devāsurādibhyaḥ pratiṣedhaḥ vaktavyaḥ |*daivāsuram rākṣosuram* ||

A prohibition in the case of enmity after *devāsura* has to be stated. *daivāsuram* ‘the gods and the demons’, *rākṣosuram* ‘Rakṣas and Asuras’.[153]

19.A 6.2.36 *ācāryopasarjanaś cāntevāsī* [*prakṛtyā pūrvapadam* 1, *dvandve* 34]

In a *dvandva* compound the first constituent also retains its original accent when it is a noun denoting a student whose *upasarjana* is the (name of the) teacher.

[151] It has to be noted that theese compounds are included in the gaṇa *vimuktādi*; as such, the *dvandva* s taken into account are *devāsura-*, *rakṣosura-*, *somāpūṣan-*, *agnāviṣṇu-*.

[152] The forms quoted here are derived by means of the affix aṆ.

[153] The forms quoted here undergo a derivational process by means of the affix aṆ. In contrast with the comment on A 4.3.88, no dual is quoted here. It has to be noted that these compounds are included in the *gaṇa vimuktādi*.

1. *ācāryopasarjane ʻnekasyāpi pūrvapadatvāt sandehaḥ*

Vt.1. There is a doubt due to the condition of being the first constituent of a [combination of] more than one word in the case of *ācāryopasarjana*.

ācāryopasarjane ʻnekasyāpi pūrvapadatvāt sandeho bhavati │ āpiśalapāṇinīyavyāḍīyagautamīyāḥ │ ekam padam varjayitvā sarvāṇi pūrvapadāni tatra na jñāyate kasya pūrvapadasya prakṛtisvareṇa bhavitavyam iti ││

There is a doubt due to the condition of being the first constituent of a [combination of] more than one word in the case of *ācāryopasarjana*. [For instance:] *āpiśalapāṇinīyavyāḍīyagautamīyāḥ* ‘pupils of Āpiśala, Pāṇini, Vyāḍi, Gautama’. All [the constituents] are first constituents with the exception of one; here it is not known with the original accent of which first constituent (the compound) has to be realized.

2. *lokavijñānāt siddham*

Vt.2. It is realized due to the knowledge of the common world (i.e., of the everyday language).

tad yathā │ loke ʻmīṣām brāhmaṇānām pūrvam ānayeti yaḥ sarvapūrvaḥ sa ānīyate │ evam ihāpi yat sarvapūrvapadam tasya prakṛtisvaratvam bhaviṣyati ││

For instance, in the common world, [when it is said] ‘bring the first of these brahmans!’ that one who is led, he is the first among all; thus, in this case too, the condition of bearing the original accent will be proper to the first of all the constituents.[154]

20.A 6.3.25 *ānaṅ ṛto dvandve* [*uttarapade* 1, *ṛto vidyāyonisambandhebhyaḥ* 22]

ānaṄ is introduced in place of ṛ before the last constituent in a *dvandva* compound after a nominal stem denoting an individual who is linked with the denotatum of the second constituent through relationships of knowledge or family.

[154] The compounds *sarvapūrvaḥ* and *sarvapūrvapadam* seem to contravene A 2.2.10, given that they presuppose a partitive sense.

kvāyam nakāraḥ śrūyate | *na kvacit śrūyate lopo 'sya bhavati nalopaḥ prātipadikāntasya iti* |*yadi na śrūyate kimartham uccāryate* | *raparatvam mā bhūt iti* || *kriyamāṇe 'pi vai nakāre raparatvam prāpnoti* | *kim kāraṇam* | *nalope kṛte eṣo 'pi hy uḥ sthāne 'ṇ śiṣyate* | *naiṣa doṣaḥ* | *uḥ sthāne 'ṇ prasajyamāna eva raparo bhavatīti ucyate na cāyam uḥ sthāne 'ṇ eva śiṣyate* | *kim tarhi* | *aṇ ca anaṇ ca* ||

Where is this sound *n* heard? It is heard nowhere, there is its *lopa* according to (A 8.2.7) *nalopaḥ prātipadikāntasya* 'there is *lopa* of *n* in the place of the final sound of the *pratipadika'*. If it is not heard, why is it uttered?[155] So that the condition of having *r* [156] (inserted) after it (according to A 1.1.51) is not realized.[157] Indeed, even if the sound *n* is made, (i.e., it is taught as a part of the *adeśa*), the condition of having r (inserted) after it is obtained. Why? Since a lopa of *n* is realized, *de facto* the (substitute) *aṆ* (i.e., *a*, *i*, *u*) is taught in place of *ṛ*. There is no flaw. It is said that *r* (inserted) after it occurs precisely when aṆ (i.e., *a*, *i*, *u*) is involved as substitute of *ṛ* (and *ḷ*), and this specific substitute aṆ (i.e., *a*, *i*, *u*) is not taught (here) in the place of *ṛ* (and *ḷ*). What follows? [the phonic sequence *ān* is] both *aṆ* and non-*aṆ*.[158]

katham punaḥ idam vijñāyate | *ṛkārāntānām yo dvandvaḥ* | *āhosvit dvandva ṛkārasyeti* | *kaś cātra viśeṣaḥ* |

How again can this [operational rule] be understood? (a) [By saying *dvandve*, provided that] the *dvandva* is made up of [*pada*s] which end with the sound *ṛ*, or perhaps (b) [the substitution with the phonic sequence *ān*] is in place of the sound ṛ in a *dvandva*. What is the difference here?

1. *ṛkārāntānām dvandve putre upasaṅkhyānam*

Vt.1. There is the inclusion of *putre* (i.e., 'before *putra'* 22) in the case of a *dvandva* made up of [*pada*s] which end with the sound *ṛ*.

[155] In other words, he questions the purpose of including a sound that will be immediately zero replaced. The use of *n* will eventually prevent the default application of A 1.1.51 (see below).

[156] Or, according to Katre, also *l*. In fact, both *r* and *l* can be understood from the siglum rÂ (see A 1.1.51). As a consequence, uḤ comprehends both the matching sonants.

[157] According to A 1.1.51, aṆ followed by r can be applied in the place of *ṛ*. (-ṛ > -a+r)

[158] -ān = ā + 0 of n = -ā; the sound obtained is certainly included in *aṆ*, but it is not taught here as a substitute of ṛ. In fact, only the phonic sequence *ān* is explicitly mentioned in A 6.3.25.

ṛkārāntānām dvandve putre upasaṅkhyānam kartavyam | *pitāputrau* ||
The inclusion of *putre* in case of (a) a *dvandva* made of [*pada*s] which end with the sound ṛ has to be done. [For instance:] *pitāputrau* 'father and son'.

2. *kāryī cānirdiṣṭaḥ*
Vt.2. And the subject of the grammatical operation is undefined.

kāryī cānirdiṣṭaḥ bhavati | *ṛkārāntānām dvandve na jñāyate kasyānaṅā bhavitavyam iti* || *astu tarhi dvandva ṛkārasyeti* |
And the subject of the grammatical operation is undefined. In the case of (a) a *dvandva* made up [of *pada*s] which end with the sound *ṛ*, it is impossible to know in the place of what *ānaṄ* has to occur. So, let it be (b) in the place of the sound *ṛ* in a *dvandva* .

3. *aviśeṣeṇa pitṛpitāmahādiṣu atiprasaṅgaḥ*
Vt.3. There is an overextension in the case of *pitṛpitāmaha-*[159] and so on, due to the absence of a specific domain.

aviśeṣeṇa pitṛpitāmahādiṣu atiprasaṅgaḥ bhavati | *pitṛpitāmahau iti* || *astu tarhi ṛkārāntānām yo dvandva iti* | *nanu coktam ṛkārāntānām dvandve putra upasaṅkhyānam iti* | *naiṣa doṣaḥ* | *putragrahaṇam api prakṛtam anuvartate* | *kva prakṛtam* | *putre anyatarasyām iti* | *yadi tadvanuvartate vibhāṣā svasṛpatyoḥ putre ceti putre 'pi vibhāṣā prāpnoti* | *putre anyatarasyām ṣaṣṭhyāḥ ākrośe* | *ṛtaḥ vidyāyonisambandhebhyaḥ putre anyatarasyām ṣaṣṭhyāḥ ākrośe* | *vibhāṣā svasṛpatyoḥ putre anyatarasyām ṣaṣṭhyāḥ ākrośe* | *ānaṅ ṛtaḥ dvandve . naiṣa doṣaḥ* | *sambandham anuvartiṣyate* | *ṣaṣṭhyā ākrośe* | *putragrahaṇam anuvartate ṣaṣṭhyā ākrośa iti nivṛttam* || *yad apy ucyate kāryī cānirdiṣṭaḥ iti kāryī ca nirdiṣṭaḥ* | *katham* | *uttarapada iti vartate* | *ṅit cāyam kriyate* | *so 'ntareṇāpi kāryinirdeśam ṛkārāntasyaiva bhaviṣyati* || *putre tarhi kāryī anirdiṣṭaḥ* | *putre ca kāryī nirdiṣṭaḥ* | *katham* | *ṛkāragrahaṇam api prakṛtam anuvartate* | *kva prakṛtam* | *ṛto vidyāyonisambandhebhyaḥ* |

[159] As for *pitṛpitāmahādiṣu,* no *gaṇa* starts in this way.

tadvai pañcamīnirdiṣṭam ṣaṣṭhīnirdiṣṭena cehārthaḥ │ putra ityeṣā saptamy ṛta iti pañcamyāḥ ṣaṣṭhīm prakalpayiṣyati tasminn iti nirdiṣṭe pūrvasya iti ││

There is an overextension in the case of *pitṛpitāmaha-* and so on due to the absence of a specific domain. [For instance:] *pitṛpitāmahau* 'father and grandfather'. So, let it be (a) in the case of a *dvandva* made of [*pada*s] which end with the sound *ṛ*. Has it not just maintained that the inclusion of *putre* in case of a *dvandva* made up of constituents ending with the sound *ṛ* [has to be done]? There is no flaw. Even the mention of *putra* (22) which has been made continues by *anuvṛtti*. Where has it been made? In *putre anyatarasyām* (A 6.3.22). If it continues even the optionality in the case of *putra* is obtained, since [A 6.3.24 would be phrased thus:] *vibhāṣā svasṛpatyoḥ putre ca*. There is no flaw. *sambandham* will be continued by *anuvṛtti* (23). (Here follows a summary of the *anuvṛtti* process):
putre anyatarasyām ṣaṣṭhyāḥ ākrośe (A 6.3.22)
ṛtaḥ vidyāyonisambandhebhyaḥ putre anyatarasyām ṣaṣṭhyāḥ ākrośe (A 6.3.23)
vibhāṣā svasṛpatyoḥ putre anyatarasyām ṣaṣṭhyāḥ ākrośe (A 6.3.24)
ānaṅ ṛtaḥ dvandve (A 6.3.25)
The mention of *putra* continues by *anuvṛtti*, there is the cessation of *ṣaṣṭhyāḥ ākrośe* (A 6.3.21). Since it is also said: 'and the subject of the grammatical operation is undefined' (vt.2), (I will say that) the subject of the grammatical operation is however defined. How? *uttarapade* continues by *anuvṛtti* (from A 6.3.1). And this is endowed with the marker Ṅ.[160] This (i.e., *ānaṄ*) will be precisely in the place of the (final sound of a nominal stem) ending with *ṛ* even without the explicit mention of the subject of the operation. Then, in the case of *putra* (as right context) the subject of the grammatical operation is undefined. And (however) in the case of *putra* (as right context) the subject of the grammatical operation is defined. How? Even the mention of the sound ṛ which has been made continues by *anuvṛtti*. Where has it been made? In *ṛto vidyāyonisambandhebhyaḥ* (A 6.3.23). This (i.e., *ṛtaḥ*) indeed is indicated in the ablative and here (in rule A 6.3.25) the sense is (realized) by means of its being indicated in the genitive. According to *tasmin iti nirdiṣṭe pūrvasya* (A 1.1.66) when it is taught *putre*, the locative will fashion a genitive ending from an ablative ending of *ṛ* (i.e., *ṛT*).

21.A 6.3.26 *devatādvandve ca* [*uttarapade* 1, *ānaṅ* 25]

[160] I.e., the mentioned marker implies that more than one sound replaces the final sound of the *sthānin* (A 1.1.53).

In the case of a *dvandva* denoting a couple of divinities *ānaṄ* is also introduced (to replace the final sound – A 1.1.52-53) before the last constituent.

1. *devatādvandva ubhayatra vāyoḥ pratiṣedhaḥ*

Vt.1. In the case of a *dvandva* denoting a couple of divinities there is the prohibition [of *ānaṄ*] (in place of the final sound - A 1.1.52-53) in the case of a [compound which includes the constituent] *vāyu* in both cases, wheter first or last slot [of the compound].

devatādvandva ubhayatra vāyoḥ pratiṣedho vaktavyaḥ │ vāyvagnī agnivāyū ││

In the case of a *dvandva* denoting a couple of divinities the prohibition [of *ānaṇ* in the place of the final sound -A 1.1.52-] in the case of [a compound which includes the constituent] *vāyu* in both cases, wheter first or last slot [of the compound] has to be stated. [For instance]: *vāyvagnī* 'Vāyu and Agni', *agnivāyū* 'Agni and Vāyu'.

2. *brahmaprajāpatyādīnām ca*

Vt.2. [Prohibiton of *ānaṄ*] also (in place of the final sound - A 1.1.52-53) of *brahmaprajāpati* and so on.[161]

brahmaprajāpatyādīnām ca pratiṣedho vaktavyaḥ │brahmaprajāpatī śivavaiśravaṇau skandaviśākhau ││ tat tarhi vaktavyam │ na vaktavyam │ dvandva iti vartamāne punar dvandragrahaṇasya etat prayojanam lokavedayor yo dvandvas tatra yathā syāt │ kaś ca lokavedayor dvandvaḥ │ vede ye sahanirvāpanirdiṣṭā na caite vede sahanirvāpanirdiṣṭāḥ ││

(The prohibiton of *ānaṇ* also in place of the final sound - A 1.1.52-53) of *brahmaprajāpat*i and so on has to be stated. [For instance:] *brahmaprajāpatī* 'Brahmā and Prajāpati', *śivavaiśravaṇau* 'Śiva and Vaiśravaṇa', skandaviśākhau 'Skanda and Viśākha'. So, it has to be stated. No, it must not be stated.[162] This purpose of the mention of *dvandva* again, even if

[161] See A 2.1.14 and the *gaṇa dadhipayādi*.
[162] I.e., all the prohibitions.

dvandve is continued [by *anuvṛtti* from the previous rule] is so that this *dvandva*, i.e., the *dvandva* formed according to this rule) is in both the everyday language and in the Veda. Which is the *dvandva* [163] (which occurs) with respect to both the world and the Veda? [The *dvandva* compounds] which are mentioned for the oblation[164] in the Veda and these which are not mentioned for the oblation in the Veda.

22.A 6.3.28 *id vṛddhau* [*uttarapade* 1, *devatādvandve* 26, *agneḥ* 27][165]

In the case of a *dvandva* denoting a couple of divinities undergoing a *vṛddhi* replacement, *iT* is introduced in place of (the final sound - A 1.1.52) of *agni-* before the last constituent.

1. *id vṛddhau viṣṇoḥ pratiṣedhaḥ*

Vt.1. Prohibition of the substitution with i (in place of the final sound of *agni-* occurring as the first constituent) when (the *uttarapada* is) *viṣṇu-* undergoing a *vṛddhi* replacement.

id vṛddhau viṣṇoḥ pratiṣedho vaktavyaḥ | *āgnāvaiṣṇavam carum nirvapet* ||

Prohibition of the substitution with *-i* has to be stated in place of the final sound of *agni-* occurring as the first constituent when the *uttarapada* is *viṣṇu-* undergoing a *vṛddhi* replacement. [For instance:] *āgnāvaiṣṇavam carum nirvapet* 'He should perform an oblation consecrated to the divinities Agni and Viṣṇu'.

23.A 6.3.32 *mātarapitarau udīcām*

mātarapitarau (is introduced as a ready-made form) according to the northern grammarians.

24.A 6.3.33 *pitarāmātarā ca chandasi*

pitarāmātarā (is introduced as a ready-made form) according to the *chandas.* [166]

[163] I.e., which is the class of *dvandva* compounds?
[164] The use of *saha-* probably hinted at oblations to many gods.
[165] Consider that in the previous rule, A 6.3.27, the long vowel *-ī* was introduced in place of the final sound of *agni-* before *soma-* and *varuṇa-*.
[166] I.e., the Vedic language, see Roodbergen (2008).

kiṃ nipātyate | *pūrvapadottarapadayor ṛkārasyārārau nipātyete* | *mātarapitarau bhojayataḥ* | *mātarapitarau ānaya* | *a mā gantāṃ pitarāmātarā cā mā somo amṛtatvāya gamyāt* ||

What is considered as a ready-made form? *arā* and *ara* are considered *nipātana* in place of the ṛ of the first and the last constituent. [For instance:] *mātarapitarau bhojayataḥ* 'mother and father feed [children]'; *mātarapitarau ānaya* 'bring mother and father'; *ā mā gantām pitarāmātarā ca ā mā somaḥ amṛtatvāya gamyāt*, 'come to me, father and mother; may Soma come to me for immortality'.[167]

Summary

Chart 1.[168]

A 1.1.32 *vibhāṣa jasi* [*sarvādīni sarvanāmāni* 27, *dvandve* 31] The class of nominal stems in the list beginning with *sarva* is marginally designated as *sarvanāman* when in a *dvandva* compound before *Jas* (i.e., plural nominative endings).	
No vtt.	The affix *akaC* optionally does not occur with respect to the operation (of substitution) of the nominative plural ending.
A 1.2.63 - *tiṣyapunarvasvor nakṣatradvandve bahuvacanasya dvivacanam nityam* In a *dvandva* denoting asterisms made up of the constituents *tiṣya* and *punarvasu* the dual number is mandatorily used in place of the plural.	
No vtt.	e.g., *tiṣyapunarvasū*

[167] Tr. Keith 1914. As hinted above, this passage is quoted by Patañjali according to TS 1.7.8.3.4 (while VSM 9.19.2 *ā́ mā gantāṃ pitárā mātárā cā́ mā sómo amrtatvéna gamyāt* represents a *varia lectio*). It is obvious, however, that in both cases the Vedic duals of *pitṛ* and *mātṛ* are coordinated by means of *ca*, which follows the inflected words. Note, indeed, the anaphoric structure of the verse itself: *ā́ mā gantāṃ pitárā mātárā ca + ā́ mā sómo amrtatvéna gamyāt*. Furthermore, TS 1.7.8.3.4 *ā́ mā gantām pitárā // mātárā cā́ mā sómo amṛtatvā́yagamyāt //* splits the supposed *devatādvandva* within the two half verses. We are forced to reflect on the reasons why Patañjali precisely quoted this passage in support to the teaching of the A although, very likely, he was perfectly aware of the relevant issues. Even more serious should be the reflection on Pāṇini's intentions: was he familiar to a different literature, unknown to Patañjali and to ourselves, where the considered *devatādvandva* was indisputably used? If one look for literary attestation of the compound taught by A 6.3.33 will not found any instance apart from the one from the A.

[168] The present chart aims at summarizing the three levels of this grammatical tradition: Pāṇini's rule, Kātyāna *vārttikas* (left column) and Patañjali's comment (right column).

	singular + dual = dual Hints about the *paribhāṣā sarvo dvandvo vibhāṣaikavad bhavati* 'all *dvandva*s are optionally treated as denoting a singular'.
A 2.2.29 - *cārthe dvandvaḥ* [*samāsaḥ* 2.1.3*, saha supā* 2.1.4*, sup* 2.1.9*, vā* 2.1.18] Two or more inflected words preferably combine in the sense of 'and' to form a *dvandva*.	
	Risk of overextension of the technical term *avyaya* (proper to *ca*) to the compound → the connection with gender and number of the compound is *svābhāvika*. Grammatical agreement between *guṇa* and *dravya*. Distinction between the domain of *karmadhāraya* and *dvandva* compounds (the false anuvṛtti of *śeṣa* 23). e.g.
1. Given that the rule is 'Two or more inflected words preferably combine in the sense of 'and' to form a *dvandva*, there could be an undesired automatic involvement of the extension of the designation as *dvandva* because of the comprehension of the *artha* of *ca* even in a non-compound.[169]	[…] *gām aśvaṃ puruṣaṃ paśum* […] […] *indras tvaṣṭā varuṇo vāyur āditya* […] ≠ Dvandva Temporarily acceptance of the rephrasing of the rule.
2. However, this is settled by expressing the rule about *dvandva* compounds in this way:	The *sāmānādhikaraṇya* is perceived as a synonym of *yugapadadhikaraṇavacanam*; it thus seemed necessary to prevent the unwanted treatment as a masculine.

[169] Cf. Roodbergen (1974:149). In his interpretation the 'undesired automatic involvement' (*aniṣṭaprasaṅgaḥ*) is the "compound-formation", while in the present reading the problem refers to the risk of overextending A 2.2.29 (i.e., the name '*dvandva'*) even to syntactic string which share some common feature with the corresponding compound. As Patañjali made manifest in his examples, there could be an ambiguity with the asyndeton, due to the absence of the particle *ca* despite the presence of its *artha*.

yugapadadhikaraṇavacane'[170] (in the case of the expression of joint referents).[171]	Kātyāyana needs such a prohibition because of A 6.3.34 (the rule about the position of the accent).
3. The prohibition of the treatment of the compound as a masculine should be provided.	*puṃvadbhāva* only occurs when the substratum is the same, which is not the case of *dvandva* compounds.
4. And there is non-accomplishment in the case of antonyms.	Moreover, all the words are antonyms. Refusal of the idea of the joint expression of referents: correspondence principle (the sequence of *artha*s has to be exactly like the sequence of *śabda*s).
5. If it is maintained that the denotation of sequence of *arthas* is due to the usage of a sequence of *śabdas*, the dual and the plural are not realized.	Risk of failing to obtain the dual and plural number due to the perception of a single *śabda* (+ *artha*).
6. However, it is the joint expression in the *vigraha* that provides the clue of the joint expression in the compound.	e.g. *dyavā ha kṣamā* *dyavā cit asmai pṛthivī namete*

[170] I.e., by rephrasing the rule this way. Kātyāyana's *usus sribendi* as far as the rephrasing of pāṇinian *sūtra*s is concerned deserves more detailed research.

[171] I.e., the expression in a single utterance. But this is not Roodbergen's reading; he states: "*yugapadadhikaraṇavacane dvandva ḥ*: 'A *dvandva* is (formed), when the items meant are simultaneously referred to (by each single constituent)'". Up to this point, the syntax of the vt. and a non-*a priori* approach, could lead us to interpret the compound *yugapadadhikaraṇavacane* as the 'expression of joint referents'. Moreover, *yugapad* in connection with *adhikaraṇa* (rather than with *vacana*) is easily misunderstood it with the risk of overextending an operation taught for the *samānādhikaraṇe* constraint. From vt. 5 onwards, Kātyāyana tends to consider reality as determined by the language (and no *viceversa*): *śabdapaurvāparyaprayogād arthapaurvāparyābhidhānam*, 'the denotation of a sequence of *artha*s is due to the usage of a sequence of *śabda*s'. In fact, in vt. 6, he uses the variant *yugapadvacanaṃ*. However, such a distinction cannot be grasped in the relevant commentary by Patañjali.

7. If it is maintained that the joint expression is realized because they make a group, the reply is 'no!', because it is proper to a group to refer to one single *artha*.	The dual and plural number are realized due to the comitative idea. e.g. *śatam, yūtham, vanam* → neuter singular with comitative idea.
8. If it is maintained that there is an automatic involvement of the plural since they have an *artha* which is more than single item, the reply is 'no!'; because of the absence of plurality.	However, due to the joint expression, a *dvandva* compound formed by two constituents will have four *artha*s (two for each one). Hence, the plural only is obtained according to A 1.4.21.
9. If it is maintained that there is no realisation of the denotation of another item by means of a word form denoting another item, the reply is that the denotation of the *plakṣa-* is realized by means of the word itself due to its being a *nyagrodha-*, and the denotation of the *nyagrodha-* due to its being a *plakṣa-*.	Absence of plurality, since the signification process ends within the compound itself.
10. If it is maintained that the application of a given *śabda* to a given *dravya* must be due to a specific *kāraṇa*, the reply is that this is settled on the basis of the equivalence of the *kāraṇa*.	But "how can *nyagrodha-* also [stand for] *plakṣa-* and *plakṣa-* also [stand for] *nyagrodha-* since the application of a [given] *śabda* to a [given] *dravya* [occurs] since it is due to a given *kāraṇa*?".
11. If it is maintained that the perception is indeed the impulse from which a given *śabda* applies to a given *dravya*, the reply is that it is comparable.	
12. And it is characterized by this domain.	The perception is actually the impulse that causes the application of a given *śabda* to a given *dravya* and the word-

	form *plakṣa-* is not perceived in the case of the *nyagrodha*.
13. Since elsewhere perception is also characterized by a restricted domain.	But when it is said 'let a *plakṣa-* be brought' a *nyagrodha-* is not brought.
	"[This perception] is characterized by the domain of *dvandva*s".
14. If it is maintained that due to the expression by means of the one, the use of the other is not realized, the reply is that due to the non-expression of *nyagrodha-* by means of *plakṣa-*, the word *nyagrodha-* is used.	"For instance, even though the red colour is the same, [it is said]: *gauḥ lohitaḥ* 'the cow is scarlet', *āsvaḥ śoṇaḥ* 'the horse is crimson'. And even though the dark colour is the same, [it is said] *gauḥ kṛṣṇa* 'the cow is black', *aśvo hema* 'the horse is dark-brown'. And even though the white colour is the same, [it is said]: *gauḥ śvetaḥ* 'the cow is hoary', *aśvaḥ karkaḥ* 'the horse is silver'".
15. Moreover, the denotation is grounded in its intrinsic conditions.	Paradoxical pointlessness of the employment of the second constituent, since its *artha* has already been expressed by the first one.
16. If it is maintained that the combination of items beginning with *eka-* 'one' with items beginning with *daśa-* 'ten' is a *dvandva*, there is the automatic involvement of the unpredicted grammatical number in case of numerals beginning with *viṃśati-* 'twenty'.	"After having realized that the *artha* of *nyagrodha* is not expressed by means of *plakṣa*, the word *nyagrodha* is used […] Both convey the meaning of each other when they (du.) occur combined, not when they (du.) occur separated".

17. But this is established by reading the combination of a numeral ending with *adhika* with another numeral within the domain of the *adhikāra* which teaches the co-referentiality of the constituents and *adhika-* is zero-replaced.[172]	Involvement of more than one denotatum due to their similarity by means of a single word-form. Hence, there is the need for disambiguation though the overt expression of each word. Refusal of the idea of the joint expression of referents. Explanation of the four *arthas* of *ca*. e.g. *ekaviṃśati-*, *dvāviṃśati-* They are singular in number and feminine in gender. i.e. *ekādhikā viṃśatiḥ ekaviṃśatiḥ* *dvyadhikā viṃśatiḥ dvāviṃśatiḥ* However, if the numeral compounds are intended as *karmadhāraya*s, the correct accent cannot be applied since it contravenes A 6.2.34. The constraint *dvandve* is taught there to prevent erroneous superimposition with the domain of other complex numerals such as those formed according to A 2.2.25.

[172] It seems worth anticipating a concept that will be deal with later: the so-called *padalopa* is not a pāṇinian expedient and there is only one instance of such an operation in the whole corpus of the *Aṣṭādhyāyī*, i.e., A 5.3.82, according to which the lexeme *ajina-* "skin", used as a second constituent of compounds (to which the affix *-ka-* applies), is subjected to *lopa*, - ex. **vyāghrājina-* > *vyāghraka-* "The poor 'Tiger-skinned'". Instead, commentators often highlight the fact that each unit of meaning requires a unit for its signification according to a currently presupposed one-to-one symmetry between the semantic and the phono-morphological level of language and *madhyamapada-* and *uttarapada-lopa*s are often proposed.

	Resolution of the problems regarding *viṃśati* and so on (see A 1.2.53): Number → *paribhāṣā* "every *dvandva* is optionally treated as one", see A 1.2.63. Gender → "has not to be taught, for its being dependent on its own common usage".

A 2.2.33 *dvandve ghi* [*pūrvam* 30]

The constituent denoting GHI (i.e., ending with the short vowels -*i* or -*u* - not only feminine in gender- and the feminine stems not included under the technical term *nadī* (A 1.4.3), with the exception of *sakhi*-) [is placed first] in a *dvandva* compound.

A 2.2.34 *ajādyadantam* [*pūrvam* 30, *dvandve* 32]

The constituent beginning with aC (any vowel) and ending with aT (the short vowel -*a*) [is placed first in a *dvandva* compound].

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A 2.2.34 *alpāctaram* [*pūrvam* 30, *dvandve* 32][173]

The constituent having the fewer number of vowels is placed first in a *dvandva* compound.

1. If the specific mention of -*tara* is not the object of the rule, the compound is made up of *śaṅkhatūṇava* combined with *mṛḍaṅga*.	Discussion on the nature of the suffix -*tara*: does it express the comparative degree? e.g. *śaṅkhadundubhivīṇānām* (with the real possibility of the longest word occupying the first slot) *mṛdaṅgaśaṅkhatūṇavāḥ pṛthaṅ nadanti saṃsadi* *prāsāde dhanapatirāmakeśavānām*

[173] The *Cāndravṛtti ad* C 2.2.48 *cārthe* comments on this teaching thus: *kvacid alpākṣaraṁ pūrvaṁ nipatati*, 'sometimes the word with the fewest syllables occurs first', [e.g.], *plakṣanyagrodhau*, 'the *plakṣa* and the *nyagrodha* tree', *dhavakhadirau*, 'the *dhava* and the *kadhira* tree'. *kvacid viparyayaḥ*, 'sometimes there is the inverted order', [e.g.], *ulūkhalamusale*, 'the mortar and the pestle', *taṇḍulakiṇvam*, 'grain and ferment', *citrarathabāhlīkau, snātakarājānau, akṣibhruvam*, 'the eye and the eyebrows', *dāragavam*, 'wife and cows'. *kvacid aniyamaḥ*, 'sometimes there is no restriction', *dhanapatirāmakeśavāḥ. vipūyavinīyajitya muñjakalkahaliṣu* (Pan. III, 1, 117). Note the different terminology employed here by Candragomin: while the A uses the technical aT (any vowel), in C 2.2.48 the word *akṣara* is introduced the word *akṣara*-, commonly used to signify 'syllable'.

2. The restriction to one happens in the case of the occurrence of more than one constituent; there is no restriction in the remaining ones.	The composition system is always binary in its input (saha supā 2.1.4, sup 2.1.9) e.g.. *paṭumṛduśuklāḥ* *paṭuśuklamṛdavaḥ*
3. Constituents denoting *ṛtu*s and *nakṣatra*s having the same number of syllables appear according to the natural order.	
4. The constituent denoting the greatly honoured is placed first.	e.g., *śiśiravasantau udagayanasthau* *kṛttikārohiṇyaḥ*
5. The constituent having short syllables is placed first.	e.g.,*mātāpitarau* *śraddhāmedhe* e.g., *kuśakāśam* *śaraśīryam*
6. Constituents denoting social classes appear according to the natural order.	But vt. 4 prevails over vt. 5 e.g., *śraddhātapasī* *dīkṣātapasī*
7. Also a constituent denoting the elder brother is placed first according to the natural order.	e.g., *brāhmaṇakṣatriyaviṭśūdrāḥ*
8. A constituent denoting the lowest number is placed first.	e.g., *yudhiṣṭhirārjunau*

9. Both constituents in the case of *dharma* and so on can be placed first.	e.g., *ekādaśa* *dvādaśa* e.g., *dharmārthau arthadharmau* *kāmārthau arthakāmau* *guṇavṛddhī vṛddhiguṇau* *ādyantau antādī*
A 2.4.2 *dvandvaś ca prāṇitūryasenāṅgānām* [*ekavacanam* 1] A *dvandva* made up of constituents denoting parts of a living being, a musical group, an army is also singular in number.	
1. There is the mention of the parts of a living being, the parts of a musical group, the parts of an army made by the compound's first and by the second constituent. 2. It is realized due to a *yogavibhāga*.	"What is the purpose? [It serves to say that] a mixture must not subsist". No need to specify that the compound has to be made up of member of the same group, (i.e., p+p. t+t, a+a). Refusal of the *yogavibhāga.*
A 2.4.3 *anuvāde caraṇānām* [*ekavacanam* 1, *dvandvaḥ* 2] A *dvandva* made up of constituents denoting branches of Vedic schools is singular in number in the case of *anuvāda*.	
1. It has the *denotatum* of one in the case of the verbal bases *sthā-* and *i-*.	Problems with the application of this rule; Patañjali quotes two counterexamples: *nandantu kaṭhakālāpāḥ* *vardhantām kaṭhakauthumāḥ* Counterexample:

2. And when an aorist is signified it has the *denotatum* of one.	*tiṣṭhantu kaṭhakālāpāḥ* e.g., *udagāt kaṭhakāpālam* *pratyaṣṭhāt kaṭhakauthumam* *udagāt maudapaippalādam*
A 2.4.7 *viśiṣṭaliṅgo nadī deśo 'grāmāḥ* [*ekavacanam* 1, *dvandvaḥ* 2] [A *dvandva*] having (constituents) of different genders denoting a river and a place - but not settlements [is singular in number].	
1. There is the prohibition of *nagara* in the prohibition of *grāma*. 2. And in both cases, with respect to the names of villages.	In order to avoid the prohibition of *mathurāpāṭaliputram* i.e., "when both are *grāma*s or either of the two is a *grāma*". See Sastri (1962:147). e.g., *śauryaketavate* *jāmbavaśālukinyau*
A 2.4.8 *kṣudrajantavaḥ* [*ekavacanam* 1, *dvandvaḥ* 2] [A *dvandva*] denoting small creatures [is singular in number].	
No vtt.	Various attempts to give a definition of *kṣudrajantavaḥ*. Quoted compounds: *yūkālikṣam* *kīṭapipīlikam*
A 2.4.9 *yeṣāṃ ca virodhaḥ śāśvatikaḥ* [*ekavacanam* 1, *dvandvaḥ* 2] And a *dvandva* denoting items between which there is everlasting enmity [is singular in number].	
No vtt.	Refusal of vt. 2 *ad* A 2.4.12; in other words, A 2.4.9 does not prevail over that rule.
A 2.4.10 *śūdrāṇām aniravasitānām* [*ekavacanam* 1, *dvandvaḥ* 2] A *dvandva* is singular in number when it is made of constituents denoting *śudra*s who are not expelled.	
No vtt.	Questions about the meaning of *aniravasitānām*

	→ definition of *āryāvarta*. Counterexamples: *kiṣkindhagandikam* *śakayavanam* *śauryakrauñcam* *caṇḍālamṛtapā* → people who live there. → the non-excluded from the sacrificial action. Counterexamples: *takṣāyaskāram* *rajakatantuvāyam* FINAL ARGUMENT → the non-excluded from the purification of the dish.
A 2.4.11 *gavāśvaprabhṛtīni ca* [*ekavacanam* 1, *dvandvaḥ* 2] And each *dvandva* of the list beginning with *gavāśvam* is also singular in number.	
1. The behaviour of the *dvandva* is according to the fact of being pronounced in the *gaṇa* beginning with *gavāśvam*.	Patañjali quotes the initial three compounds of the *gaṇa*.
A 2.4.12 *vibhāṣā vṛkṣamṛgatṛṇadhānyavyañjanapaśuśakunyaśvavaḍava-pūrvāparādharottarāṇām* [*ekavacanam* 1, *dvandvaḥ* 2] A *dvandva* is marginally singular in number when it is made up of constituents denoting trees, wild beasts, herbs, grains, condiments, domestic animals, birds, and in the case of *aśvavaḍava-* 'a horse and a mare', *pūrvāpara-* 'the first and the subsequent', *adharottara-* 'the lower and the higher'.	
1. A *dvandva* whose nominal stems convey the sense of plurality is treated as a singular when it is made up of names of fruits, armies, forest trees, wild beasts, birds, small animals, grains, herbs.	Input = words inflected in the plural number. Theoretical equivalence between: *badarāmalakam badarāmalakāni* *hastyaśvam hastyaśvāḥ* *plakṣanyagrodham plakṣanyagrodhāḥ* *rurupṛṣatam rurupṛṣatāḥ* *haṃsacakravākam haṃsacakravākāḥ* *yūkālikṣam yūkālikṣāḥ* *vrīhiyavam vrīhiyavāḥ*

	māṣatilam māṣatilāḥ *kuśakāśam kuśakāśāḥ* *śaraśīryam śaraśīryāḥ*
2. There is a conflict between two rules in which the first one prevails with regards to items between which there is everlasting enmity in the case of a *dvandva* denoting domestic animals and birds.	Possibility of *pūrvavipratiṣedha* with respect to A 2.4.9 (if there is *virodha* between the *paśu*s or the birds mentioned in A 2.4.12) Domain of A 2.4.12: *mahājorabhram mahājorabhrāḥ* *haṃsacakravākam haṃsacakravākāḥ* Domain of A 2.4.9: *śramaṇabrāhmaṇam*
3. The neuter gender [has to be taught] for a *dvandva* made up of [constituents denoting] domestic animals because of the (rule that prescribes that the) gender (must be) in accordance with the first constituent in the case of *aśvavaḍavau*, 'a horse and a mare' (according to A 2.4.27).[174]	Possible application for both with prevalence of A 2.4.9: *kākolūkam* *śvaśṛgālam* The compound *aśvavadavau-* is quoted in the present rule and in A 2.4.27; in A 2.4.12 there is the option of the neuter gender while in A 2.4.27 it is taught as being inflected with the masculine gender (i.e., that of *aśva-*).
4. It is realized since there is the literal teaching in the phrasing of A 2.4.12 itself.	When the optionality prescribed in A 2.4.12 does not work, there is room for the gender in accordance with the first constituent, e.g. *aśvavaḍavau* (A 2.1.27). The risk is the application of the *pūrvavipratiṣedha* → *aśvavaḍavam.*

[174] Note that the same compound is quoted in the present *sūtra*. The problem is the undesired superimposition of the two rules with a prevalence of the former one.

5. Due to the singularity of the *samāhāra*, the teaching of the singular is useless from A 2.4.1.	Refusal of the *pūrvavipratiṣedha.* The realization of the neuter gender is obtained via *nipātana*. "This I will declare: the *vidhi* is in that case necessary (before A 2.4.12), in this case optional (i.e. in A 2.4.12 there is the chance for the *itaretarayoga*)". Purpose of the rule: To teach the singularity → *paribhāṣā* every *dvandva* can be treated as singular; To teach the neuter gender → gender need not to be taught Final argument: The aim is to teach the given optionality (*vibhāṣā*).
A 2.4.16 *vibhāṣā samīpe* [*ekavacanam* 1, *dvandva ḥ* 2, *adhikaraṇaitāvattve* 15] A *dvandva* is marginally singular in number when denoting a proximate quantity of a *substratum*.	
No vtt.	e.g., *upadaśam pāṇipādam* *upadaśāḥ pāṇipādāḥ* However, the singular of the *dvandva* is undertaken. So, the purpose is to provide an extra word (*upadaśa*-) which will be an *avyayībhāva* or a *bahuvrihi* - depending on the grammatical number of the following compound (respectively singular and plural).
A 2.4.69 *upakādibhyo 'nyatarasyām advandve* [*luk* 58, *bahuṣu tenaivāstriyām* 62, *gotre* 63] Optionally in a non-*dvandva*, there is *luk* in the case of a *gotra* affix to denote a plurality, provided that it (i.e., plurality) is conveyed by it (i.e., the *gotra* affix) and not in the case of a feminine after the stems of the *gaṇa* beginning with *upaka*-.	

	Whilst the rule overtly states *advandve*, the teaching is also valid for the domain of dvandva compounds (risk of misunderstanding): *bhraṣṭakakapiṣṭhalāḥ* → *luk* *bhrāṣṭakikāpiṣthalayaḥ* → *aluk*
1. In the case of a non-*dvandva* in the sense of discontinuation of the *adhikāra dvandve*.	*adhikāra* is used in the sense of *anuvṛtti* of *dvandve* 68: the rule is valid for both domains since it teaches a degree of optionality.
A 4.3.88 *śiśukrandayamasabhadvandvendrajananādibhyaś chaḥ* [*adhikṛtya kṛte granthe* 87] The *taddhita* affix *-cha* is introduced after *śiśukranda-* 'a child's cry', *yamasabha-* 'Yama's assembly', a *dvandva* compound and after the stems belonging to the *gaṇa* beginning with *indrajanana-* 'Indra's birth' provided that the *taddhita* derivative word denotes a book written with reference to (them).	
1. There is a prohibition in case of a *dvandva* after *devāsura* and so on.	[For instance, from the *dvandva* compounds] *daivāsuram, rākṣosuram,* [the derived forms will be] *daivāsurī rākṣosurī.* The forms quoted here are derived by means of the affix *aṆ.* Note that *devāsura* is not the head of a *gaṇa*.
A 4.3.125 *dvandvād vun vairamaithunikayoḥ* [*tasyedam* 120] The *taddhita* affix *vuN* is introduced after a *dvandva* compound provided that the meaning is X belongs to Y to express enmity or marriage between the *denotata* of the constituents.	
1. There is a prohibition in the case of enmities after *devāsura* and so on.	Same compounds quoted in A 4.3.88: *daivāsuram*, *rākṣosuram* The prohibition is valid since the compounds undergo a derivational process by means of the affix aṆ. Again, note that *devāsura* is not the head of a gaṇa.

A 6.2.36 *ācāryopasarjanaś cāntevāsī* [*prakṛtyā pūrvapadam* 1, *dvandve* 34]

In a *dvandva* compound the first constituent also retains its original accent when it is a noun denoting a student whose *upasarjana* is the (name of the) teacher.

1. There is a doubt due to the condition of being the first constituent of a combination of more than one word in the case of *ācāryopasarjana*.	In the case of a *pūrvapada* made up of more than one word, the doubt arises as to which one has to bear the original accent (in fact, apart from the last one, al the constituents are *pūrvapada*s)
2. It is realized due to the knowledge of the everyday language.	e.g., *āpiśalapāṇinīyavyāḍīyagautamīyāḥ* The very first constituent will bear the original accent.

A 6.3.25 *ānaṅ ṛto dvandve* [*uttarapade* 1, *ṛto vidyāyonisambandhebhyaḥ* 22]

ānaṄ is introduced in place of ṛ before the last constituent in a *dvandva* compound after a nominal stem denoting an individual who is linked with the *denotatum* of the second constituent through relationships of knowledge or family.

	The lopa of *n* is prescribed according to A 8.2.7; *n* is taught in order to avoid the *prasaṇga* of A 1.1.51. Risk of applying A 1.1.51 after the lopa of *n* → the substitute taught here is anaṄ (not the same as A 1.1.51)
1. There is the inclusion of *putre* (i.e., 'before *putra'* 22) in the case of a *dvandva* made up of *pada*s which end with the sound *ṛ*.	Problem of the adeśa ṛ with respect to *dvandve* in the wording of the rule; two possibilities: (a) *ṛkārāntānām yo dvandvaḥ* = a *dvandva* is made up of [*pada*s] which end with the sound ṛ; (b) *dvandva ṛkārasya* = in place of the sound ṛ in a dvandva.
2. And the subject of the grammatical operation is undefined.	The locative *putre* (22) is introduced as the right context for the operation of this rule. e.g., *pitāputrau* (*pitṛ-* + *ānaṄ*)

3. There is an overextension in the case of *pitṛpitāmaha-* and so on, due to the absence of a specific domain.	In the case of (a) *ṛkārāntānām yo dvandvaḥ* = a *dvandva* is made of [*pada*s] which end with the sound *ṛ* there is no way of understanding where the operation has to be carried out. Endorsement of (b) *dvandva ṛkārasya* = in place of the sound ṛ in a dvandva. Back to (a) *ṛkārāntānām yo dvandvaḥ* = a *dvandva* is made up of [*pada*s] which end with the sound ṛ Explanation of the anuvṛtti of *putre*. Patañjali claim the the wrongness of vt. 2: Anuvṛtti of uttarapade (#1) Involvement of the marker Ṅ (more than one sound replaces the final sound of the *sthānin* – A 1.1.53)
A 6.3.26 *devatādvandve ca* [*uttarapade* 1, *ānaṅ* 25] In the case of a *dvandva* denoting a couple of divinities *ānaṄ* is also introduced (to replace the final sound – A 1.1.52-53) before the last constituent.	
1. In the case of a *dvandva* denoting a couple of divinities there is the prohibition of *ānaṄ* in place of the final sound - A 1.1.52-53 in the case of a compound which includes the constituent *vāyu* in both cases, whter first or last slot of the compound. 2. Prohibiton of *ānaṄ* also in place of the final sound - A 1.1.52-53 of *brahmaprajāpati* and so on.	e.g.,*vāyvagnī, agnivāyū* Reference to A 2.1.14 and the gaṇa *dadhipayādi*. e.g., *brahmaprajāpatī*

	śivavaiśravaṇau *skandaviśākhau* Explanation of the repetition of *dvandve* (distinction between the linguistic registers).
6.3.28 *id vṛddhau* [*uttarapade* 1, *devatādvandve* 26, *agneḥ* 27] In the case of a *dvandva* denoting a couple of divinities undergoing a *vṛddhi* replacement, iT is introduced in place of (the final sound - A 1.1.52) of *agni-* before the last constituents.	
1. Prohibition of the substitution with *-i* in place of the final sound of *agni-* occurring as the first constituent when the *uttarapada* is *viṣṇu-* undergoing a *vrddhi* replacement.	e.g., *āgnāvaiṣṇavam carum nirvapet*
A 6.3.32 - *mātarapitarau udīcām* *mātarapitarau* (is introduced as a ready-made form) according to the northern grammarians. **A 6.3.33 - *pitarāmātarā ca chandasi*** *mātarapitarau* (is introduced as a ready-made form) according to the chandas.	
No vtt.	e.g. *mātarapitarau bhojayataḥ* *mātarapitarau ānaya* *ā mā gantām pitarāmātarā ca ā mā somaḥ amṛtatvāya gamyāt*

After having analysed the comments on *sūtra*s about *dvandva* compounds, let us now summarize the main points of Patañjali's commentary on the topic.[175]

More than once (M *ad* A 1.2.63, A 2.2.29, A 2.4.12) Patañjali refers to a specific *paribhāṣā*, namely *sarvo dvandvo vibhāṣaikavad bhavati* 'all *dvandva*s are optionally treated as denoting singularity'. The author uses this argument in order to solve difficult problems (for instance, the point raised by vt. 16 *ad* A 2.2.29 about the inconsistency of gender and number in a specific series of numeral compounds).

[175] It is possible that, on the one hand, Patañjali shows more interest in commenting rules whose application is still productive during his age: in this case the evolution of the language leaves room for a grammatical debate In fact, Patañjali's comments are often a direct reply to the vtt. On the other hand, his need to shed light on those teachings perceived as opaque should not be undervalued: in this case, the presence of previous vtt. cannot be always detected.

In M *ad* A 2.2.29, Patañjali returns to the assumption by which the sequence of *artha*s has to follow the sequence of *śabda*s (according to a sort of correspondence principle). By elaborating a series of reasons as to why it is apparently impossible to apply the correct grammatical number to the compound due to the strict observance of the afore-mentioned principle, Patañjali finally enunciates the four *artha*s of *ca* (*samuccaya, anvācaya, itaretarayoga* and *samāhāra*).[176]

Some data come from the comments on rules A 2.2.32-34: these passages contain the precise explanation of the binary structure which also lies behind the formation of *dvandva* compounds (according to A 2.1.4). Moreover, there is the explicit endorsement of the following additional provisions:

1. constituents denoting *ṛtu* and *nakṣatra* having the same number of syllables appear according to the natural order (vt. 3);
2. the constituent standing for the greatly honoured *denotatum* is placed first (vt. 4);
3. the constituent having short syllables is placed first (vt.5);
4. constituents denoting *varṇa*s (social classes) follow the natural order (vt. 6);
5. the constituent denoting the elder brother is placed first (vt. 7);
6. the constituent denoting the lowest number is placed first (vt. 8);
7. no special order is taught in the case of the class of words beginning with *dharma* (vt. 9).

From a linguistic (and cultural) perspective, the following fact shows a special interest: Kātyāyana usually intervenes on the text of the *Aṣṭādhyāyī* to criticize or to improve a given teaching; Patañjali, on the contrary, is very often conservative. The section quoted above (A 2.2.32-34) traditionally deals with the order of the constituents in a *dvandva* compound. Basically, Pāṇini handed down only three instructions and thus it comes as no surprise to discover that seven integrations were needed. This gap cannot be ignored when reflecting (a) on the phrasing and on the utility of this section in the *Aṣṭādhyāyī*, (b) on the geographical, social and diachronic distance between the language targeted by Pāṇini and the one known to Kātyāyana and then to Patañjali. Self-evidently, at the time of the latter commentators it was necessary to fix these rules.

[176] Among which, traditionally, only the *itaretarayoga* and the *samāhāra* can originate a *dvandva* compound.

As far as the category of *dvandva samāhāra* is concerned, some achievements derive from the reading of the comment on A 2.4.2 (the present section of the *Aṣṭādhyāyī* is characterized by the *anuvṛtti* of *ekavacanam* 1). The rule teaches the use of the singular number (and the neuter gender according to A 2.4.17) for copulative compounds when special combinations occur, that is the parts of a living being, of a musical group, of an army. Now, Kātyāyana feels uncomfortable with the textual formulation of this rule because it is perceived as subject to a misinterpretation: the mixture of these parts in the output formation is indeed an undesired result. In order to avoid any ambiguity, he even proposes the use of a most intrusive procedure like the *yogavibhāga*. Such an argument, however, is totally rejected by Patañjali who clearly explains the correct syntax of the rule. The fact could be thought-provoking. Is Kātyāyana's whole objection merely a rhetorical expedient? It actually seems somewhat out of character. Was, then, Patañjali's linguistic view more accustomed to linguistic reflection on natural copulative relations? In any case, the imperative parameter of belonging to the same sphere of denotation is a conviction shared by both commentators. This bears witness to the prominence of the role of natural copulative relations in pairing items in the (extremely close) sense of a group in *dvandva samāhāra*s.

Patañjali accepts some of Kātyāyana's points as regards the context of application of the singular and of the neuter:

8. the application of A 2.4.3 in the case of use of the aorist tense (vt. 2);
9. the non-inclusion of *nagara* in the prohibition stated by A 2.4.7 (vt.1);
10. the clarification that nouns of *grāma*s prevent the application of the singular even if they are included as only one of the constituents of a *dvandva* compound (vt. 2 *ad* 2.4.7);
11. the qualificand *bahuprakṛtiḥ* (vt. 1 *ad* A 2.4.12) for the input passage in forming a *dvandva samāhāra* in the case of precise denotations of the constituents (see the wording of the rule). In other words, while the output is characterized by a compound singular in number and neuter in gender, the sense conveyed will be that of a plurality of objects;
12. prohibition of the derivation by means of the taddhita *cha* for *dvandva*s belonging to the class *devāsurādi* (vt. 1 *ad* A 4.3.88), since they appear to be subject to the affix aṆ (note that *devāsura* is not the head of a gaṇa);

13. analogous prohibition of the constraint *vaire* ‘in case of enmity’ for, once again, *dvandva*s belonging to the class *devāsurādi* (vt. 1 *ad* 4.3.125);

14. prohibition of the substitution of the last sound before the uttarapada when *vāyu-* occupies either of the possible slots in the compound (vt. 1 *ad* A 6.3.26);

15. analogous prohibition in the case of *dvandva*s belonging to the series of *brahmaprajāpatī* in the gaṇa *dadhipayādi* (vt. 2 *ad* 6.3.26);

16. prohibition of the substitution with i of the last sound of *agni-* in case of compounds made up of *agni-* + *viṣṇu-* (with the *vṛddhi*), i.e., *āgnāvaiṣṇava-*, as proposed in the vt. 1 *ad* A 6.3.28.

PART TWO

Linguistic Analysis of a Selection of Vedic Texts

1. Instances of coordinated lexicon from the *Ṛgveda*

This section is devoted to the analysis of a selection of the Ṛgvedic syntactic strings semantically organized in the two main sections headed (1) ‘Non-natural pairings’ and (2) ‘Natural pairings’. Such a distinction is basically grounded on the intrinsic mutual relationship subsisting between the nouns involved in the considered coordinated string or compound. In other words, when the pair is made of members having a common domain, inasmuch as they belong to specific spheres not influenced or modified by the human intervention. Even though the reflection on the pairing of the elements clearly occurs through the perspective of the observers, the pairs themselves can be considered natural, spontaneous. On the contrary, the coordinated nouns labelled as 'Non-natural' comprehend elements whose strict relationship - and sometimes even existence - is determined by human agency and cultural reflection. Note that the distinction considered here does not match with special *Aṣṭādhyāyī*’s technical terms, since there is no need to proceed by means of such a dichotomy since it is intrinsecal in the speakers' mind. It is well known that in Pāṇini’s grammar semantics if often presupposed but

involved in the phrasing of the rules only when it is strictly necessary the mention of a precise constraint denoting a given semantic category.

Furthermore, even though in the *dvandva* rules some semantic categories are involved, they are not meant to directly assign any morphologic trait to the final comound itself. For instance, notwithstanding the indisputable importance of the categories *prāṇin* and *aprāṇin*, which conveys the sense of animate and non-animate being, a closer look to the present section of the grammar shows that in no rule devoted to the fomation of *dvandva*s, these semantic catergories (animated vs non-animated) assign the singular number and neuter gender.[177]

(1) This section analyses combinations that refer to the Vedic ritual: in the first part one can observe the interaction between the word *yajña-* with a set of words from various semantic spheres. The second parts consider the technical terms for Vedic chants, hymn and metrics and the third part examines names of ritual food offered as libations.[178] The fourth part is devoted to the analysis of three different syntactic strings whose meaning corresponds to 'gods and men', while the last part takes into account a series of combinations involving words denoting material items (weapons, chariots etc.) or elements characterized by a strong human influence (roads, battles etc.).

(2) In this section, the first and the second parts analyse combinations referring to the semantic spheres of the human body and the family (i.e., denoting natural relationships such as men and women, father and mother etc.). The third and last part examines pairs of words denoting animals and components of the landscape. A particular case is represented by pairs such as heaven and earth, night and dawn, the sun and moon: although the religious Vedic tradition does contemplate these natural elements as divine entities, the stanzas in which they appear reveal the slippery boundary between the nature of their double identity (i.e., theonimic nouns or not. The same assumption does not hold true for pairs such as Indra and Varuṇa or Mitra and Varuṇa, since these words, in the specific context of the ṚV exclusively denote names of gods).

The scope of the present inquiry is to observe the behaviour of these pairs to try to understand:

[177] See above § I, rules A 2.4.2, 2.4.6.

[178] This set of coordinative syntactic strings does not include pairs where words denoting Vedic ritual chants combine with words from a different semantic sphere, such as *gir-* + *sumati-*, *namas-* + *sūkta-*, *nivid-* + *kavyatā-*, soma- + *stoma-*, *stotra-* + *havis-*.

(a) the nature and the mutual relationship between coordinated nouns in the ṚV.
(b) if the given nouns constitute a string that is coordinated elsewhere in the literature by means of *dvandva* compounds.
(c) the reliability of the A with respect to the language of the ṚV (mostly as far as the word-order is concerned).[179]

The last point mentioned above, other than considering the main rule A 2.2.29 *cārthe dvandvaḥ*, mostly refers to the three rules governing the placement of constituents in *dvandva* compounds (which should be mirrored by syntactic strings coordinated by means of particles or asyndeton), namely:

(1) A 2.2.32 *dvandve ghi* [*pūrvam* 30] 'the constituent denoting GHI[180] is placed first in a *dvandva* compound'.
(2) A 2.2.33 *ajadiadantam* [*pūrvam* 30, *dvandve* 32] 'the constituent beginning with aC (i.e., whatever vowel) and ending with aT (the short vowel a) is placed first in a *dvandva* compound'.
(3) A 2.2.34 *alpāctaram* [*pūrvam* 30, *dvandve* 32] 'the constituent that has fewer vowels (aC) is placed first in a *dvandva* compound'.

[179] An interesting contribution by Cooper and Ross (1975), which does not deal with the Sanskrit language, starts wondering "why the ordering of certain conjoined elements is fixed" in the language. The authors detect systematic models followed by nouns in coordination. In essence, they listed a number of domains where freezed structures can be observed. During the present research, I noticed that there are syntactic strings where the word-order appears as fixed even though no apparent reasons seem to lie behind this behaviour (e.g., phonetics -but see also Kātyāyana's *vtt. ad* 2.2.34). Consider Bronkhorst (2019:1-2): "concerning the objection that *mantras* use fixed expressions and have a fixed word order: the same can be said about utterances used in the world; for example: […] *pitāputrau*." This compound follows the same word-order in JB 1.166.30 and 34, ŚS 6.11.2 and TB 3.9.1.2.8. Note that the word-order of *pitṛ-* and *putra-* is not taught by the A.
We can infer that the one observed in the compound also was the fixed word-order current in Vedic, and then in Classical and Epic Sanskrit (whose examples I do not quote here). Interestingly, the word-order FATHER-SON falls under the cathegory ADULT singled out by Cooper and Ross with respect to another Indo-European language such as modern English. Is it possible to single out analogous patterns with respect to the Sanskrit? I dealt elsewhere with the topic. Another point that deserves to be briefly explained here: during the present research I noticed that the assonance, the common etymology and even the condition of being antonyms play a role in the coordination and in the compounding of two nouns. However, I have never systematically and statistically analysed the phaenomenon, whose notewhorty frequency in the language is still a pure impression.
[180] According to A 1.4.7 the technical term GHI covers stems ending with the vowels *-i*, *-u* (not only feminine in gender) and those feminine stems which are not included under the technical term *nadī* (A 1.4.3), with the exception of *sakhi-*.

Further Pāṇinian rules dealing with the formation of *dvandva* compounds will be considered whenever necessary.

1. Non-natural pairings

Coordinative instances of Ṛgvedic Ritual Lexicon

Coordinative strings with *yajña-* m. ‘act of worship, sacrifice’

1. *adhvara-* m. ‘sacrifice’

ṚV 1.1.4 *ágne yáṃ* ***yajñám adhvaráṃ*** *viśvátaḥ paribhū́r ási* / *sá íd devéṣu gachati*
‘o Agni, the act of worship and the sacrifice that you surround from all sides only goes among the gods’.
ṚV 1.128.4 […] *'gnír* ***yajñásyādhvarásya*** *cetati* […]
‘[…] Agni attends to the act of worship and to the sacrifice […]’.
ṚV 4.9.7 *asmā́kaṃ joṣy* ***adhvarám*** *asmā́kaṃ* ***yajñám*** *aṅgiraḥ* /
‘enjoy our sacrifice and our act of worship, o Aṅgiras’
ṚV 6.10.1 […] *prayatí* ***yajñé*** […] ***adhvaré***
‘[…] while act of worship […] and sacrifice are going on’
ṚV 7.92.5 *ā́ no* […] ***adhvaráṃ*** […] *úpa yāhi* ***yajñám*** /
‘come to our sacrifice […], to the act of worship’.
ṚV 8.10.4 *tā́* ***yajñásyādhvarásya*** *prácetasā* […]
‘they are attentive to the act of worship and to the sacrifice’.

- While the occurrences shown above hint toward a symmetric relationship between *yajña-* and *adhvara-*, clues from other Ṛgvedic hymns suggest a more complex situation with respect to these two words. Consider ṚV 10.110.2 *mánmāni dhībhír utá* ***yajñám*** *ṛndhán devatrā́ ca kṛṇuhy* ***adhvaráṃ*** *naḥ //* ‘And increasing the prayer and the act of worship by means of the poetic/ religious insights, perform our sacrifice among the gods’. In this verse the *adhvara* seems to encompass the *yajña* as a main ceremony. The same conclusion can be drawn from ṚV 10.30.11 *hinótā no* ***adhvaráṃ devayajyā́*** […] ‘Send forth our sacrifice through an act of worship to the gods’: here *-yajya-* (a derived form of *yaj-*) is inflected in the instrumental case ending and represents the means to make the *adhvara-* successful. An analogous trend of semantic subordination can be observed also in the series of verses featuring the word *adhvara-* inflected in the locative (i.e., denoting the context of the action)

and cooccurring with nominal and verbal forms derived by the root *yaj-*. Consider, first, the case of *yajiṣṭha-* 'the best worshipper', an epithet of the god Agni: ṚV 1.58.7 […] ***yájiṣṭhaṃ*** […] ***adhvaréṣu*** / 'the best worshipper […] in the sacrifices'; ṚV 3.10.7 […] ***yájiṣṭho adhvaré*** […] 'the best worshipper in the sacrifice'; ṚV 4.7.1 […] ***yájiṣṭho adhvaréṣv*** […] 'the best worshipper in the sacrifices'; ṚV 7.3.1 ***yájiṣṭhaṃ*** […] ***adhvaré*** […] 'the best worshipper […] in the sacrifice'; ṚV 8.60.3 1 […] ***yájiṣṭho adhvaréṣv*** […] 'the best worshipper in the sacrifices'. As far as other nominal forms derived from the root *yaj-* appearing in verses that also involves the word *adhvara-* inflected in the locative, consider ṚV 8.12.32 *nā́bhā* ***yajñásya*** *dohánā* ***prā́dhvaré*** // 'those who give milk at the core point of the act of worship, during the ongoing sacrifice'; see also the similar cases of ṚV 8.46.18 ***yajñám*** […] ***prā́dhvaré*** // 'the act of worship when the sacrifice is going on', ṚV 8.71.12 […] *deva****yajyáya****[…] prayaty* ***àdhvaré*** / 'by means of the worship of gods when the sacrifice is going on' and ṚV 10.21.6 *tvā́ṃ* ***yajñéṣv*** *īḷaté 'gne prayaty* ***àdhvaré*** / 'in acts of worship they praise you, Agni, when the sacrifice is going on'. Finally, consider a case featuring the imperative form of *yaj-*: ṚV 6.16.2 […] ***adhvaré*** […] ***yajā*** […] '(you) sacrifice in the sacrifice'. The completely reversed perspective, however, can be observed in ṚV 1.14.11, ṚV 1.26.1 and ṚV 6.52.12, where the accusative singular of *adhvara*, i.e., *adhvaram*, is the direct object of the imperative of *yaj-* (2 p.s.) *yaja*, 'worship/ sacrifice'.

- From a Pāṇinian point of view, according to the trend prescribed by A 2.2.34 (which prevails over A 2.2.33), the word with fewer syllables is placed first in a *dvandva* compound. It has to be noted that the disyllabic word *yajña-* is placed before the trisyllabic *adhvara-* in 4 out of 6 cases of coordination between these two words.

2. *brahman-* n. 'sacred prayer'

ṚV 1.10.4 ***bráhma ca*** *no vaso sácéndra* ***yajñáṃ ca*** *vardhaya* //
'o good Indra, together with us strengthen our sacred prayer and our act of worship'.
ṚV 10.50 6 *várāya te pā́traṃ dhármaṇe tánā* ***yajñó*** *mántro* ***bráhmó****dyataṃ vácaḥ* //[181]

[181] Note the list of coordinated items: *pātra-*, *yajña-*, *mantra-*, *brahman-*, *vāc-* are introduced by *tánā* which is an indeclinable word conveying the sense of endless continuation of a given process (cf. Jamison-Brereton (2014), 'in succession'). In this sense the quoted items do not necessarily be intended as set in a logical succession (see also ṚV 2.2.1) but, perhaps they are considered as endowed with a mutual continuum, i.e., forming an unbreakable blend.

‘for your favour there is the cup, for your support one after another the act of worship, the *mantra*, the raised sacred prayer and the speech.’
ṚV 10.141.6 *tváṃ no agne agníbhir* ***bráhma yajñáṃ ca*** *vardhaya* /
‘through your sacrificial fires, o Agni, strengthen our sacred prayer and act of worship’.

- The words *yajña-* and *brahman-* are apparently set on the same level also elsewhere in the text. Consider ṚV 6.38.4 *várdhād yáṃ* ***yajñá*** *utá sóma índraṃ várdhād* ***bráhma*** *gíra ukthấ ca mánma* / ‘Indra, whom act of worship and *soma* will strengthen, (whom) sacred prayer, *gir*s, *uktha*s and *manman* will strengthen’, ṚV 7.35.7 *śáṃ naḥ sómo bhavatu* ***bráhma*** *śáṃ naḥ śáṃ no grā́vāṇaḥ śám u santu* ***yajñā́ḥ*** / ‘Luck for us be soma, *sacred prayer* luck for us; luck for us be the *grāvāṇa*s and also luck the acts of worship’; ṚV 7.84.3 *kṛtáṃ no* ***yajñáṃ*** *vidátheṣu cā́ruṃ kṛtám* ***bráhmāṇi*** *sūríṣu praśastấ* / ‘Make our act of worship pleasing in the congregations; make our sacred prayers approved among the institutors of the sacrifice’. Anyway, a non-symmetrical relation between *yajña-* and *brahman-* can be observed, e.g., in ṚV 1.93.6 *ágnīṣomā* ***bráhmaṇā*** *vāvṛdhānórúṃ* ***yajñā́ya*** *cakrathur ulokám* // ‘Agni and Soma, you have increased through the sacred prayer, and you have created a wide place for the act of worship’, where, in the first half verse, sort of temporal anteriority can be observed with respect to the second action. Consider, also, ṚV 6.40.4 *úpa* ***bráhmāṇi*** *śṛṇava imā́ nó 'thā te* ***yajñás*** *tanvè váyo dhāt* // ‘You will listen to these sacred prayers of ours, then the act of worship will present energy to your body’. This verse suggests that the aim of the *yajña* arises in consequence of the god (Indra in this case) listening (*śru-*) to the *brahman*s. The presence of *atha* here may suggest the consequential nature of the second part of the verse. ṚV 7.16.2 features the phrase ***subrahmā yajñaḥ***, where *subrahman-* is a bahuvrihī referred to *yajña-*, ‘of good sacred prayers, having good sacred prayers’. This implies an asymmetrical status of *yajña-* with respect to *brahman-*. An analogous situation appears in ṚV 7.70.6 ***yajñó*** […] ***kṛtábrahmā*** ‘*yajña-* with performed sacred prayers’. Note that along with *kṛtabrahman-*, *haviṣmat-* ‘endowed with *havis*’ and *sumarya-* ‘with many persons’ qualify *yajña-* in this verse.[182]
- To the best of my knowledge, there are no *dvandva* compounds formed by combining *yajña-* and *brahman-* not even in the literature subsequent to the ṚV. A *tatpuruṣa* compound, *brahmayajña-*, is attested with the meaning of ‘recitation of the Veda (as a ritual)’.

[182] Consider the role of the word *brahman-* (inflected in the instrumental case ending) within the syntax of ṚV 10.50.4 *bhúvas tvám indra bráhmaṇā mahấn* ‘Indra, become strong by means of sacred prayers’.

- From a Pāṇinian point of view these words do not follow any fixed order.

3. *dakṣiṇā-* f. ‘magnificence’[183]

ṚV 10.62.1 […] ***yajñéna dákṣiṇayā*** *sámaktāḥ* […]
‘[…] anointed (pl. referring to the Aṅgiras) with the act of worship and the magnificence’.
ṚV 10.103.8 […] ***dákṣiṇā yajñáḥ*** *purá etu* […]
‘let the magnificence and the act of worship advance forward’.

- The word *dakśina-* co-occurs with a noun derived from the root *yaj-* in ṚV 10.107.3 *daívī pūrtír* ***dákṣiṇā devayajyā́*** […] ‘The *magnificence* is the divine reward, a worship of gods’. Instances of coordination between *yajña-* and *dakṣina-* can be observed also in the subsequent literature: a strong idea of parallelism emerges from GB 1. 1.33.34-36 ***yajña*** *eva savitā* ***dakṣiṇāḥ*** *sāvitrī* // *yatra hy eva* ***yajñas*** *tad* ***dakṣiṇā*** *yatra vai* ***dakṣiṇās*** *tad* ***yajña*** *iti* // *ete dve yonī ekaṃ mithunam* // ‘*yajña* is indeed *Savitṛ* and *dakṣiṇā* is *Sāvitrī*. In fact, wherever there is *yajña* there is *dakṣiṇā*, wherever there is *dakśiṇā* there is *yajña*. These two are the origins and a single pair.’ Playing with their opposite gender, and depicting their extralinguistic referents as a married couple, the just quoted passage helps to understand the relationship of these two words, which truly corresponds to that of an established pair. Consider, in this sense, also ŚGS 3.3.1-6: *satyaṃ ca śraddhā ceti pūrve* //***yajñaś ca dakṣiṇā ceti*** *dakṣiṇe* // *balaṃ caujaś cety apare* // *brahma ca kṣatraṃ cety uttare* // ‘The two (posts) to the east with (the words), 'Truth and faith!' Those to the south with (the words), 'Sacrifice and gift!' Those to the west with (the words), 'Strength and power!' Those to the north with (the words), 'The *Brahman* and the *Kṣatra*!’[184] These pairs of words were supposed to be pronounced during the ritual for the construction of a new house.
- To the best of my knowledge, there are no *dvandva* compounds formed by combination of the word *yajña-* with the word *dakṣinā-* not even in the literature subsequent to the ṚV. The compound *yajñadakṣiṇa-* (see, e.g., MBh 13.129.49.2 ***yajñadakṣiṇā***) is a *tatpuruṣa* meaning ‘fee for the sacrifice’.

[183] See Candotti-Neri-Pontillo (2021: 27).
[184] Tr. Oldenberg 1886.

- From a Pāninian point of view, in a *dvandva* compound the disyllabic *yajña-* should be placed before the trisyllabic *dakṣiṇa-*. This trend can be observed in the coordinative syntactic strings quoted above.

4. *dhī-* f. 'poetic (and religious) insight'

ṚV 10.74.3 ***dhíyaṃ ca yajñáṃ ca*** *sā́dhantas* […]

'accomplishing (pl. referring to the immortals) the poetic/religious insight and the act of worship […]'.

- The analysis of Ṛgvedic passages where *yajña-* and *dhī-* are syntactically related suggest of considering *dhī-* as a prerequisite for the performance of the *yajña-*. Consider ṚV 3.3.6 *agnír* […] *tanvānó* ***yajñám*** […] ***dhiyā́*** / 'Agni […] extends the act of worship by means of the poetic/religious insight' and ṚV 3.27.6 […] ***dhiyā́ yajñávantaḥ*** / 'sacrificing by means of the poetic/religious insight'. In both cases, the logical function of the instrumental of *dhī-* overtly expresses that the act of worship (*yajña-*) results also on the basis of the existence of the poetic/religious insight (*dhī-*). In this sense, see also ṚV 10.110.2 *mánmāni* ***dhībhír*** *utá* ***yajñám*** *ṛndhán* […] 'And increasing the prayers and the act of worship by means of poetic/religious insights'. A strict connection between these two words is also represented by ṚV 2.21.5; finally, consider the parallelism featured in ṚV 1.168.1 ***yajñā́-yajñā*** […] ***dhíyaṃ-dhiyaṃ*** '*yajña* after *yajña* […] *dhī* after *dhī.'*
- To the best of my knowledge, there are no *dvandva* compounds involving the words *yajña-* and *dhī-* not even in the literature subsequent to the ṚV.
- From a Pāṇinian point of view, note that even if the above mentioned instance of coordination between *yajña-* and *dhī-* occurs outside compounds, it still mirrors the trend described by A 2.2.32, since *dhī-*, being the shorter constituent, is placed first.

5. *gir-* f. 'praise, song'

ṚV 5.6.10 […] ***gīrbhír yajñébhir*** *ānuṣák* /
'[…] with praises/songs and acts of worship uninterruptedly'.
ṚV 5.43.10 ***yajñáṃ gíro*** *jaritúḥ suṣṭutíṃ ca víśve ganta maruto* […]

‘the act of worship, the praises/songs and the good *stuti* of the praiser, may you all, o Maruts, approach [them]’.

ṚV 6.2.2 […] ***yajñébhir gīrbhír*** *īḷate* /

‘they invoke [you] with the act of worship and the praises/songs’.

ṚV 6.13.4 *yás te sūno sahaso* ***gīrbhír*** *ukthaír* ***yajñaír*** *márto níśitiṃ vedyā́naṭ* /

‘o son of strength, that mortal who manifestly reached your refreshing with praises/songs, *uktha*s and acts of worship’.

ṚV 8.46.17 ***yajñébhir gīrbhír*** *viśvámanuṣām* […]

‘with acts of worship and praises/songs of all the men […]’.

ṚV 8.68.10ab *táṃ tvā* ***yajñébhi****r īmahe táṃ* ***gīrbhír*** […]

‘we request you with acts of worship, you with (praise-)songs.’

- The status of *yajña-* with respect to *gir-* is not easy to determine: all the passages shown above hint at a type of a coordination grounded on a symmetrical relationship: both the words, whenever they are inflected in the instrumental case ending (6 out of 7), both seem to be considered as a parallel means to reach the gods. Consider, also, the parallelism featured in ṚV 6.48.1 ***yajñā́-yajñā*** […] ***girā́-girā*** ‘act of worship after act of worship […] praise/song after praise/song’. Anyway, there are clues in the ṚV that may suggest a different interpretation. Consider the case of ṚV 6.21.2: ***gīrbhír yajñávṛddham***, ‘strengthened by the act of worship, by means of praises/songs’, an attributive phrase referred to Indra. The verbal root *yaj-*, from which the word *yajña-* is derived, appears along with the substantive *gir-* in ṚV 2.2.1 ***yajadhvaṃ*** […] ***girā́*** / ‘may you sacrifice by means of a praise/song’. According to this verse, the praise/song, whose sense is conveyed by the word *gir-*, represents a means, an instrument in the act of worshipping Agni. This status may suggest a semantic and logical subordination of *gir-* with respect to *yajña-*. An analogous conclusion can be drawn from two further passages: consider ṚV 8.23.9 […] ***yajñásya*** *sā́dhanaṃ* ***girā́*** / ‘fulfilling the act of worship by means of a praise/song’ and ṚV 8.26.15 […] ***yajñám*** *ūhathur* ***girā́*** // ‘you have conveyed the act of worship by means of a praise/song’.
- As far as I have seen, there are no *dvandva* compounds involving the words *yajña-* and *gir-* not even in the literature subsequent to the ṚV.

- From a Pāṇinian point of view, the monosyllabic *gir-* should be placed first in a *dvandva* compound. Within the passages shown above, however, *yajña-* (which has one syllable more than *gir-*) appears first in the majority of cases (4 times out of 6 total occurrences).

6. *go-* m.f. ‘ox, cow’ pl. ‘cattle’

ṚV 1.151.8a *yuvā́ṃ* ***yajñaíḥ*** *prathamā́* ***góbhir*** *añjata* […]
‘they anoint you first with acts of worship and cattle’.

- Cows (or cow-products) are employed as oblation during the act of worship (*yajña*). This fact presupposes a non-symmetric relationship between the nouns *yajña-* and *go-* even if they are coordinated by means of asyndeton.
- Subsequent literature does not form *dvandva* compounds out of the nouns *yajña-* and *go-*. On the contrary, there are textual occurrences of *goyajña-* as a tatpuruṣa (see, e.g., PārGS 3.8.14, 3.9.2).
- Since there is only one attestation of these two words in coordination, it is not possible to derive a trend as far as the placement of the words *yajña-* and *go-* are concerned. This syntactic string does not comply with Pāṇini’s syllable count principle.

7. *havis-* n. ‘oblation’

ṚV 1.12.10 *úpa* ***yajñáṃ havíś ca*** *naḥ* //
‘towards our act of worship and (our) oblation’.
ṚV 1.24.14 […] ***yajñébhir*** *īmahe* ***havírbhiḥ*** /
‘[…] we pray with acts of worship, with oblations’.
ṚV 2.35.12 […] ***yajñaír*** *vidhema námasā* ***havírbhiḥ*** /[185]
‘[…] we would be reverent through acts of worship, through *namas*, through oblations’.
ṚV 4.50.6 […] ***yajñaír*** *vidhema námasā* ***havírbhiḥ*** /[186]
‘[…] we would be reverent through acts of worship, through *namas*, through oblations’.

[185] Note the formulaic expression of the second half verse.
[186] As above.

ṚV 10.20.6 *sá hí kṣémo* ***havír yajñáḥ*** [..]

'he is indeed the rest, the oblation, the act of worship'.

ṚV 10.24.2 *tvā́ṃ* ***yajñébhi****r ukthaír úpa* ***havyébhir*** *īmahe* /

'we pray you with acts of worship, with *ukthas*, with oblations'.

ṚV 10.70.8 […] ***yajñáṃ*** *súdhitā* ***havī́ṃṣi****́ḷā devī́ ghṛ́tápadī juṣanta* //

'o Ilā, goddess with feet of ghee, (you all) enjoy the act of worship, the well-placed oblations'.

- It is possible to observe the interaction between the words *yajña-* and *havis-* also elsewhere in the ṚV. Consider ṚV 3.35.10 […] *dhótur vā* ***yajñáṃ havíṣo*** *juṣasva* // ' or from the *havis* of the Hotar enjoy the *yajña*': the coordinative relationship observed above between the words *yajña-* and *havis-* lacks in this verse. Analogous cases are represented by verses featuring various verbal forms of *yaj-* in co-occurrence with *havis-* inflected in the instrumental case ending, to denote the means for the realization of the sacrifice itself. Consider ṚV 1.91.19 […] ***havíṣā yájanti*** […] 'they sacrifice by means of the oblation', ṚV 2.2.1 […] ***yajadhvaṃ havíṣā*** […] '(you) sacrifice by means of the oblation', ṚV 3.17.2 […] ***havíṣā yakṣi*** […] 'sacrifice by means of the *havis*'. The analogous syntactic role is played by *havis-* in ṚV 10.90.6 *yát púruṣeṇa* ***havíṣā*** *devā́* ***yajñám átanvata*** / 'When, with the *puruṣa* as oblation, the gods stretched the sacrifice'; the word *yajña-* is here the direct object of the verb *tan-* 'to stretch' so that, in essence, this verse can indeed compared to the previous ones.
- To the best of my knowledge, there are no *dvandva* compounds formed by combination of these two words. In subsequent literature *havis-* and *yajña-* can be observed as constituents of the tatpuruṣa compound *haviryajña* 'a *yajña* of *havis*', attested as part of the lexicon of the *Śrauta* ritual. [187]
- From a Pāṇinian point of view these words do not follow any fixed order.

8. *rajas-* n. 'atmosphere, air'

ṚV 10.8.6 *bhúvo* ***yajñásya rájasaś ca*** *netā́* […]

[187] For textual occurrences of this compound, see e.g., Mylius (1995) *s.v.* Note the case of BhāMañj 13.229.1 […] ***yajñahaviṣe*** […], a late passage where the tatpuruṣa compound features a reversed word-order. There are seven types of *haviryajña*. Basically, they are variants of the *somayajña* and only differ in some features that are exclusively proper to the latter type (see Keith 1925: 316 and Renou 1953 *s.v.*).

‘you has become the leader of the act of worship and of the atmosphere […]’.

- There are no other instances of Ṛgvedic co-occurrence of *yajña-* and *rajas-*.
- To the best of my knowledge, there are no *dvandva* compounds involving the words *yajña-* and *samidh-*.
- From a Pāṇinian point of view these words do not follow any fixed order.

9. *samidh-* f. ‘kindling wood’[188]

ṚV 6.5.5 *yás te* ***yajñéna samídhā*** *yá ukthaír arkébhiḥ sūno sahaso dádāśat* /
‘who honoured you with the act of worship and the kindling wood, who with *ukthas* and *arkas*, o son of strength’.

- This is the only passage where *yajna-* and *samidh-* are coordinated in the ṚV. According to the meaning of the verse, both the instrumentals are the means through which the worshipper obtains benefits. However, consider ŚS 5.26.1 […] ***yajñé samídhaḥ*** […]. This verse suggests a different ranking for these words since *yajña-* inflected in the locative case denotes the main context where the kindling wood is involved.
- To the best of my knowledge, there are no *dvandva* compounds involving the words *yajña-* and *samidh-*.
- From a Pāṇinian point of view these words do not follow any fixed order.

10. *stoma-* m. ‘praise, song’

ṚV 2.5.7 ***stómaṃ yajñáṃ cā́****d áraṃ vanémā* […]
‘then, we would readily acquire the praise/song and the act of worship’.
ṚV 5.52.4 […] *dadhīmahi* ***stómaṃ yajñáṃ ca*** […][189]
‘we would place the praise/song and the act of worship’.
ṚV 6.16.22 *prá vaḥ sakhāyo agnáye* ***stómaṃ yajñáṃ ca*** *dhṛṣṇuyā́* /[190] *árca gā́ya ca vedháse* //

[188] See Jamison-Brereton (2014).
[189] Note the frozen expression *in clausula*.
[190] As above.

‘o friends, strongly recommend to Agni your praise/song and act of worship and sing to the worshipper’.

- Consider ṚV 1.156.1 […] *vidúṣā cid árdhya **stómo yajñáś ca** rā́dhyo havíṣmatā* // ‘*stoma*s can be accomplished by the one who knows and *yajña*s can be performed by the *haviṣmat*’. The content of this verse suggests that these words may be related to different competencies of the worshippers of the god (i.e., Viṣṇu). On the one hand *stoma*s may refer to an abstract domain, since they can be effectful only if performed by a *vidus*, literally a wise man; on the other hand, *yajña*s seem to reach their goal (*ṛdh-*, *rādh-*) only by means of a *havíṣmat*, ‘one who offers an oblation’. Even if these words are not coordinated in the quoted verse, note the parallel the poet draws between them as part of the practice of worshipping the god; a similar case is represented by ṚV 1.131.2 […] *cíndraṃ ná **yajñaíś** citáyanta āyáva **stómebhir** índram āyávaḥ* // ‘[…] making Indra take notice (of us) with our sacrifices as the Āyus did—as the Āyus did Indra with their praises’.[191] As Jamison and Brereton (2014) underline in commenting on the hymn, Indra appears to be sought after by clans who use different strategies (*yajña*s vs *stoma*s) to gain his favour. However, by analysing other textual passages of the ṚV, it is possible to observe a non-coordinative relationship between the words *yajña-* and *stoma-*. This is the case of ṚV 8.3 […] ***stómair yajñásya** sā́dhanam* / ‘fulfilling the *yajña* by means of *stoma*s’: the role of *stoma-* in this verse is underlined by the inflection in the instrumental case ending.
- To the best of my knowledge, there are no *dvandva* compounds involving the words *yajña-* and *stoma-* not even in the literature subsequent to the ṚV.
- From a Pāṇinian point of view these words do not follow any fixed order.

11. *uktha-* n. ‘saying, verse, praise’[192]

ṚV 6.5.5 *yás te **yajñéna** samídhā yá **ukthaír** arkébhiḥ sūno sahaso dádāśat* /
‘who honoured you with the act of worship and the kindling wood, who with sayings/verses, with *arkas*, o son of strength’.

[191] Tr. Jamison-Brereton (2014).
[192] As for the many semantics facets of this term, also consider Jamison-Brereton (2014) translations, e.g., ‘recitation’, ‘hymn’, ‘solemn speech’.

ṚV 6.13.4 *yás te sūno sahaso gīrbhír* ***ukthaír yajñaír*** *márto níśitiṃ vedyā́naṭ* /
'o son of strength, that mortal who manifestly reached your refreshing with praise/songs, with sayings/verses and acts of worship'.
ṚV 6.24.6 […] ***ukthébhir*** *indrānayanta* ***yajñaíḥ*** /
'o Indra, they leaded with sayings/verses, with acts of worship'.
ṚV 8.66.5 *vayáṃ tát ta indra sám bharāmasi* ***yajñám ukthā́ṃ*** *turáṃ vácaḥ* //
'this we bring together for you, o Indra: the act of worship, the saying/verse, the powerful speech'.
ṚV 10.24.2 *tvā́ṃ* ***yajñébhir ukthaír*** *úpa havyébhir īmahe* /
'we pray you with the act of worships, the sayings/verses and the oblations'.

- A different perspective emerges from the analysis of ṚV 6.18.15 […] ***ukthā́ṃ*** […] *janayasva* ***yajñaíḥ*** // 'may you generate a saying/verse by means of acts of worship';[193] see also ṚV 5.45.4, where *uktha-* is inflected in the instrumental case ending in relation with the verb *yajanti*, i.e., 'they sacrifice by means of sayings/verses'. Consider also ṚV 9.17.4 ***ukthaír yajñéṣu*** *vardhate* // 'he becomes strong by means of sayings/verses in the acts of worship'. In both the cases the word *uktha-* seems to be set in a subordinate condition.
- To the best of my knowledge, there are no compounds formed by combining the words *yajña-* and *uktha-* not even in the literature subsequent to the ṚV.
- The word-order of the Ṛgvedic syntactic strings involving *yajña-* and *uktha-* is not fixed. From a Pāṇinian point of view, *uktha-* should be placed first in a *dvandva* compound according to A 2.2.33, since it starts with a vowel and ends in *-a*. It has to be noted that the only example of asyndeton bimember between *yajña-* and *uktha-* (ṚV 8.66.5) features *uktha-* at the beginning of the string.

1.3 Coordinative strings involving specific names of ritual songs and relevant technical terminology

1. *arka-* m. 'praise, song' + *brahman-* n. 'sacred prayer'

[193] See Sayāna, *yajñeṣu*.

ṚV 6.65.5 *vy* ***àrkéṇa*** *bibhidur* ***bráhmaṇā ca*** […]
'they have broken (them) with the praise/song and with the sacred prayer'.

- The verse quoted above is the only one in the ṚV where the words *arka-* and *brahman-* can be observed in coordination. An instance of same-level relationship between these two words emerges from ṚV 1.88.4 ***bráhma*** *kṛṇvánto gótamāso* ***arkaír*** *ūrdhváṃ nunudra utsadhím píbadhyai* // 'The Gotamas performing a sacred prayer by means of praises/songs have impelled a well to drink'.
- To the best of my knowledge, there are no instances of *dvandva* compounds formed by combining the two words *brahman-* and *arka-* not even in the literature subsequent to the ṚV with the same meanings as those described above (cf. MPur 22.94.2).
- From a Pāṇinian perspective the word *arka-* should be placed first in a *dvandva* compound since it starts with a vowel and ends in -a (A 2.2.33); moreover, it is shorter than the word *brahman-*.

2. *brahman-* n. 'sacred prayer' + *gir-* f. 'praise, song'

ṚV 3.51.6 *túbhyam* ***bráhmāṇi gíra*** *indra túbhyaṃ*[194] *satrā́ dadhire harivo juṣásva /*
'for you the sacred prayers, o Indra, the praises/songs for you have been placed together. O you of bay horses, enjoy (them)!'
ṚV 6.38.3 ***bráhmā ca gíro*** *dadhiré* […]
'the sacred prayers and the praises/songs and the have been placed'.
ṚV 6.38.4 […] *várdhād* ***bráhma gíra*** *ukthā́* ***ca*** *mánma*
'[…] may the sacred prayer strengthen (Indra), (and so will do) the praises/songs, the sayings/verses and thought'.
ṚV 6.47.14 […] ***gíro bráhmāṇi*** *niyúto dhavante /*
'the praises/songs, the sacred prayers, the poems[195] flow'.
ṚV 6.69.4 […] *úpa* ***bráhmāṇi*** *śṛṇutaṃ* ***gíro*** *me //*
'listen to my sacred prayers and praises/songs'.
ṚV 8.33.13 […] *śṛṇávad* ***gíro bráhm****okthā́* ***ca*** *sukrátuḥ //*

[194] 'for you *brahman*s and *gir*s, Indra, for you […]'
[195] Cf. Jamison-Brereton (2015).

‘may he of good intention will listen the praises/songs, the sacred prayers and the sayings/verses’.

ṚV 10.4.7 ***bráhma ca*** *te jātavedo námaś ceyáṃ* ***ca gī́ḥ*** *sádam íd várdhanī bhūt* /

‘o Jātavedas, may the sacred prayer and the *namas* and this praise/song always be strengthening you’.

ṚV 10.65.14 […] ***gíro bráhma*** *sūktáṃ juṣerata* //

‘they will enjoy the praises/songs, the sacred prayers, the *sūkta*’.

- The interaction between the two words *brahman*- and *gir*- can be observed elsewhere in the ṚV. Consider ṚV 6.17.3 *śrudhí* ***bráhma*** *vāvṛdhásvotá* ***gīrbhíḥ*** / ‘listen to the sacred prayer and grow up by means of praises/songs’. Note that the last quotation, along with 4 instances of coordination shown above, are all taken from the book of the Bharadvāja family.
- *Dvandva* compounds formed by combining the two words *brahman*- and *gir*- are attested in the literature subsequent to the ṚV, e.g., in MBh 1.199.35.10* ***brāhmaṇagiraḥ*.**
- From a Pāṇinian point of view, the monosyllabic word *gir*- should be placed first in a *dvandva* compound formed by combining *brahman*- and *gir*-.[196]

3. *brahman*- n. ‘sacred prayer‘+ *uktha*- n. ‘saying, verse, praise’[197]

ṚV 1.80.16 *tásmin* ***bráhmāṇi*** *pūrváthéndra* ***ukthā́*** *sám agmatā́*[…]

‘in Indra formerly the sacred prayers and the sayings/verses moved together […]’.

ṚV 3.13.6 *utá no* ***bráhmann*** *aviṣa* ***ukthéṣu*** […]

‘and you may favour us in our sacred prayer and sayings/verses […]’.

ṚV 4.22.1 ***bráhma*** *stómam maghávā sómam* ***ukthā́*** […]

‘the sacred prayer, the *stoma*, o munificent one, the *soma*, the sayings/verses […]’.

ṚV 6.23.1 *sutá ít tváṃ nímiśla indra sóme stóme* ***bráhmaṇi*** *śasyámāna* ***ukthé*** /

‘you are attached to the pressed *soma*, o Indra, to the *stoma*, to the sacred prayer, to the recited saying/verse’.

[196] Note that when two words are not immediately consecutive, the possibility of inquiring after the validity of Pāṇini’s word-order rules is less scientifically grounded.

[197] As for the many semantics facets of this term, also consider Jamison-Brereton (2014) translations, e.g., ‘recitation’, ‘hymn’, ‘solemn speech’.

ṚV 6.38.4 […] *várdhād* ***bráhma*** *gíra* ***ukthā́ ca*** *mánma* /

'[…] the sacred prayer will strengthen (Indra), (and so) the praises/songs (will do), the sayings/verses and thought'.

ṚV 8.33.13 […] *śṛ́ṇávad gíro* ***bráhmokthā́ ca*** *sukrátuḥ* //

'may he of good intention will listen the praises/songs, the sacred prayers and the sayings/verses'.

ṚV 8.63.2 ***ukthā́ bráhma ca*** *śáṃsyā* //

'the sayings/verses and the sacred prayer have to be recited'.

- A coherent picture emerges from the analysis of the ṚV. A clear parallelism between *brahman-* and *uktha-* in the same verse is shown in other passages. Consider ṚV 4.6.11 *ákāri* ***bráhma*** *samidhāna túbhyaṃ śáṁsāty* ***ukthám*** […] 'Samidh, a sacred prayer has been composed for you. He recites a saying/verse […]'. ṚV 6.29.4 […] ***brahma****kārā́* ***ukthā́*** *śáṃsanto* […] 'the authors of sacred prayers reciting sayings/verses.'. See also ṚV 6.23.5 and ṚV 10.107.6.
- According to the analysed textual tradition, the subsequent literature does not feature instances of *dvandva* compounds formed by combining *brahman-* and *uktha-*.
- Since both *brahman-* and *uktha-* are disyllabic words, from a Pāṇinian point of view *uktha-* should be placed first in *dvandva* compounds according to A 2.2.33. However, the syntactic strings quoted above shows the opposite trend, since *uktha-* appears as first word only in one case (ṚV 8.63.2) out of 7.

4. *brahman-* n. 'sacred prayer' + *stoma-* m. 'praise, hymn'

ṚV 2.39.8 *etā́ni vām aśvinā várdhanāni* ***bráhma stómaṃ*** *gṛtsamadā́so akran* /

'the Gṛtsamadas composed, o Aśvins, these elements which strengthen you two, the sacred prayer and the praise/hymn'.

TṚV 4.22 ***bráhma stómam*** *maghávā sómam ukthā́* […]

'the sacred prayer, the praise/hymn, o munificent one, the *soma*, the sayings/verses […]'.

ṚV 6.23.1 *sutá ít tvā́ṃ nímiśla indra sóme* ***stóme bráhmaṇi*** *śasyámāna ukthé* /

'you are attached to the pressed soma, o Indra, to the praise/hymn, to the sacred prayer, to the recited saying/verse'.

- An analogous interaction between the two words *brahman-* and *stoma-* can be observed elsewhere in the ṚV. Consider ṚV 1.165.11 *ámandan mā maruta* ***stómo*** *átra yán me naraḥ śrútyam* ***bráhma*** *cakrá* / 'Maruts, the *stoma* has inspired me, the *brahman* to be heard that you, men, have made for me', ṚV 7.72.3ab *úd u* ***stómāso*** *aśvínor abudhrañ jāmí* ***bráhmāṇy*** *uṣásaś ca devī́ḥ* / 'the praises/hymns addressed to the Aśvins have awaked our family *brahman*s and the Uṣasas, the goddesses'. See also ṚV 8.4.2 and ṚV 6.38.3.
- To the best of my knowledge, there are no instances of compounds formed by combining the two words *brahman-* and *stoma-* not even in the literature subsequent to the ṚV.
- From a Pāṇinian point of view these words do not follow any fixed order.

5. *gāyatra-* n. 'hymn composed in the *gayātri* metre' + *traiṣṭubha-* n. ' hymn composed in the *triṣṭubh* metre*'*

ṚV 2.43.1 *ubhé vā́cau vadati sāmagā́ iva* ***gāyatráṃ ca traíṣṭubhaṃ cā́****nu rājati* //
'it (the bird) speaks both the speeches, like a singer of *sāman*: it shines in accordance with the hymn composed in the *gāyatrī* metre and that in the *triṣṭubh* metre'.

- For further hints about the semantic role of these two words (plus *arka-*), see ṚV 1.164.24.
- To the best of my knowledge, there are no compounds formed by combining of *gāyatra-* and *traiṣṭubha-* not even in the literature subsequent to the ṚV.
- From a Pāṇinian point of view these words do not follow any fixed order.

6. *stoma-* m. 'praise, hymn'+ *gir-* f. 'praise, song'

ṚV 3.5.2 *préd v agnír vāvṛdhe* ***stómebhir gīrbhí*** *stotṝṇā́ṃ* […]
'indeed, Agni has been magnified by the praises/hymns, by the praises/songs of the ones who praise/worship'.
ṚV 7.80.1 *práti* ***stómebhir*** *uṣásaṃ vásiṣṭhā* ***gīrbhír*** *víprāsaḥ prathamā́ abudhran* /
'with praises/hymns, with praises/songs, the wise Vasiśthas, as first, have awakened the dawn'.
ṚV 8.3.15 […] ***gíra stómāsa*** *īrate* /
'praises/songs, praises/hymns arise'.
ṚV 8.7.9 *imā́m me maruto* ***gíram*** *imáṃ* ***stómam*** […]

‘o Maruts, may you long for this praise/song of mine, for this praise/hymn […]’

ṚV 8.8.22 *prá vāṃ* ***stómāḥ*** *suvṛktáyo* ***gíro*** *vardhantv aśvinā* /

‘let the praises/hymns, the hymns of praise, the praises/songs strengthen you, o Aśvins’.

ṚV 8.43.1 […] ***gíra stómāsa*** *īrate* //

‘praises/songs, praises/hymns arise’.

- Parallel cases with respect to the coordinative strings shown above seem to be found in ṚV 1.61.4 [..] ***stómaṃ*** *sáṃ hinomi ráthaṃ ná táṣṭeva tátsināya* /***gíraś*** *ca* […] ‘ I compose a praise/hymn—like a carpenter a chariot for the one wish to acquire it— and praises/songs’, ṚV 1.165.15[198] *eṣá va* ***stómo*** *maruta iyáṃ* ***gī́r*** […] ‘This is your praise/hymn, Maruts—this praise/song […]’. Consider the parallel passages of ṚV 6.69.2cd ***prá*** *vāṃ* ***giraḥ*** […] ***prá stómāso*** […]’ and ṚV 5.22.4 […] ***stómair*** *vardhanty átrayo* ***gīrbhíḥ*** *śumbhanty átrayaḥ* // ‘The Atris increase you by means of the praises/songs, the Atris with their praise songs, the Atris adorn you with praises/songs’. For a same-level relationship between these two words, see also ṚV 6.38.3. A different relationship between *stoma-* and *gir-* can be observed in ṚV 9.114.2 *ṛ́ṣe mantrakṛ́tāṃ* ***stómaiḥ*** *káśyapodvardháyan* ***giraḥ*** / ‘O seer Kaśyapa, strengthening up your praises/songs with the praises/hymns of the mantra-makers’, where *stoma-* is inflected in the instrumental case ending.
- To the best of my knowledge, there are no compounds formed by combining *stoma-* and *gir-* not even in the literature subsequent to the ṚV.
- From a Pāṇinian point of view these words do not follow any fixed order.

7. *stoma-* m. ‘praise, hymn’ + *uktha-* n. ‘saying, verse, praise’[199]

ṚV 1.8.10 […] ***stóma ukthā́ṃ ca*** *śáṃsyā* /

‘the praise/hymn and the saying/verse have to be recited’.

ṚV 4.22.1 *bráhma* ***stómam*** *maghávā sómam* ***ukthā́*** […]

‘the sacred prayer, the praise/hymn o munificent one, the soma, the sayings/verses’.

[198] Matching ṚV 1.166.15, 167.11, 168.10.

[199] As for the many semantics facets of this term, also consider Jamison-Brereton (2014) translations, e.g., ‘recitation’, ‘hymn’, ‘solemn speech’.

ṚV 6.24.7 […] ***stómebhir ukthaíś ca*** *śasyámānā* //
‘’while it (the body of Indra) is praised by means of praises/hymns and sayings/verses’

- Ṛgvedic verses where the words *stoma-* and *uktha-* cooccur can be considered as parallels to the instances of coordination quoted above. The relationship between these terms is seen to be on the same-level in ṚV 3.5.2 *préd v agnír vāvṛdhe* ***stómebhir*** *gīrbhí stotṝṇā́m namasyà* ***ukthaíḥ*** / ‘Agni grew up by means of praises/hymns, praises/songs; he is the one who deserves to be honoured by means of sayings/verses of worshippers’, ṚV 1.5.8 *tvā́m* ***stómā*** *avīvṛdhan tvā́m* ***ukthā́*** *śatakrato* / ‘*śatakratu*, the praises/hymns have grown you up, the sayings/verses (have grown) you up’, ṚV 1.136.5 ***ukthaír*** *yá enoḥ paribhū́ṣati vratáṃ* ***stómair*** *ābhū́ṣati vratám* // ‘(he who) honours the observance of these two by means of sayings/verses, (he who) serves the(ir) *vrata* by means of praises/hymns’, ṚV 8.14.11 *tváṃ hí* ***stomavárdhana*** *índrāsy* ***ukthavárdhanaḥ*** / ‘Indra, you are the increaser of praises/hymns, the increaser of sayings/verses’. A clear picture about the status of these word also emerges from ṚV 6.59.10 *índrāgnī* ***uktha****vāhasā* ***stómebhir*** *havanaśrutā* / *víśvābhir gīrbhír ā́ gatam asyá sómasya pītáye* // ‘Indra and Agni, having sayings/verses as conveyer, who listen to the invocation through praises/hymns, through all the praises/songs, come here to drink this soma’. A different perspective emerges from ṚV 6.69.3 *sáṃ vām añjantv aktúbhir matīnā́ṃ sáṃ stómāsaḥ śasyámānāsa ukthaíḥ* // ‘may the prayers recited by means of sayings/verses celebrate you two with the lights of worships/thoughts’. Also the *Atharvaveda* offers instances of coordination between the words *stoma-* and *uktha-*, see, e.g. ŚS 20.60.6 […] ***stóma ukthā́ṃ ca*** […]. Finally, consider the case of ŚS 6.35.3 […] ***stóma ukthā́ṃ ca*** […] and cf. PS 19.9.6 […] ***stomaṃ yajñaṃ ca*** […].
- To the best of my knowledge, there are no compounds formed out of the combination of *stoma-* and *uktha-* not even in the literature subsequent to the ṚV.
- Since both *stoma-* and *uktha-* are disyllabic words, from a Pāṇinian point of view *uktha-* should be placed first in a *dvandva* compound according to A 2.2.33. However, the syntactic strings quoted above show the opposite trend.

8. *uktha-* n. ‘’saying, verse, praise’[200] + *arka-* m. ‘praise, song’

[200] As for the many semantics facets of this term, also consider Jamison-Brereton (2014) translations, e.g., ‘recitation’, ‘hymn’, ‘solemn speech’.

ṚV 1.47.10 ***ukthébhir*** […] *purūvásū* ***arkaíś ca*** *ní hvayāmahe* /
'with sayings/verses and praises/songs we summon back the two of many riches'.
ṚV 6.5.5 *yás te yajñéna samídhā yá* ***ukthaír arkébhiḥ*** *sūno sahaso dádāśat* /
'who honoured you with the act of worship and the kindling wood, who with sayings/verses and praises/songs, o son of strength'.
ṚV 6.34.1 *purā́ nūnáṃ ca stutáya ṛ́ṣīṇām paspṛdhrá índre ádhy* ***ukthārkā́*** //
'before and now the *stut*is of the *ṛṣi*s strived together over Indra, (and so) the sayings/verses and the praises/songs'.

- Note the case of ṚV 6.34.1 […] ***ukthārkā́*** […]. According to Whitney (1889: 487), this is a *dvandva* compound inflected in the neuter plural even if the final constituent is a masculine noun. Note that, indeed, the presence of one single accent suggests univerbation. Out of the many meanings conveyed by *arka-*, the context of the verses quoted above suggest an interpretation toward the sense of 'hymn, song'.
- Apart from the Ṛgvedic case, there are no further occurrences of this compound.
- Since both *uktha-* and *arka-* are disyllabic words, both starts with a vowel and end with the vowel *-a*, from a Pāṇinian perspective both *uktha-* and *arka-* can be placed first in a *dvandva* compound. However, the verses quoted above show a constant pattern as far as their word-order is concerned, since the word *uktha-* is always placed first.

9. *uktha-* n. ''saying, verse, praise'[201] + *mati-* f. 'worship, hymn, thought'

ṚV 4.3.16 […] *áśaṁsiṣam* ***matíbhir*** […] ***ukthaíḥ*** //
'[…] I have proclaimed (them) with worships/thoughts, with sayings/verses'.
ṚV 10.64.16 ***ukthébhir*** *átra* ***matíbhiś ca*** […]
'with saying/verses, here, and with worships/thoughts […]'.
ṚV 10.88.5 *táṃ tvāhema* ***matíbhir*** *gīrbhír* ***ukthaíḥ*** […]
'we impel you with your worships/thoughts, with (your) praises/songs, with (your) sayings/verses'.

[201] As for the many semantics facets of this term, also consider Jamison-Brereton (2014) translations, e.g., 'recitation', 'hymn', 'solemn speech'.

- A further parallel interaction between these two words can be observed in ṚV 6.69.3 *sáṃ vām añjantv aktúbhir* ***matīnā́ṃ*** *sáṃ stómāsaḥ śasyámānāsa* ***ukthaíḥ*** // 'may the prayers recited by means of sayings/verses celebrate you two with the lights of worships/thoughts'.
- To the best of my knowledge, there are no compounds formed out of the combination of the two words *uktha-* and *mati-* not even in the literature subsequent to the ṚV.
- From a Pāṇinian point of view, since *uktha-* starts with a vowel and ends in *-a*, should be placed first in a *dvandva* compound according to A 2.2.33. The same trend is not observed in the ṚV instances of syntactic coordination shown above. In fact, out of 3 occurrences, the word *uktha-* is placed first only once.[202]

10. *ṛc-* f. 'praise, verse'+ *sāman-* n. 'metrical hymn, song of praise'

ṚV 10.85.11 ***ṛksāmā́bhyām*** *abhíhitau gā́vau te sāmanā́v itaḥ* /
'your two cows set forth by the *ṛc* and the *sāman* walk with equal step between them''.
ṚV 10.90.9 *tásmād yajñā́t sarvahúta* ***ṛ́caḥ sā́māni*** *jajñire* /
'from this *yajña,* when offered whole, the *ṛc* (pl.) and the *sāman*s were born'.
ṚV 10.114.6 […] *yajñáṃ vimā́ya kaváyo manīṣá* ***ṛksāmā́bhyām*** *prá ráthaṃ vartayanti* //
'after measuring the sacrifice with their intelligence, the poets make the chariot (I.e. the sacrifice) roll forth with the *ṛc* and the *sāman*'.

- The words *ṛc-* and *sāman-* combine to form a *dvandva* compound twice in the ṚV. Note the presence of one single accent that suggests univerbation. There is one further instance of interaction between the words *ṛc-* and *sāman-* in the ṚV. It is the case of ṚV 5.44.14 *yó jāgā́ra* ***tám ṛ́caḥ*** *kāmayante yó jāgā́ra* ***tám u sā́māni*** *yanti* / 'He who is awake, the *ṛc*s call him; he wo is awake, the *sāman*s go to him'.
- The literature after the ṚV features many instances of *dvandva* compounds formed by combining *ṛc-* and *sāman-*. To the best of my knowledge, the word-order of subsequent occurrences of this compound is coherent with the one observed in the ṚV.

[202] See fn. 196.

- The Pāṇinian analysis of rule A 2.2.34 fits the *dvandva* compounds occurring in ṚV 10.85.11 and ṚV 10.114.6 ***ṛksāmā́bhyām***; the monosyllabic word *ṛc-* is placed first in both cases. This is a compound of the common *itaretarayoga* type inflected in the dual.

1.4 Coordinative strings involving specific names of ritual offerings

1. *ghṛta-* n. 'ghee' + *ājya-* n. 'melted butter'

ṚV 10.79.5 […] ***ā́jyair ghṛtaír*** *juhóti* […]
'[…] he sacrifices with melted portions of butter and ghee […]'

- There are no further instances of interaction between the two words *ājya-* and *ghṛta-* in the ṚV.
- To the best of my knowledge, there are no *dvandva* compounds formed out of the combination of these two words not even not even in the literature subsequent to the ṚV.
- From a Pāṇinian point of view, the word *ājya-*, beginning with a vowel and ending in -a, should be placed first in a *dvandva* compound according to rule A 2.2.33.

2. *ghṛta-* n. 'ghee'+ *āśira-* n. 'milk mixture'

ṚV 1.134.6 víśvā ít te dhenávo duhra ***āśíraṃ ghṛtáṃ*** *duhrata āśíram* //
'all your milk cows milk the milk mixture, the ghee, they milk the milk mixture'.
ṚV 8.6.19 […] ***ghṛtáṃ*** *duhata* ***āśíram*** /
'[…] they milk the ghee, the milk mixture'.

- No further interaction of these two words can be observed in the ṚV.
- To the best of my knowledge, there are no compounds formed by combining the two words *ghrta-* and *āśira-*
- From a Pāṇinian point of view the disyllabic word *ghṛta-* should be placed first in a *dvandva* compound when it is combined with the trisyllabic word *āśira-*. No trend can be observed in the coordinative syntactic strings shown above.

3. *ghṛta-* n. ‘ghee’ + *madhu-* n. ‘honey’

ṚV 1.157.2 […] ***ghṛténa*** *no* ***mádhunā*** *kṣatrám ukṣatam* /

‘[…] let you sprinkle our dominion with the ghee and the honey’.

ṚV 3.1.8 *ścótanti dhā́rā* ***mádhuno ghṛ́tásya*** […]

‘drops of honey and ghee are falling […]’

ṚV 5.42.3 […] *unáttainam abhí* ***mádhvā ghṛténa*** /

‘[…] wet him (the poet) with honey and ghee’.

ṚV 8.6.43 […] ***mádhor ghṛtásya*** *pipyúṣīm* /

‘[…] swollen of honey and of ghee’.

ṚV 8.24.20 […] ***ghṛtā́t*** *svā́dīyo* ***mádhunaś ca*** […]

‘[…] sweeter than ghee and honey […]’[203]

ṚV 10.30.13 […] *ā́paḥ* […] ***ghṛtám*** *páyāṃsi bíbhratīr* ***mádhūni*** /

‘[…] the waters which are carrying ghee, milk, honey’.

ṚV 10.110.10 […] *vánaspátiḥ śamitā́ devó agníḥ svádantu havyám* ***mádhunā ghṛténa*** //

‘[…] let the lord of the forest, the butcher and god Agni sweeten the *havya* with honey and ghee’.

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- Instances of analogous interaction between the two words *madhu-* and *ghṛta-* can be observed elsewhere in the ṚV. Consider ṚV 7.47.1 ***ghṛtaprúṣam mádhumantaṃ*** […] ‘sprinkling ghee, rich in honey’, ṚV 9.86.37 […] ***madhumad ghṛtam*** […] ‘ghee rich in honey’ (in the sense of mixture), ṚV 10.5.4 *ghṛtair annair vāvṛdhāte madhūnām* // ‘they grew up with ghee and foods of honey’. Also consider Atharvavedic passages where the words *ghṛta-* and *madhu-* form coordinative syntactic strings: see, e.g., ŚS 5.7.2, ŚS 18.3.10.
- The combination of the two words *madhu-* and *ghṛta-* gives rise to *dvandva* compounds that are attested, e.g., in PārGS 1.16.4, 2.13.2 […] ***madhughṛte*** […] and in ArthaŚ 14.2.3.1, 3.41.1, 3.54.1 […] ***madhughṛtābhyām*** […].
- From a Pāṇinian point of view, according to rule A 2.2.32, the word *madhu-* should be placed first in a *dvandva* compound since it ends with the vowel -u. This trend is respected in the instances of *dvandva* compounds attested in the literature subsequent to the ṚV. As

[203] Note that cases such as this one are partiularly ambiguous since two terms of comparison could not be coordinated. They could rather be independent from each other but related in parallel to the comparative *svā́dīyas.*

far as the ṚV is concerned, out of 7 instances of syntactic coordination between the two words *madhu-* and *ghṛta-*, *madhu-* is placed first 4 times. Even if quite balanced, the trend of the word-order of Ṛgvedic syntactic strings is coherent with the one observed for the relevant *dvandva* compounds.

4. *ghṛta-* n. 'ghee' + *payas-* n. 'fluid, milk'

ṚV 9.62.9 *tvám indo pári srava svā́diṣṭho áṅgirobhyaḥ* / *varivovíd* ***ghṛtám páyaḥ*** //
'You, o drop, flow around ghee and milk, sweetest for the Aṅgiras, granting space!'
ṚV 9.74.4 *ātmanván nábho duhyate* ***ghṛtám páyaḥ*** […]
'the cloud provided with *ātman* is milked of ghee and fluid/honey […]'.
ṚV 9.86.37 *tā́s te kṣarantu mádhumad* ***ghṛtám páyaḥ*** […]
'let them stream *ghee* full of honey, the fluid/honey for you!'
ṚV 10.19.7 *pári vo viśváto dadha ūrjā́* ***ghṛténa páyasā*** /
'I hold you, from all sides, with the food, with the ghee, with the fluid/honey'.
ṚV 10.30.13: […] *ā́paḥ* […] ***ghṛtám*** *páyāṃsi bíbhratīr* ***mádhūni*** /
'[…] the waters which are carrying ghee, fluid/honey, honey'.

- An analogous interaction between the two words *ghrta-* and *payas-* can be observed in ṚV 6.70.2a […] ***páyasvatī ghṛtáṃ*** […] 'ghee full of fluid/honey' (in the sense of mixture).
- To the best of my knowledge, there are no *dvandva* compounds formed out of the combination of the word *ghṛta-* and the word *payas-* not even in the literature subsequent to the ṚV.
- From a Pāṇinian point of view these words do not follow any fixed order.

5. *havis-* n. 'oblation' + *ghṛta-* n. 'ghee'

ṚV 1.84.18 *kó agním īṭṭe* ***havíṣā ghṛténa*** […]
'who invokes Agni with the oblation, with the ghee? […]'
ṚV 1.93.8 *yó agnī́ṣómā* ***havíṣā*** *saparyā́d devadrī́cā mánasā yó* ***ghṛténa*** /

‘the one who honours Agni and Soma with the oblation, with mind bended to the gods, the one who [honours them] with the ghee’.
ṚV 1.10.4 *jígharmy agníṃ* ***havíṣā ghṛténa*** […]
‘I wet Agni with the oblation, with the ghee […]’

- A parallel interaction between these *havis-* and *gṛtha-* can be observed in ṚV 7.14.2 *vayáṃ* ***ghrténā****dhvarasya hotar vayáṃ deva* ***havíṣā*** *bhadraśoce* // ‘we with the ghee, o hotṛ of the sacrifice, we with the oblation, o god of good flame’. However, there are passages where the status of these two words is not on the same level; consider, e.g., ṚV 10.14.14.
- To the best of my knowledge, there are no *dvandva* compounds formed by combining the word *havis-* and the word *ghṛta-*.
- From a Pāṇinian point of view these words do not follow any fixed order.

1.5 Coordinative strings involving men and gods

1. *deva-* m. ‘god’+ *mānuṣa-* m. ‘man’

ṚV 4.54.3 ***devéṣu ca*** *savitar* ***mā́nuṣeṣu*** *ca tváṃ no átra suvatād ánāgasaḥ* //
‘o Savitṛ, vivify us as blameless among the gods and the men’.
ṚV 10.125.5 […] *júṣṭaṃ* ***devébhir utá mā́nuṣebhiḥ*** /
‘[…] enjoyed by the gods and men’.

- No further interactions between these two words can be observed in the ṚV.
- *dvandva* compounds formed by combining *deva-* and *mānuṣa-* are attested, e.g., in MBh 2.22.25.2 […] ***devamānuṣaiḥ*** // and MBh 5.59.4.1 ***devamānuṣayoḥ*** […].
- From a Pāṇinian point of view, the disyllabic word *deva-* should be placed first in a *dvandva* compound. This trend can also be observed in the ṚV and in the attested *dvandva* compounds.

2. *deva-* m. ‘god’ + *marta-* m. ‘man, mortal’

ṚV 1.70.6 […] ***devā́nāṃ*** *jánma* ***mártāṃś ca*** *vidvā́n* //
‘[…] you (Agni) know the race of the gods and the mortals’.
ṚV 1.190.1 […] *yásya* ***devā́*** *āśṛṇvánti* [...] ***mártāḥ*** //

‘[…] whom the gods and the mortals listen to […]’

ṚV 2.7.2 *mā́ no árātir īśata* ***devásya mártyasya ca*** /

‘let the adversity of the gods and of the mortals not take over us’.

ṚV 4.12.5 […] *ūrvā́d* ***devā́nām utá mártyānām*** /

‘[…] (release us) from the enclosure of the gods and of the mortals’.[204]

ṚV 6.15.8 ***devā́saś ca mártāsaś ca*** […] *ṣedire* //

‘the gods and the mortals […] sat down’.

ṚV 8.2.4 *antár* ***devā́n mártyāṃś ca*** //

‘among the gods and the mortals’.

ṚV 8.39.6 *agnír jātā́* ***devā́nām*** *agnír veda* ***mártānām*** […]

‘Agni knows the races of the gods, Agni, of the mortals […]’.

- Further interaction between these two words in the ṚV can be observed in a disjunctive syntactic relation: see, e.g, ṚV 4.17.19 *devā́* […] *ná mártāḥ* ‘no god nor mortal’.
- To the best of my knowledge, there are no *dvandva* compounds formed out of the combination of *deva-* and *marta-* not even in the literature subsequent to the ṚV.
- From a Pāṇinian point of view these words do not follow any fixed order. However, in Ṛgvedic coordinative syntactic strings *deva-* is always placed first.

3. *deva-* m. ‘god’ + *nṛ-* m. ‘man, hero’

ṚV 10.49.11 *evā́* ***devā́ṁ*** *índro vivye* ***nṝ́n*** […]

‘indeed, Indra approached the gods and the men/heroes’.

- A further instance of parallel interaction between these two words in the ṚV can be observed in ṚV 7.74.4, where the plural vocatives of *deva-* and *nṛ-* are employed in the same verse.

[204] See Jamison-Brereton (2014). Geldner takes *ūrvá-* in b as a proper noun referring to the Vala myth, but the word generally just means an ‘enclosure’, here an imprisoning one.

- To the best of my knowledge, there are no *dvandva* compounds formed out of the combination of these two terms not even in the literature subsequent to the ṚV.
- From a Pāṇinian point of view, the monosyllabic word *nṛ-* should be placed first in a *dvandva* compound.

1.6 Coordinative Instances of Ṛgvedic Material Lexicon

1. *adhvan-* m. 'road, way' + *pathin-* m. 'road, way'

ṚV 6.16.3 *véttthā hí vedho* ***ádhvanaḥ pathā́ś ca*** […]
'indeed, o wise one, you know the *adhvan* and the *pathin* […]'.
ṚV 6.46.13 *asamané* ***ádhvani*** *vṛjiné* ***pathí*** *śyenā́m̐ iva śravasyatáḥ* //
'on an uneven *adhvan*, on a deceitful *pathin*, like an eagle preying the fame'.

- No further significant interaction between these two words can be observed in the ṚV.
- To the best of my knowledge, there are no *dvandva* compound formed by combining the two words *adhvan-* and *pathin-* not even in the literature subsequent to the ṚV.
- From a Pāṇinian point of view these words do not follow any fixed order.

2. *arvat-* m. 'courser, horse' + *vāja-* m. 'prize[205], horse'

ṚV 6.45.12 *dhībhír árvadbhir* ***árvato vā́jām̐*** *indra śravā́yyān* / […] *jeṣma* […]
'o Indra, might we win horses, (might we win) prizes worthy to be celebrated by means of insightful thoughts as our coursers'.

- See also ṚV 5.54.14 *yūyám* ***árvantam*** *bharatā́ya* ***vā́jaṃ*** *yūyáṃ dhattha* […] 'you placed a horse for Bharata, you (placed) a prize […]', where the considered nouns seem to share a parallel status. Further instances show a different perspective as far as their relationship is concerned: consider ṚV 1.27.9 *sá* ***vā́jaṃ*** *viśvácarṣaṇir* ***árvadbhi****r astu tárutā* / 'let the

[205] See Jamison-Brereton (2014).

Viśvacarṣaṇi be the one who wins the prize with the horses' where *arvan-* is inflected in the instrumental case ending and represents the means to obtain the *vāja-*. For an analogous analysis, see ṚV 1.64.13, ṚV 8.40.2, ṚV 8.103.5. A slightly different perception of the relationship between these words can be observed in ṚV 5.85.2, where *arvan-* is inflected in the locative case ending.

- To the best of my knowledge, there are no *dvandva* compounds formed by combining the two words *arvan-* and *vāja-*.
- From a Pāṇinian point of view these words do not follow any fixed order.

3. *khādi-* m. 'brooch, ring' + *kṛti-* m.f. 'weapon, dagger'

ṚV 1.168.3 […] *hásteṣu* ***khādíś ca kṛtíś ca*** *sáṃ dadhe* //
'in the hands the ring and the dagger are placed together'.

- No further interaction between these two words can be observed in the ṚV. Note that *khādhi-* occurs only 10 times in the ṚV.
- To the best of my knowledge, there are no *dvandva* compound formed by combining the two words *khādi-* and *kṛti-*.
- From a Pāṇinian point of view these words do not follow any fixed order.

4. *pṛtanā-* f. 'army, battle' + *viś-*[206] f. 'community'

ṚV 6.41.5 […] *prắsmắ̃ ava* ***pṛ́tanāsu*** *prá* ***vikṣú*** //
'protect us in the battles, in the communities'.

- No further interaction can be observed between these two words in the ṚV.
- To the best of my knowledge, there are no *dvandva* compounds formed out of the combination of the two words *pṛtanā-* and *viś-*.

[206] See also Maggi (2019: 10), who maintains that viś- could have represented "almeno in prima istanza, piuttosto che qualcosa di visibile sul terreno, un'entità astratta nell'ambito dell'organizzazione sociale".

- From a Pāṇinian point of view, the monosyllabic word *viś-* should be placed first in a *dvandva* compound.

5. *ratha-* m. 'chariot' + *aśva-* m. 'horse'

ṚV 1.38.12 *sthirā́ vaḥ santu nemáyo* ***ráthā áśvāsa*** *eṣām* /
'let your fellies be strong, and their chariots, (their) horses'.
ṚV 2.15.4 *sáṃ góbhir* ***áśvair*** *asṛjad* ***ráthebhiḥ*** […]
'he endowed (Dabhīti) with cows, with horses, with chariots'.
ṚV 3.58.3 *suyúgbhir* ***áśvaiḥ*** *suvṛ́tā* ***ráthena*** *dásrāv imáṃ śṛṇutaṃ ślókam ádreḥ* /
'with well joined horses, with a well running chariot, o you two who perform wonderful deeds (i.e. the two Aśvins), listen this *śloka* of the pressing stone'.
ṚV 4.4.8 ***sváśvās*** *tvā* ***suráthā*** *marjayema* [...]
'we with good horses, with good chariots would adorn you […]'
ṚV 4.14.4 *ā́ vāṃ váhiṣṭhā ihá té vahantu* ***ráthā áśvāsaḥ*** […]
'let the best conveyer convey you two here, these chariots, the horses […]'.
ṚV 4.45.2 *úd vām pṛkṣā́so mádhumanta īrate* ***ráthā áśvāsa*** […]
'your foods full of honey, the chariots, the horses move upwards […]'
ṚV 5.58.6 *yát prā́yāsiṣṭa pṛ́ṣatībhir* ***áśvair*** *vīḷupavíbhir maruto* ***ráthebhiḥ*** /
'when you two went forth with dappled horses, o Maruts, with hard-tired chariots'.
ṚV 8.5.35 *hiraṇyáyena* ***ráthena*** *dravátpāṇibhir* ***áśvaiḥ*** /
'with a golden chariot, with horses of running feet'.
ṚV 8.74.10 ***áśvam*** *íd gā́ṃ* ***ratha****prā́ṃ tveṣám índraṃ ná sátpatim* /
'a horse, a cow, the one (acc.) who vehement fills the chariot like Indra, the lord of heroes".
ṚV 10.70.3 *váhiṣṭhair* ***áśvaiḥ*** *suvṛ́tā* ***ráthenā́*** *devā́n vakṣi* [..]
'with the best conveying horses, with your well running chariot sing you will convey the gods'.
ṚV 10.75.8 ***sváśvā*** *síndhuḥ* ***suráthā*** […]
'Sindhu is endowed with good horses, with good chariots'.

- Further instances of interaction in the same verse between *aśva-* and *ratha-* in the ṚV show how the horses are intended as the factor that impels the movement of the chariot itself. To observe this subordinate relation, see among the many analogous instances, ṚV 5.31.4

ánavas te rátham áśvāya takṣan […] ‘The Anu people made a *chariot*- for your *horse*-’. An extremely close relationship between *aśva*- and *ratha*- emerges, e.g., from ṚV 1.161.3 *agníṃ dūtám práti yád ábravītan**áśvaḥ** kártvo **rátha** utéhá kártvaḥ* / ‘what you said to Agni the messenger: a chariot should be made, and then a horse should be made’; see also ṚV 10.119.3 *ún mā pītā́ ayaṃsata rátham áśvā ivāśávaḥ* / ‘the drinks raised me up, like fast horses [raised up] a chariot.

- *dvandva* compounds of the *samāhāra* type formed by combining these two words are attested, e.g., in MS 7.96 ***rathāśvaṃ*** […] and MBh 1.89.7.8 […] ***rathāśvaṃ*** […].
- From a Pāṇinian point of view, the word *aśva*-, beginning with a vowel and ending in -a should be placed first in a *dvandva* compound according to A 2.2.33. This trend can be observed in the Ṛgvedic syntactic strings, where the word *aśva*- is placed first 6 times out of 9 cases. However, the *dvandva* compounds attested in literature show the inverted word-order.

6. *ratha*- m. ‘chariot’ + *gṛha*- m. ‘house’

ṚV 1.140.12 ***ráthāya** nā́vam **utá** no **gṛhā́ya*** […] *rāsy agne* /
‘for our chariot and (our) house, […] Agni, give a vessel’.

- No further interaction between these words can be observed in the ṚV.
- To the best of my knowledge, there are no *dvandva* compound formed out of the combination of the two words *ratha*- and *grha*-.
- From a Pāṇinian point of view these words do not follow any fixed order.

7. *ratna*- n. ‘goods, wealth’ + *draviṇa*- n. ‘substance, wealth’

ṚV 1.94.14 *dádhāsi **rátnaṃ drávi̯ṇaṃ ca** dāśúṣé* […]
‘you give the goods and the wealth to the one who is generous’.

- A further analogous interaction between *ratna*- and *draviṇa*- in the ṚV can be observed in ṚV 4.5.12 *kíṃ no asyá drávi̯ṇaṃ kád dha rátnaṃ* […] ‘which (part?) of this *draviṇa* is for us? Which *ratna*, indeed?’ *asyá **drávi̯ṇaṃ** kád dha **rátnaṃ*** […] ‘which (part?) of this

draviṇa is for us? Which *ratna*, indeed?'[207] As for the case of ṚV 4.54.1, the exact meaning conveyed by these two terms is difficult to be set by observing their relationship in the text.

- To the best of my knowledge, there are no *dvandva* compounds formed out of the combination of these two words.
- From a Pāṇinian point of view, the disyllabic word *ratna-* should be placed first in a *dvandva* compound formed in combination with the trisyllabic *draviṇa-*, according to rule A 2.2.34.

8. *ratna-* n. 'goods, wealth'+ *vasu-* n. 'goods, wealth'

ṚV 1.41.6 *sá* ***rátnam*** *mártyo* ***vásu*** […] *gacchati* […]
'the mortal approaches the goods, the wealth […]'.
ṚV 3.2.11 […] ***vásu rátnā*** *dáyamāno ví dāśúṣe* //
'[…] one giving the wealth, the goods to the one who is generous'.

- Further interactions between these two words in the ṚV can be observed in ṚV 1.164.49 […] ***ratnadhā́ vasuvíd*** […] 'giver of *ratna*, acquirer of *vasu*' and ṚV 6.19.10 *ī́kṣe hí* ***vásva*** *ubháyasya rājan dhā́* ***rátnam*** *máhi sthūrám bṛhántam* // 'King, indeed you dispose of both kinds of *vasu*. Give a great, strong(?), abundant *ratna*'. In the mentioned verses it is possible to observe the opposition between the actions of giving and acquiring.
- A *dvandva* compound formed by combining the two words *ratna-* and *vasu-* is attested in MBh 13.61.90.2 ***vasuratnasamākīrṇāṃ*** […] 'filled with *vasu* and *ratna*'.
- From a Pāṇinian point of view, according to rule A 2.2.32, the word *vasu-* should be placed first in a *dvandva* compound. This is mirrored by the occurrence in the MBh. The Ṛgvedic coordinative strings show no fixed order; on the contrary, further instances of coordination by means of the particle *ca* in the MBh show a different word-order with respect to the compound attested in the same text. Consider, e.g., MBh 1.198.7.6 […] ***ratnāni vasūni*** *vividhāni* ***ca***, MBh 1.198.12.2 […] ***ratnāni*** *vividhāni* ***vasūni ca***, MBh 1.212.1.465 […] ***ratnāni ca vasūni ca***.

[207] The present verse is not listed among the instances of coordination because the presence of two interrogative pronouns suggests a more marked distinction as far as the sentences are concerned.

9. *saṃga-* m. ‘conflict, war’ + *samad-* f. ‘battle’

ṚV 4.20.1 […] ***saṃgé samátsu*** *turváṇiḥ pṛtanyűn* //
‘[…] overcoming the enemies in the war, in battles’.
ṚV 10.133.1 […] ***saṃgé samátsu*** *vṛtrahấ*[…]
‘[…] the smasher of Vṛtra in the war, in battles’.

- No further instances of the word *saṃga-* can be found in the ṚV.
- To the best of my knowledge, there are no *dvandva* compounds formed by combining the two words *saṃga-* + *samad-*.
- From a Pāṇinian point of view these words do not follow any fixed order.

10. *sāyaka-* m. ‘arrow’ + *dhanvan-* n. ‘bow’

ṚV 2.33.10 *árhan bibharṣi* ***sấyakāni dhánvấ***[…]
‘[…] being worthy, you carry the arrows, the bows [...]’

- No further interaction can be observed between these two words in the ṚV.
- To the best of my knowledge, there are no *dvandva* compounds formed by combining these two words.
- From a Pāṇinian point of view, the disyllabic word *dhanvan-*[208] should be placed first in a *dvandva* compound formed from the combination with the trisyllabic *sāyaka-*.

11. *vastra-* n. ‘cloth’+ *peśana-* n. ‘ornaments’[209]

ṚV 10.1.6 […] ***vástrāṇy*** *ádha* ***péśanāni*** *vásāno* […]
‘[…] wearing now cloths, ornaments […]’

[208] See A 5.4.132.
[209] See Jamison-Brereton (2014).

- No further interactions can be observed between these two words in the ṚV. Note that the word *peśana-* is attested only in the ṚV.
- To the best of my knowledge, there are no *dvandva* compounds formed by combining these two words.
- From a Pāṇinian point of view, the disyllabic word *vastra-* should be placed first in a *dvandva* compound formed from the combination with the trisyllabic words *peśana-*.

12. *vāśī-* f. 'axe' + *añji-* mfn 'ointment'

ṚV 1.37.2 *yé pṛ́ṣatībhir ṛṣṭíbhiḥ sākáṃ* ***váśībhir añjíbhiḥ*** /
'who, along with the dappled ones, the spears, the axes, the ointments'.

- A further interaction between the words *vāsī-* and *añji-* can be observed in ṚV 5.53.4 *yé* ***añjíṣu*** *yé* ***váśīṣu*** […] 'those in *añji*s, those in *vāsī*s […]'.
- To the best of my knowledge, there are no *dvandva* compounds formed by combining these two words.
- From a Pāṇinian point of view, the word *añji-* should be placed first in a *dvandva* compound since it is termed GHI.

2. Natural Pairings

2.1 Coordinative instances of Ṛgvedic Human Body Lexicon

1. *aṅga-* n. 'limb' + *tanū-* f. 'body'

ṚV 1.89.8 *sthiraír* ***áṅgais*** *tuṣṭuvā́ṃsas* ***tanū́bhir*** […]
'having praised with strong limbs, with the bodies […]'.

- No further interaction between the word *aṅga-* and the word *tanū-* can be observed in the ṚV.
- To the best of my knowledge, there are no *dvandva* compounds formed by combining these two words.
- From a Pāṇinian point of view, according to A 2.2.33, the word *aṅga-*, beginning with a vowel and ending in -a should be placed first in a *dvandva* compound.

2. *ās-* n. ‘mouth, face’ + *jihva-* m. ‘tongue’

ṚV 1.140.2 *anyásy**āsā́ jihváyā** jényo vṛ́ṣā* […]
‘with the mouth of one, with the tongue, he (Agni) is a true bull/man […]’.
ṚV 7.16.9 ***jihváyā*** […] ***āsā́*** […] *ágne rayím* […] *vaha* […]
‘with the tongue with the mouth […] o Agni, convey here the wealth […]’.

- No further interaction between the word *ās-* and the word *jihva-* can be observed in the ṚV. Note that the word *ās-* is attested only in the passages shown above and in TS 2.2.12.15.
- To the best of my knowledge, there are no *dvandva* compounds formed out of the combination of these two words.
- From a Pāṇinian point of view, according to A 2.2.33, the word *āsa-*, beginning with a vowel and ending in -a should be placed first in a *dvandva* compound.

3. *karṇa-* m. ‘ear’ + *grīva-* m. ‘neck’

ṚV 1.122.14 *híraṇya**karṇam** maṇi**grīvam** árṇas tán no víśve varivasyantu devā́ḥ* /

‘let that all the gods grant space for us to (this) wave made of a golden ear, of a neck with ornaments’.

- No further interactions between the word *karṇa-* and the word *grīva-* can be observed in the ṚV.
- To the best of my knowledge, there is one occurrence of a *dvandva* compound where, among other terms, also *karṇa-* and *grīva-* are involved: see AHS 1.27.11 ***grīvākarṇa**śaṅkhaśiraḥśritāḥ*.
- From a Pāṇinian point of view these words do not follow any fixed order.

4. *manas-* m. ‘mind’+ *hṛd-* n. ‘heart’

ṚV 1.61.2 *índrāya **hṛdā́ mánasā** manīṣā́* […]

‘to Indra with the heart, with the mind, with the intelligence […]’.

ṚC 1.73.10 *etā́ te agna ucáthāni vedho júṣṭāni santu* ***mánase hṛdé ca*** /

‘o Agni, let these praises be enjoined by you, o pious one, in the mind, in the heart’.

ṚV 1.171.2 […] ***hṛdā́*** *taṣṭó* ***mánasā*** […]

‘[…] (the *stoma*) fashioned by the heart, by the mind’.

ṚV 4.37.2 *té vo* ***hṛdé mánase*** *santu yajñā́* […]

‘let these sacrifices be to your heart, to (your) mind’.

ṚV 4.58.6 […] ***hṛdā́ mánasā*** *pūyámānāḥ* /

‘[…] purified by the heart, by the mind’.

ṚV 6.28.5 […] *ichā́mīd* ***dhṛdā́ mánasā*** *cid índram* //

‘indeed, I search for Indra with the heart, with the mind’.

ṚV 7.98.2 *utá* ***hṛdótá mánasā*** *juṣāṇá* […]

‘having pleasure with the heart and with the mind […]’

ṚV 10.10.13 […] *naívá te* ***máno hṛ́dayaṃ cā****vidāma* /

‘[…] indeed, we have not found your mind and your heart’.

ṚV 10.160.3 *yá uśatā́* ***mánasā*** *sómam asmai* ***sarvahṛdā́*** *devákāmaḥ sunóti* /

‘the one who with a whishing mind, with his whole heart, longing for the gods, presses the soma for him (Indra)’.

ṚV 10.177.1 […] ***hṛdā́*** *paśyanti* ***mánasā*** […]

[…] they see with the *heart*, with the *mind* […]’

- A close interaction between the word *manas-* and the word *hṛd-* can be observed in ṚV 8.100.5, ṚV 10.47.7 and ṚV 10.71.8.
- *dvandva* compound formed out of the combination of these two words can be observed, e.g., in MBh 2.10.8 ***manohṛdaya****saṃhlādī*. Consider also the reversed word-order in R 1.18.20 ***hṛdayamano****vidāraṇaṃ*.
- From a Pāṇinian point of view these words do not follow any fixed order. In the ṚV the word *hṛd-* is placed first 7 times out of 11 occurrences.

5. *pāṇi-* m. ‘(palm of) hand’+ *hasta-* m. ‘hand’

ṚV 4.21.9 *bhadrā́ te* ***hástā*** *súkṛtotá* ***pāṇí*** […]

‘blessed are your hands, well done your palms […]’.[210]

- An analogous case is represented by ṚV 6.49.9 ***supāṇím*** […] ***sugábhastim***, ‘having good *pāṇi* and good *gabhasti*’, where also *gabhasti* means ‘hand’.
- To the best of my knowledge, there are no *dvandva* compounds formed by combining the word *pāṇi-* with the word *hasti-*.
- From a Pāṇinian point of view these words do not follow any fixed order.

6. *uras-* n. ‘chest’+ *aṃsa-* m. ‘shoulder’

ṚV 1.158.5 […] *svayáṃ dāsá* ***úro áṃsāv*** *ápi gdha* //
‘[…] the Dāsa also ate his own chest and shoulder’.

- No further interactions between *uras-* and *aṃsa-* (inflected in the dual case ending in the verse shown above) can be observed in the ṚV.
- To the best of my knowledge, there are no *dvandva* compounds formed by combining these two words.
- From a Pāṇinian point of view, *aṃsa-* should be placed first in a *dvandva* compound.

2.2 Coordinative instances of Ṛgvedic Familiar Lexicon

1. *nṛ-* m. ‘man, hero’+ *nārī-* f. ‘woman, wife’

ṚV 1.43.6 […] ***nṛ́bhyo nā́ribhyo*** […]
‘[…] to the men/heroes and to the women […]’
ṚV 8.77.8 […] ***nṛ́bhyo nā́ribhyo*** […]
‘[…] to the men/heroes and to the women […]’

- There are no further cooccurrences of these two words in the ṚV.
- *Dvandva* compounds formed from the combination of the two words *nṛ-* and *nārī-* are attested, e.g., in MBh 1.199.36.13 ***naranārī*** […] and, with the reversed order in MBh 13.105.26 ***nārīnarāṇāṃ***.

[210] Note that in this verse it is perhaps possible to observe a coordination between two nominal phrases rather than two simple nouns.

- From a Pāṇinian point of view, the monosyllabic word *nṛ*- should be placed first in a *dvandva* compound. This trend is reflected by the instances of Ṛgvedic coordinative syntactic strings and in the vast majority of *dvandva* compounds attested in the subsequent literature (cf. MBh 13105.26.2 […] ***nārīnarāṇāṃ*** […]).

2. *gnā*- f. ‘wife, divine female’+ *nṛ*- m. ‘man, hero’

ṚV 6.68.4 ***gnā́ś ca*** *yán* ***náraś ca*** *vāvṛdhánta víśve devā́so* […]
‘when all the gods, wives/divine females and men, grew up […]’.

- This is the only case where these words cooccur in the ṚV.
- To the best of my knowledge, there are no *dvandva* compounds formed by combining the two words *gnā*- and *nṛ*-.
- From a Pāṇinian point of view these words do not follow any fixed order.

3. *pitṛ*- m. ‘father’ + *mātṛ*- f. ‘mother’

ṚV 1.24.1 […] ***pitáraṃ ca*** *dṛśéyam* ***mātáraṃ ca*** //
‘[…] I would see the father and the mother’.
ṚV 1.89.4 […] *tán* ***mātā́*** *pṛthivī́ tát* ***pitā́*** *dyaúḥ* /
‘[…] this mother Earth, this father Heaven’.
ṚV 1.89.10 […] *áditir* ***mātā́*** *sá* ***pitā́*** […]
‘[…] Aditi is the mother, she is the father […]’.
ṚV 1.114.7 *mā́ no vadhīḥ* ***pitáram*** *mótá* ***mātáram*** […]
‘do not kill our father nor (our) mother […]’.
ṚV 1.159.2 *utá manye* ***pitúr*** *adrúho máno* ***mātúr*** *máhi svátavas* […]
‘and I think of the great and self-strong mind of the benevolent father, of the mother […]’.
ṚV 1.160.2 *uruvyácasā mahínī asaścátā* ***pitā́ mātā́ ca*** *bhuvanāni rakṣataḥ* […]
‘The great, wide extending father and mother ceaselessly protect the beings’.
ṚV 1.163.13 […] *árvāṁ áchā* ***pitáram mātáraṃ ca*** /
‘the courser (moved) towards the father and the mother’.
ṚV 1.185.10 […] ***pitā́ mātā́ ca*** *rakṣatām ávobhiḥ* //
‘[…] let the father and the mother protect (us) with (their) attentions’.

ṚV 1.185.11 *idáṃ dyāvāpṛthivī satyám astu* ***pítar mā́tar*** […]

'let this be true, o Heaven and Earth, o father, o mother […]'

ṚV 1.191.6 *dyaúr vaḥ* ***pitā́*** *pṛthivī́* ***mātā́*** […]

'the Heaven is your father, the Earth (your) mother'.

ṚV 4.6.7 *ná yásya sā́tur jánitor ávāri ná* ***mātárāpitárā*** […]

'whose womb has not been obstructed nor his mother and father […]'.

ṚV 4.17.12 *kíyat svid índro ádhy eti* ***mātúḥ*** *kíyat* ***pitúr*** […]

'how much does Indra remember of (his) mother, how much of his father […]?'.

ṚV 5.43.2 ***pitā́ mātā́*** *mádhuvacāḥ suhástā* […]

'the father, the mother with honeyed words, with good hands […]'

ṚV 6.1.5 […] *bhūḥ* ***pitā́ mātā́*** *sádam ín mā́nuṣāṇām* //

'[…] become a father, a mother indeed forever of the men'.

ṚV 6.51.5 *dyaùṣ* ***pítaḥ*** *pṛ́thivi* ***mā́tar*** […] *mṛḷátā naḥ* /

'o Heaven, father, o Earth, mother […] be gracious to us'.

ṚV 6.70.6 […] ***pitā́ mātā́*** *viśvavídā sudáṃsasā* /

'[…] the father, the mother, the all-knowing of wonderous power'.

ṚV 8.69.15 *sá pakṣan mahiṣám mṛgám* ***pitré mātré*** *vibhukrátum* //

'he cooked Ta wild buffalo of mighty power for the father, for the mother.'

ṚV 8.98.11 *tváṃ hí naḥ* ***pitā́*** *vaso tvám* ***mātā́*** […]

'indeed you are our father, o good one, you (our) mother […]'

ṚV 9.73.5 ***pitúr mātúr*** *ádhy ā́ yé samásvarann* […]

'those who sounded in unison from the father and the mother'.

ṚV 10.34.4 ***pitā́ mātā́*** *bhrā́tara enam āhur* […]

'the father, the mother, the brothers say of him […]'

ṚV 10.54.3 […] ***mātáraṃ ca pitáraṃ ca*** *sākám ájanayathās* […]

'[…] you generated at the same time (your) mother and (your) father […]'.

ṚV 10.88.15 […] *yád antarā́* ***pitáram mātáraṃ ca*** //

'[…] what (is) between the father and the mother'.

ṚV 10.189.1 […] *ásadan* ***mātáram*** *puráḥ* / ***pitáraṃ ca*** […]

'[…] it (the dappled cow) sat in front of the mother and of the father […]'

- An analogous interaction between the two words *pitṛ-* and *mātṛ-* can be observed e.g., in ṚV 1.164.10 *tisró mātṝ́s trī́n pitṝ́n* […] 'three mothers and three fathers', ṚV 1.164.33 *dyaúr*

me pitā́ janitā́ […] *bándhur me mātā́ pṛthivī́*, 'The heaven is my father, my progenitor […] my female relative, my mother, is the Earth'.

- *dvandva* compounds formed from the combination of the two words *pitṛ-* and *mātṛ-* are attested in a great number of occurrences with the form *mātāpitarau*. The form *pitarāmātarā*, with the reversed word-order and both the constituents inflected in the dual case ending is attested in ŚBM 5.1.5.26.
- From a Pāṇinian point of view these words do not follow any fixed order. The forms *mātarāpitarau* and *pitarāmātarā* are introduced via *nipātana* by A 6.3.33 and 34 respectively. These rules provide a special constraint for the compounds, namely *udīcām* 'in the northerner language' (A 6.3.33) and *chandasi* 'in the *chandas*' (A 6.3.34). However, the compound *pitarāmātarā* is not found in the ṚV, where one can observe the form *mātarapitarā* (ṚV 4.6.7) and not the *mātarapitarau* taught in rule A 6.3.33.[211] As far as the word-order of Ṛgvedic syntactic strings, the word *pitṛ-* is placed first in 17 out of 23 cases.

4. *toka-* n. 'offspring' + *tanaya-* n. 'offspring, posterity'

ṚV 1.64.14 […] ***tokám*** *puṣyema* ***tánayaṃ*** *śatáṃ hímāḥ* //

'[…] may we gain the offspring, the descendance, one hundred winters'.

ṚV 1.92.13 *yéna* ***tokáṃ ca tánayaṃ ca*** *dhā́mahe* //

'through which we obtain the offspring and the descendance'.

ṚV 1.100.11 *apā́ṃ* ***tokásya tánayasya*** *jeṣé* […]

'in the gaining of waters, of the offspring, of the descendance […]'.

ṚV 1.114.6 […] *tmáne* ***tokā́ya tánayāya*** *mṛḷa* //

'[…] be gracious to myself, the offspring, the descendance'.

ṚV 1.114.8 *mā́ nas* ***toké tánaye*** […] *rīriṣaḥ* /

'do not destroy our offspring, (our) descendance […]'.

ṚV 1.147.1 *ubhé yát* ***toké tánaye*** *dádhānā ṛtásya sā́man raṇáyanta devā́ḥ* //

'when placing both the offspring, the descendence, the gods rejoice in the *sāman* of truth'.

[211] Note that, albeit the feminine elliptic dual of *matṛ-* has been replaced by a masculine one in the tradition of the sacred text (ṚV 10. 140. 2; TS 4. 2. 7. 3), in Vedic Sanskrit both the duals of *pitṝ* and *mātṝ* possess the distinctive trait of conveying the sense of 'parents' (Macdonell 1916: §193). Actually, the behaviour of this term shares some analogies with Gothic pl. *berusjos* (Lehmann 1986 s.v.) However, the feminine option is excluded from Pāṇini's teachings, which only give an account of the masculine one: *pitarau* = mother and father (see the *ekaśeṣa* section A 1. 2. 64-73). I have studied elsewhere (Borghero forthcoming) the textual evidence of the use of the feminine dual to signify the whole parental pair in the ṚV.

ṚV 1.189.2 […] *bhávā* ***tokā́ya tánayāya*** *śáṃ yóḥ* //

‘(o Agni) […] become happiness and welfare for the offspring, for the descendance’.

ṚV 2.25.2 ***tokáṃ ca*** *tásya* ***tánayaṃ ca*** *vardhate* […]

‘his offspring and descendance increase […]’.

ṚV 2.30.5 ***tokásya*** *sātaú* ***tánayasya*** *bhū́rer asmā́ṁ ardháṃ kṛṇutād indra gónām* //

‘in the conquest of offspring, of abundant descendance, of cattle, make us partakers, O Indra!’

ṚV 2.33.14 […] ***tokā́ya tánayāya*** *mṛḷa* //

‘[…] be gracious to the offspring, to the descendance’.

ṚV 3.53.18 *bálaṃ dhehi* […] *bálaṃ* ***tokā́ya tánayāya*** *jīváse* […]

‘place strength […] strength to the offspring, to the descendance to live […]’.

ṚV 4.12.5 […] *yáchā* ***tokā́ya tánayāya*** *śáṃ yóḥ* //

‘grant happiness and welfare to the offspring, to the descendance’.

ṚV 4.24.3 […] ***tokásya tánayasya*** *sātaú* //

‘[…] in the conquest of the offspring, of the descendance’.

ṚV 4.41.6 ***toké*** *hité* ***tánaya*** [...]

‘being the offspring, the descendance placed […]’.

ṚV 5.53.13 *yéna* ***tokā́ya tánayāya*** *dhānyàm bī́jaṃ váhadhve ákṣitam* /

‘through which you convey the undecayed grain which is a seed to the offspring, to the descendance’.

ṚV 5.69.3 […] *īḷe* ***tokā́ya tánayāya*** *śáṃ yóḥ* //

‘[…] I summon happiness and welfare for the offspring, for the descendance’.

ṚV 6.1.12 *nṛvád vaso sádam íd dhehy asmé bhū́ri* ***tokā́ya tánayāya*** *paśváḥ* /

‘o excellent one, strongly forever bestow to us, to the offspring, to the descendance abundance of cattle’.

ṚV 6.13.6 […] *ágne* ***tokáṃ tánayaṃ*** *vājí no dāḥ* /

‘[…] o Agni, give us offspring, the descendance, a stallion!’.

ṚV 6.19.7 […] ***tokásya tánayasya*** *sātaú* […]

‘[…] in the conquest of *offspring,* of *descendance* […]’.

ṚV 6.25.4 ***toké*** *vā góṣu* ***tánaye*** *yád apsú ví krándasī urvárāsu brávaite* //

‘or when with respect to the offspring, to the cattle, to the descendance’

ṚV 6.31.1 *ví* ***toké*** *apsú* ***tánaye ca*** *sū́ré 'vocanta* […]

‘they disputed about the offspring, the waters, the descendance and the sun […]’.

ṚV 6.44.18 *apā́ṃ* ***tokásya tánayasya*** *jeṣá* […]

‘in the gaining of waters, of offspring, of descendance […]’.

ṚV 6.48.10 *párṣi* ***tokáṃ tánayam*** *partṛ́bhiṣ* […]

‘may you helpfully protect the offspring, the descendance […]’.

ṚV 6.50.7 […] *dhā́ta* ***tokā́ya tánayāya*** *śáṃ yóḥ* /

‘[…] place happiness and welfare for the offspring, for the descendance’.

ṚV 7.46.3 […] *mā́ nas* ***tokéṣu tánayeṣu*** *rīriṣaḥ* //

‘[…] do not injure our offspring, (our) descendance’.

ṚV 7.52.2 […] *śárma* ***tokā́ya tánayāya*** […]

‘[…] protection to the offspring, to the descendance […]’.

ṚV 7.56.20 […] *dhattá víśvaṃ* ***tánayaṃ tokám*** *asmé* //

‘[…] give us the whole descendance, (the whole) offspring’.

ṚV 7.60.8 […] *ā́* ***tokáṃ tánayaṃ*** *dádhānā* […]

‘[…] preserving the offspring, the descendance […]’

ṚV 7.67.6 […] ***toké tánaye*** *tū́tujānāḥ* […]

‘promoting ourselves in offspring , in descendance […]’.

ṚV 7.82.9 […] ***tokásya tánayasya*** *sātíṣu* //

‘[…] in the conquests of offspring, of descendance’.

ṚV 7.84.5[…] *me gíṃ prá āvat* ***toké tánaye*** *tū́tujānā* /

‘[…] my song protecting and promoting the offspring, (promoting) the descendance’.

ṚV 7.85.5 […] *me gíṃ prá āvat****toké tánaye*** *tū́tujānā* /

‘[…] my song protecting and promoting the offspring, (promoting) the descendance’.

ṚV 8.9.11 *vartís* ***tokā́ya tánayāya*** *yātam* //

‘move your orbit for the offspring, for the descendance’.

ṚV 8.23.12 *prā́va nas* ***toké tánaye*** *samátsv ā́* //

‘protect our offspring, (protect our) descendance in the battles’.

ṚV 8.71.13 *agníṃ* ***toké tánaye*** *śáśvad īmahe* […]

‘we always summon Agni’s protection on our offspring, (on our) descendance […]’.

ṚV 8.103.7 *ubhé* ***toké tánaye*** […] *párṣi* […]

‘protect both the offspring and the descendance […]’

ṚV 9.74.5 […] *yéna* ***tokáṃ ca tánayaṃ ca*** *dhā́mahe* //

‘[…] through which may we acquire offspring and descendance’.

ṚV 9.91.6 […] ***tokā́ tánayāni*** *bhū́ri* /

‘[…] abundant offspring, (abundant) descendance’.

ṚV 10.4.7 *rákṣā ṇo agne* ***tánayāni tokā́*** […]

‘protect, o Agni, our descendance, (our) offspring […]’.

ṚV 10.35.12 *páśve* ***tokā́ya tánayāya*** *jīváse* […]

‘for the cattle, for the offspring, for the descendance to live […]’.

ṚV 10.147.3 *árcanti* ***toké tánaye*** *páriṣṭiṣu medhásātā vājínam* […]

‘they praise prizewinner when offspring and descendance are in distress in the sacrificial ceremonies […]’.

- The only different type of interaction between the two words *toka-* and *tana-* in the same verse can be observed in ṚV 1.31.12 *trātā́* ***tokásya tánaye*** *gávām asy* […] ‘you are the protector over the *tana* of *offspring* and cows’.
- To the best of my knowledge, there are no *dvandva* compounds formed by combining the two words *toka-* and *tana-*.
- From a Pāṇinian point of view these words do not follow any fixed order. In the ṚV, 39 out of 41 strings feature *toka-* in the first place.

5. *putra-* m. ‘son’+ *naptṛ-* m. ‘grandson, descendant’

ṚV 10.85.42 *krī́ḷantau* ***putraír náptṛbhir*** […]

‘playing (du. i.e., the spouses) with the sons, (playing) with the grandsons […]’

- There are no further interactions between these two words in the ṚV.
- *Dvandva* compounds formed from the combination of *putra-* and *naptṛ-* are attested, e.g., in AB 3.48.9 […] ***putranaptāra*** […] and in MBh 14.73.1.3 […] ***putranaptṛbhiḥ*** //.
- From a Pāṇinian point of view these words do not follow any fixed order. In any case, the word-order observed in the coordinative syntactic string shown above[212] is also mirrored in the attested *dvandva* compounds, where the word *putra-* is placed first.

2.3 Coordinative instances of Ṛgvedic Lexicon of the Nature

1. *ajāvaya-* m. ‘ram and sheep’

ṚV 10.90.10 […] *tásmāj jātā́* ***ajāváyaḥ*** /

‘[…] from it ram and sheep were born’.

[212] But see also TS 1.3.11.1.4 […] ***putráṃ náptāram*** […].

- There are no further interactions between the words *aja-* and *avi-* in the ṚV.
- *Dvandva* compounds analogous to the Ṛgvedic one are attested, e.g., in ŚS 5.21.5.
- From a Pāṇinian point of view, the *dvandva* compound *ajāváyaḥ* complies with rule A 2.2.33.

2. *ajra-* m. 'field, plain'+ *giri-* m. 'mountain'

ṚV 8.15.2 *yásya* […] *bṛhát sáho dādhā́ra* […] ***girī́ṁr ájrāṁ*** […]
'whose […] great power holds […] the mountains sing and the fields sing […]'.
ṚV 10.44.8 ***girī́ṁr ájrān*** *réjamānāṁ adhārayad* […]
'he held the trembling mountains (and) fields […]'.

- A different perspective can be observed in ṚV 6.24.8 ***ájrā*** *índrasya* ***giráyaś*** *cid ṛṣvā́* […] 'even the high mountains are fields for Indra' and ṚV 10.59.3 […] *dyaúr ná bhū́miṃ* ***giráyo nā́jrān*** / 'like heaven (with) the earth, like mountains (with) fields'. These verses do not feature a same-level between the two words *ajra-* and *gira-*, since they presuppose a prevalence of *gira-* (in terms of power and physical dimension).
- No *dvandva* compounds formed out of the combination of the two words *ajra-* and *gira-* are attested in literature. Note that *ajra-* is attested only in the ṚV.
- From a Pāṇinian point of view, the word *ajra-* should be placed first in a *dvandva* compound since it starts with a vowel and it ends in *-a*. The trend is not mirrored in Ṛgvedic coordinative syntactic strings, since *gira-* is placed first twice out of 2 cases.

3. *apas-* f. 'water'+ *oṣadhī-* f. 'herb, plant'

ṚV 1.59.3 *yā́ párvateṣv* ***óṣadhīṣv apsú*** […]
'those in the mountains, in the plants, in the waters […]'.
ṚV 1.91.4 […] *párvateṣv* ***óṣadhīṣv apsú*** /
'those in the mountains, in the plants, in the waters'.
ṚV 1.91.22 *tvám imā́* ***óṣadhīḥ*** *soma víśvās tvám* ***apó*** *ajanayas* […]
'o Soma, you generated all these plants, you the waters […]'.
ṚV 1.103.5 […] *sá* ***óṣadhīḥ*** *só* ***apáḥ*** […]

‘[…] he found the plants, he indeed the waters […]’.

ṚV 1.108.11 […] *yát párvateṣv**óṣadhīṣv apsú*** /

‘[…] when in the mountains, when in the plants, in the waters’.

ṚV 1.187.8 *yád **apā́m óṣadhīnām** pariṃśám āriśā́mahe* /

‘when we eat up the best part of the waters (pl.), of the plants’.

ṚV 3.1.13 ***apā́ṃ** gárbhaṃ darśatám **óṣadhīnāṃ** vánā jajāna subhágā vírūpam* /

‘the wood who brings good fortune has engendered the beautiful multiform embryo of the waters and of the plants.’.

ṚV 3.22.2 […] *yád **óṣadhīṣv apsv*** […]

‘[…] when in the plants, in the waters […]’.

ṚV 3.51.5 *índrāya dyā́va **óṣadhīr utā́po** rayíṃ rakṣanti* […]

‘the heavens, the plants and the waters protect the goods for Indra […]’.

ṚV 3.55.22 *niṣṣídhvarīs ta **óṣadhīr utā́po*** […]

‘the plants and the waters are offering to you […]’.

ṚV 4.33.7 *sukṣétrākṛṇvann ánayanta síndhūn dhánvā́tiṣṭhann **óṣadhīr** nimnám **ā́paḥ*** //[213]

‘they made the fields fertile and led the rivers [to flow]; plants went towards the dry soil and waters towards the low ground/depression’.

ṚV 4.57.3 *mádhumatīr **óṣadhīr** dyā́va **ā́po** mádhuman no bhavatv antárikṣam* /

‘May the plants, the heavens, the waters be full of sap (lit. “honey”), may the intermediate space/atmosphere full of sap for us!’.

ṚV 5.41.11 ***ā́pa óṣadhīr** utá no 'vantu* […]

‘let the waters (pl.) and the plants favour us […]’.

ṚV 6.39.5 ***apá óṣadhīr** aviṣā́ vánāni gā́ árvato nṝ́n ṛcáse rirīhi* […]

‘give waters, non venomous plants, forests, cows, horses and men for the stanza […]’.

ṚV 7.34.25 *tán na* […] ***ā́pa óṣadhīr*** […] *juṣanta* /

‘may the waters, the plants enjoy this for us […]’.

ṚV 7.56.25 *tán na* […] ***ā́pa óṣadhīr*** […] *juṣanta* /

‘may the waters, the plants enjoy this for us […]’.

ṚV 7.70.4 *caniṣṭáṃ devā **óṣadhīṣv apsú*** […]

‘o gods (du.), let you two be satisfied with the plants, with the waters […]’

ṚV 8.9.5 *yád **apsú** yád vánaspátau yád **óṣadhīṣu*** […] *kṛtám* /

[213] In this case the two phrases share a common verbal form: this fact somehow constitutes an instance of coordination.

‘what you made on the waters, what (you made) on the trees, what (you made) on the plants […]’.

ṚV 8.59.2 […] ***óṣadhīr ā́pa*** […] *mahimā́nam ā́śata* /

‘the plants, the waters […] gained their great size’.

ṚV 10.51.3 […] *práviṣṭam agne* ***apsv óṣadhīṣu*** /

‘[…] o Agni, you went into the waters, into the plants’.

ṚV 10.58.7 *yát te* ***apó*** *yád* ***óṣadhīr*** *máno jagā́ma* […]

‘if your mind went towards the waters, if towards the plants […]’

ṚV 10.65.11 *bráhma gā́m áśvaṃ janáyanta óṣadhīr vánaspátīn pṛthivī́m párvatāṃ̄ apáḥ / sū́ryaṃ diví roháyantaḥ sudā́navaḥ […]*

‘[…] the munificent [gods] engendering the Brahman, the cow, the horse, the plants, the trees, [the earth, the mountains, the waters, causing the sun to ascend heaven…], the waters’.

ṚV 10.66.9 […]***ā́pa óṣadhīr*** *vanínāni yajñíyā* /

‘[…] the waters, the plants, the trees worthy of worship’.

ṚV 10.66.10 ***ā́pa óṣadhīḥ*** *prá tirantu no gíro* […]

‘the waters, the plants elevate our song […]’.

ṚV 10.88.2 […]***ā́pó*** *'raṇayann* ***óṣadhīḥ*** *sakhyé asya* //

‘[…] the waters, the plants rejoiced in his friendship’.

- A parallel relationship between these two words can be observed, e.g., also in ṚV 7.101.2 *yó várdhana* ***óṣadhīnāṃ*** *yó* ***apā́ṃ*** […] ‘he who is the increaser of plants, he of *waters* (pl.)’. A slightly different perspective emerges from ṚV 10.30.5, where the *oṣadhi*s are intended as purifiers of *apas*.
- To the best of my knowledge, there are no *dvandva* compounds formed by combining the two words *apas*- and *oṣadhī*-.
- From a Pāṇinian point of view, the disyllabic word *apas*- should be placed first in a *dvandva* compound. In the Ṛgvedic coordinative syntactic strings shown above, *apas*- is placed first in 12 out of 25 occurrences.

1. *apas*- f. ‘water’ + *svar*- ‘sun’

ṚV 3.34.8 […] *sasavā́ṃsaṃ* ***svàr apáś ca*** *devī́ḥ* /

‘[…] him who gained the sun and the divine water’.

ṚV 5.14.4 *ávindad gā́* ***apáḥ svàḥ*** //

'he found the cattle, the waters, the sun'.

ṚV 6.60.2 *tā́ yodhiṣṭam abhí gā́ indra nūnám* ***apáḥ svàr*** *uṣáso agna ūḷhā́ḥ* /

'may you, Indra and Agni, fight for the cows now, for the waters, for the sun, for the dawns which were carried away'.

ṚV 6.73.3 ***apáḥ*** *síṣāsan* ***svàr*** *ápratīto bṛ́haspátir* […]

'Bṛhaspati is unattackable in seeking winning the water, the sun […]'.

ṚV 7.44.1 […] *ūtáye huve* / *índraṃ víṣṇum pūṣáṇam bráhmaṇas pátim ādityā́n dyā́vāpṛtivī́* ***apáḥ svàḥ*** //

'I call for help Indra, Viṣṇu, Pūṣan, Brahmaṇaspati, the Ādityas, Heaven and Earth, Waters, Sun'.

ṚV 8.15.2 […] *dādhā́ra ródasī /girī́m̐r ájrām̐* ***apáḥ svàr*** *vṛṣatvanā́* //

'[…] he holds steady the earth and heaven, the mountains, the fields, the waters, the sun by means of his male vigour/strength'.

ṚV 9.90.4 ***apáḥ*** *síṣāsann* […] ***svàr*** […]

'seeking to win the water, […] the sun […]'.

ṚV 9.91.6 *evā́ punānó* ***apáḥ svàr*** *gā́ asmábhyaṃ* […]

'just while flowing through purification, (give) us the *water*, the *sun*, cattle […]'.

ṚV 10.36.1 *índraṃ huve […]* ***apáḥ svàḥ*** //

'o Indra, I summon […] the waters, the sun'.

- No further close interaction can be observed between these two words in the ṚV.
- To the best of my knowledge, there are no *dvandva* compounds formed by combining the two words *apas*- and *svar*-.
- From a Pāṇinian point of view, the monosyllabic word *svar*- should be placed first in a *dvandva* compound. However, in the Ṛgvedic coordinative syntactic strings shown above, the word *apas*- is placed first 8 times out of 9 occurrences.

2. *div*- m. 'heaven'+ *bhūmi*- f. 'earth'

ṚV 1.61.14 *asyéd u bhiyā́ giráyaś ca dṛḷhā́* ***dyā́vā ca bhū́mā*** *janúṣas tujete* /

'Due to their fear of his birth, both the solid mountains and heaven and earth are inciting (you)'.

ṚV 1.62.8 *sanā́d* ***dívam*** *pári* ***bhū́mā*** […] *ā́ carataḥ anyā́nyā* […]

'always (night and Dawn go) one after the other, around the heaven and the earth […]'.

ṚV 2.27.8 ***tisró bhū́mīr*** *dhārayan* ***trī́ṁr utá dyū́n*** […]

'they hold the three earths, and the three heavens […]'.

ṚV 4.55.1 […] ***dyā́vābhūmī*** […] *trā́sīthāṃ naḥ* /

'o heaven and earth […] protect us'.

ṚV 6.67.6 […] ***bhū́mim*** *átān* ***dyā́ṃ*** […]

'[…] they stretch the earth, the heaven […]'.

ṚV 7.62.4 ***dyā́vābhūmī*** […] *trā́sīthāṃ no* […]

'o heaven and earth, […] you should protect us […]'.

ṚV 8.70.5 *yád* ***dyā́va*** *indra te śatáṃ śatám* ***bhū́mīr*** *utá syúḥ /*

'since one hundred heavens, o Indra and one hundred earths could be yours'.

ṚV 10.12.4 […] ***dyā́vābhūmī*** *śṛṇutáṃ* […] *me* /

'[…] o heaven and earth, listen to me […]'.

ṚV 10.65.4 *svàrṇaram antárikṣāṇi rocaná* ***dyā́vābhū́mī*** *pṛthivī́ṃ skambhur ójasā* /

'they established, the ether, the intermediate spaces, the firmaments, heaven and earth, the broad one, with their energy'.

ṚV 10.81.3 […] ***dyā́vābhū́mī*** *janáyan* […]

'[…] originating the heaven and the earth […]'.

ṚV 10.85.7 ***dyaúr bhū́miḥ*** *kóśa āsīd* […]

'the vessel were the heaven and the earth […]'.

ṚV 10.132.6 *yuvór hí mātā́ditir vicetasā* ***dyaúr*** *ná* ***bhū́miḥ*** […]

'indeed, your mother Aditi, o wise ones (du), is like the heaven and the earth'.

- Further interactions between these two words can be observed e.g., in ṚV 10.69.3, 75.3. In these two cases the heaven is conceived as something that surmounts the earth.
- Apart from the Ṛgvedic cases of ***dyā́vābhūmī*** (which has a single accent on the first slot and both constituents inflected in the dual case ending) and ***dyā́vābhū́mī*** (with two accents and both constituents inflected in the dual case ending), a further attestation of *dvandva* compounds formed from the combination of *div-* and *bhūmi-* can be observed, e.g., in MS 2.10.2.4.4 .

- From a Pāṇinian point of view, the monosyllabic word *div-* should be placed first in a *dvandva* compound. This trend is also mirrored by the coordinative syntactic strings shown above (6 times out of 9 occurrences) and by the Ṛgvedic compound**.**

3. *div-* m. ‘heaven’+ *kṣam-* f. ‘earth’

ṚV 1.25.20 […] ***diváś ca gmáś ca*** *rājasi* /
‘[…] you rule over the heaven and the earth’.
ṚV 1.37.6 *kó vo várṣiṣṭha ā́ naro* ***diváś ca gmáś ca*** *dhūtayaḥ* /
‘who of you is the highest, o men, who are shakers of heaven and earth?’
ṚV 1.96.5 ***dyā́vākṣā́mā*** *rukmó antár ví bhāti* […]
‘between the heaven and the earth the golden disc shines brightly […]’.
ṚV 1.102.2 *asyá śrávo nadyàḥ saptá bibhrati* ***dyā́vākṣā́mā*** *pṛthivī́ darśatáṃ vápuḥ* /
‘His glory brings the seven rivers; heaven and earth, the broad one [bring] their body’.
ṚV 1.121.11 *ánu tvā* […] ***dyā́vākṣā́mā*** *madatām indra kárman* /
‘the heaven and the earth […] rejoice in you, o Indra, for (your) performance’.
ṚV 1.140.13 […] ***dyā́vākṣā́mā*** *síndhavaś ca svágūrtāḥ* /
‘the heaven and the earth, and the rivers greet (the hymn)’.
ṚV 3.8.8 *ādityā́ rudrā́ vásavaḥ sunīthā́* ***dyā́vākṣā́mā*** *pṛthivī́ antárikṣam* /
‘the Ādityas, the Rudras, righteous Vasus, heaven and earth, the broad one, the atmosphere’.
ṚV 5.52.3 *marútām ádhā máho* ***diví kṣamā́ ca*** *manmahe* //
‘Now we think of Maruts’ power in heaven and earth’.
ṚV 5.38.3 *ubhā́ devā́v* […] ***diváś ca gmáś ca*** *rājathaḥ* //
‘both the gods, (you) rule over the heaven and the earth […]’.
ṚV 6.31.2 ***dyā́vākṣā́mā*** […] *bhayate ájmann ā́ te* //
‘the heaven and the earth […] are afraid of you in the battle’.
ṚV 8.18.16 ***dyā́vākṣāmā****ré asmád rápas kṛtam* //
‘o heaven and earth, keep the disease far from us’.
ṚV 8.70.4 […] ***dyā́vaḥ kṣā́mo*** *anonavuḥ* //
‘[…] the heaven and the earth bellowed’.
ṚV 10.12.1 ***dyā́vā*** *ha* ***kṣā́mā*** […] *satyavā́cā* /
‘the heaven and the earth[…] with truthful speech’.
ṚV 10.22.6 *ā́ jagmathuḥ parākā́d* ***diváś ca gmáś ca*** *mártyam* //

‘you have come from the distance, from the heaven and the earth, to a mortal.’

ṚV 19.36.1 *uṣā́sānáktā bṛhatī́ supéśasā* ***dyā́vākṣā́mā*** […]

‘the dawn and night, great, well-adorned heaven and earth […]’.

ṚV 10.49.2 […] ***diváś ca gmáś cā****pā́m ca jantávaḥ* /

‘the heaven and the earth and the creatures of the waters’.

- No further interaction can be observed between these two words in the ṚV. In any case, consider the case of ṚV 10.45.4, where ***kṣamā́*** may be interpreted as an elliptic dual meaning ‘heaven and earth’.
- The Ṛgvedic occurrences of *dvandva* compounds formed by combining the word *div-* and the word *kṣam-*, ***dyā́vākṣā́mā***, feature two accents and both constituents inflected in the dual case ending.
- From a Pāṇinian point of view, these words do not follow any fixed order. However, the word *div-* is placed first in all the Ṛgvedic occurrences, both in and outside compounds.

4. *div-* m. ‘heaven’+ *pṛthivī-* f. ‘earth’

ṚV 1.22.13 *mahī́* ***dyaúḥ pṛthivī́ ca*** *na imáṃ yajñám* / *mimikṣatām* /[214]

‘let the great heaven and earth mix this sacrifice for us’.

ṚV 1.31.8 […] *devaír* ***dyāvāpṛthivī*** *prā́vataṃ naḥ* // [215]

‘o heaven and earth, with the gods, favour us’.

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[214] The conjunction *ca* is employed to coordinate these two nouns also in: *ṚV* 1.100.1 […] ***diváḥ pṛthivyā́ś ca*** […]; ṚV 1.109.6 […] ***pṛthivyā́*** […] ***diváś ca*** / ṚV 3.6.3 ***dyaúś ca*** […] ***pṛthivī́*** […]; ṚV 4.51.11 […] ***dyaúś ca*** […] ***pṛthivī́ ca*** […]; ṚV 6.68.4 […] ***dyaúś ca pṛthivi*** […];ṚV 6.70.6 […] ***dyaúś ca pṛthivī́ ca*** […]; ṚV 8.97.14 […] ***dyā́vā*** […] ***pṛthivī́ ca*** […]; ṚV 9.86.9 […] ***dyaúś ca*** […] ***pṛthivī́ ca*** […]; ṚV 9.86.29 […] ***dyā́ṃ ca pṛthivī́ṃ cā́***[…]; ṚV 9.100.9 […] ***dyā́ṃ ca*** […] ***pṛthivī́ṃ cā́***[…]; ṚV 10.16.3 […] ***dyā́ṃ ca*** […] ***pṛthivī́ṃ ca***[…]; ṚV 10.36.2 ***dyaúś ca*** […] ***pṛthivī́ ca*** […]; ṚV 10.91.3 […] ***dyā́vā ca*** […] ***pṛthivī́ ca*** […]; ṚV 10.190.3 ***dívaṃ ca pṛthivī́ṃ*** […].

[215] This ‘*devatādvandva* ’ occurs in the same nominal form also in: ṚV 1.35.9; ṚV 1.52.14;ṚV 1.61.8; ṚV 1.101.3; ṚV 1.112.1;ṚV 1.115.1; ṚV 1.115.3; ṚV 1.159.5; ṚV 1.160.1; ṚV 1.160.5; ṚV 1.185.11; ṚV 2.1.15; ṚV 2.2.7; ṚV 2.32.1; ṚV 3.3.11; ṚV 3.25.3; ṚV 3.26.8; ṚV 3.30.4; ṚV 3.32.10; ṚV 3.58.8; ṚV 4.14.2; ṚV 4.54.6; ṚV 4.56.1; ṚV 4.56.3; ṚV 5.47.2; ṚV 5.51.11; ṚV 5.55.7; ṚV 5.47.2; ṚV 5.51.11; ṚV 5.55.7; ṚV 5.63.2; ṚV 5.83.8; ṚV 6.18.15; ṚV 6.44.24; ṚV 6.50.3; ṚV 6.70.1; ṚV 6.70.4; ṚV 6.70.5; ṚV 6.75.10; ṚV 7.35.5; ṚV 7.44.1; ṚV 7.52.1; ṚV 7.53.2; ṚV 7.53.3; ṚV 8.22.5; ṚV 8.42.2; ṚV 8.48.13; ṚV 8.96.16; ṚV 9.68.10; ṚV 9.69.10; ṚV 9.81.5; ṚV 9.97.42; ṚV 10.1.7; ṚV 10.2.7; ṚV 10.31.7; ṚV 10.31.8;
ṚV 10.35.1; ṚV 10.36.1; ṚV 10.37.6; ṚV 10.45.12; ṚV 10.47.8; ṚV 10.63.9; ṚV 10.64.14; ṚV 10.65.8; ṚV 10.66.4; ṚV 10.66.6; ṚV 10.66.9; ṚV 10.67.12; ṚV 10.70.10; ṚV 10.81.4; ṚV 10.82.1; ṚV 10.89.6; ṚV 10.92.11; ṚV 10.93.1; ṚV 10.93.10; ṚV 10.110.9; ṚV 10.113.1; ṚV 10.113.5; ṚV 10.114.8; ṚV 10.125.6;
ṚV 10.149.2. Note the case of ṚV 3.46.[…] ***pṛthivī́dyā́vā*** […] where the reversed word order can be observed.

ṚV 1.33.10 *ná yé* ***diváḥ pṛthivyā́*** *ántam āpúr* […][216]

'They who did not reach the end of the heaven, of the earth […]'.

ṚV 1.94.16 *tán no* […] *māmahantām* […] ***pṛthivī́ utá dyaúḥ*** //[217]

'this let earth and heaven be great for us'.

- An analogous relationship between *div-* and *pṛthivī-* can be observed in other verses of the ṚV. Consider, e.g., ṚV 1.89.4 […] *tán mātā́* ***pṛthivī́*** *tát pitā́* ***dyaúḥ*** / 'this mother *pṛthivī-* and this father *div-*' and ṚV 5.59.1 *rcā* ***divé*** *prá* ***pṛthivyā́*** *ṛtám bhare* / 'I chant for the *div-*

[216] These two nouns are coordinated in asyndeton also in: ṚV 1.56.6 […] ***divó*** […] ***pṛthivyā́*** […]; ṚV 1.61.9 […] ***divás pṛthivyā́ḥ*** […]; ṚV 1.63.1 […] ***dyā́vā*** […] ***pṛthivī́*** […]; ṚV 1.143.2 […] ***dyā́vā*** […] ***pṛthivī́*** […]; ṚV 1.159.1 […] ***dyā́vā*** […] ***pṛthivī́*** […]; ṚV 1.185.2 […] ***dyā́vā*** […] ***pṛthivī*** […]; ṚV 1.185.3 […] ***dyā́vā*** […] ***pṛthivī*** […]; ṚV 1.185.5 […] ***dyā́vā*** […] ***pṛthivī*** […]; ṚV 1.185.6 […] ***dyā́vā*** […] ***pṛthivī*** […]; ṚV 1.185.7 […] ***dyā́vā*** […] ***pṛthivī*** […]; ṚV 1.185.8 […] ***dyā́vā*** […] ***pṛthivī*** […]; ṚV 1.185.10 […] ***divé*** […] ***pṛthivyā́*** […]; ṚV 1.190.4 […] ***divī***[…] ***pṛthivyā́m*** […]; ṚV 2.12.13 ***dyā́vā*** […] ***pṛthivī́*** […]; ṚV 2.38.11 […] ***divó*** […] ***pṛthivyā́s*** […]; ṚV 2.41.20 ***dyā́vā*** […] ***pṛthivī́*** […]; ṚV 3.1.3 […] ***diváḥ*** […] ***pṛthivyā́ḥ***; ṚV 3.6.2 ***diváś*** […] ***pṛthivyā́*** […]; ṚV 3.22.2 […] ***diví*** […] ***pṛthivyā́m*** […]; ṚV 3.25.1 […] ***diváḥ*** […] ***pṛthivyā́*** […]; ṚV 3.32.8 […] ***pṛthivī́m dyā́m*** […]; ṚV 3.34.8 […] ***pṛthivī́m dyā́m*** […]; ṚV 3.46.3 […] ***divá*** […] ***pṛthivyā́ḥ*** […]; ṚV 3.54.2 […] ***divé*** […] ***pṛthivyaí*** […]; ṚV 3.54.3 […] ***divé*** […] ***pṛthivyaí*** […]; ṚV 3.54.19 […] ***pṛthivī́ dyaúr*** […]; ṚV 3.61.4 […] ***diváḥ*** […]***pṛthivyā́ḥ***; ṚV 3.62.2 […] ***divā́ pṛthivyā́*** […]; ṚV 4.21.3 […] ***divá*** […] ***pṛthivyā́*** […]; ṚV 4.36.1 […] ***dyā́m*** […] ***pṛthivī́m*** […]; ṚV 4.39.1; ṚV 4.44.5 […] ***divó*** […] ***pṛthivyā́*** […]; ṚV 4.53.5 […] ***dívaḥ pṛthivī́s*** […];ṚV 5.43.2 […] ***dyā́vā*** […] ***pṛthivī́*** […]; ṚV 5.46.3 […] ***pṛthivī́m dyā́m*** […]; ṚV 5.63.3 […] ***divás*** […] ***pṛthivyā́*** […]; ṚV 6.11.1 […] ***dyā́vā*** […] ***pṛthivī́*** […]; ṚV 6.18.12 […] ***divó*** […] ***pṛthivyā́ḥ***; ṚV 6.21.2 ***dívam*** […] ***pṛthivyā́ḥ*** […]; ṚV 6.30.1 […] ***divá*** […] ***pṛthivyā́*** […]; ṚV 6.44.21 […] ***divó*** […] ***pṛthivyā́*** […]; ṚV 6.47.27 ***divás pṛthivyā́ḥ*** […]; ṚV 6.58.4 […] ***divá*** […] ***pṛthivyā́*** […]; ṚV 6.71.5 ***divó*** […] ***pṛthivyā́*** […]; ṚV 7.5.1 […] ***divó*** […] ***pṛthivyā́ḥ*** […]; ṚV 7.6.7 […] ***divá*** […] ***pṛthivyā́ḥ*** […]; ṚV 7.24.3 […] ***divá*** […] ***pṛthivyā́*** […]; ṚV 7.38.5 […] ***divó*** […] ***pṛthivyā́ḥ*** […]; ṚV 7.39.5 […] ***divá*** […] ***pṛthivyā́*** […]; ṚV 7.43.1 […] ***dyā́vā*** […] ***pṛthivī́*** […]; ṚV 7.53.1 […] ***dyā́vā*** […] ***pṛthivī́*** […]; ṚV 7.60.7 […] ***divó*** […] ***pṛthivyā́ś*** […]; ṚV 7.64.1 ***diví*** […] ***pṛthivyā́m*** […]; ṚV 7.97.1 […] ***divó*** […] ***pṛthivyā́*** […]; ṚV 7.104.4 […] ***divó*** […] ***pṛthivyā́*** […]; ṚV 8.25.18 […] ***divó*** […] ***pṛthivyā́ḥ*** […]; ṚV 8.35.2 […] ***divā́ pṛthivyā́***[…]; ṚV 8.50.7 […] ***pṛthivyā́m diví*** […]; ṚV 8.57.3 […] ***divó*** […] ***pṛthivyā́ḥ*** […]; ṚV 9.31.2 ***divás pṛthivyā́*** […]; ṚV 9.57.4 […] ***divó*** […] ***pṛthivyā́*** […]; ṚV 9.109.5 […] ***divé pṛthivyaí*** […]; ṚV 10.7.1 […] ***divó*** […] ***pṛthivyā́*** […]; ṚV 10.10.9 ***divā́ pṛthivyā́*** […]; ṚV 10.29.6 […] ***dyaúr*** […] ***pṛthivī́*** […]; ṚV 10.35.3 ***dyā́vā*** […] ***pṛthivī́*** […]; ṚV 10.46.9 ***dyā́vā*** […] ***pṛthivī́*** […]; ṚV 10.55.1 […] ***pṛthivī́m dyā́m*** […]; ṚV 10.59.8 […] ***dyaúḥ pṛthivi*** […]; ṚV 10.59.9 […] ***dyaúḥ pṛthivi*** […]; ṚV 10.59.10 […] ***dyaúḥ pṛthivi*** […]; ṚV 10.88.2 […] ***pṛthivī́ dyaúr*** […]; ṚV 10.88.3 […] ***pṛthivī́m dyā́m*** […]; ṚV 10.88.9 […] ***pṛthivī́m dyā́m*** […]; ṚV 10.94.12 […] ***dyā́m*** *ráveṇa* ***pṛthivī́m*** […]; ṚV 10.111.5 […] ***diváḥ*** […] ***pṛthivyā́*** […]; ṚV 10.119.8 […] ***dyā́m*** […] ***pṛthivī́m*** […]; ṚV 10.121.1 […] ***pṛthivī́m dyā́m*** […]; ṚV 10.125.8 […] ***divā́*** […] ***pṛthivya***[…].

[217] The present verse consists of a refrain perfectly matched by ṚV 1.95.11, ṚV 1.96.9, ṚV 1.98.3, ṚV 1.100.19, ṚV 1.101.11, ṚV 1.102.11, ṚV 1.103.8, ṚV 1.105.19, ṚV 1.106.7, ṚV 1.107.3, ṚV 1.109.8, ṚV 1.110.9, ṚV 1.111.5, ṚV 1.112.25, ṚV 1.113.20, ṚV 1.114.11, ṚV 1.115.6. The conjunction *uta* is employed to coordinate these two nouns also in: ṚV 1.154.4 […] ***pṛthivī́m utá dyā́m*** […]; ṚV 3.30.11 […] ***pṛthivī́m utá dyā́m*** […]; ṚV 3.59.1 […] ***pṛthivī́m utá dyā́m*** […]; ṚV 5.62.3 […] ***pṛthivī́m utá dyā́m*** […]; ṚV 5.85.4 […] ***pṛthivī́m utá dyā́m*** […]; ṚV 6.47.29 […] ***pṛthivī́m utá dyā́m*** […]; ṚV 6.51.8 […] ***pṛthivī́m utá dyā́m*** […]; ṚV 7.5.4 […] ***pṛthivī́ utá dyaúr*** […]; ṚV 9.97.13 […] ***pṛthivī́m utá dyā́m*** […]; ṚV 9.97.58 […] ***pṛthivī́ utá dyaúḥ***; ṚV 10.10.5 […] ***pṛthivī́ utá dyaúḥ*** […]; ṚV 10.81.6 […] ***pṛthivī́m utá dyā́m*** […].ṚV 10.89.4 […] ***pṛthivī́m utá dyā́m*** […]

, I carry truth for *pṛthivī-*'. There is a slippery boundary between the theonimic and non-theonimic nature of these two words. To the best of my knowledge, the different types of coordination used in the ṚV to connect them do not imply any semantic suggestion.

- *Dvandva* compounds formed from the combination of these two words can be observed in a great number of occurrences.
- From a Pāṇinian point of view, the monosyllabic *div-* should be placed first in a compound. This trend is observed in Ṛgvedic syntactic strings and in the relevant compounds (note that the only exception is represented by ṚV 3.46.5 ***pṛthivī́dyā́vā***). The *Aṣṭādhyāyī* introduce ***dyā́vāpṛthivī́*** as a ready-made form (A 4.3.32).

5. *go-* m. f. 'ox, cow' pl. 'cattle'+ *aśva-* m. 'horse'

ṚV 1.16.9 *sémáṃ naḥ kā́mam ā́ pṛṇa* ***góbhir áśvaiḥ*** […]
'fulfil this desire of ours with cattle and horses […]'.
ṚV 1.29.1 *ā́ tū́ na indra śaṁsaya* ***góṣv áśveṣu*** *śubhríṣu sahásreṣu tuvīmagha* //
'O generous Indra, cause us hope in splendid cows, horses by the thousand'.
ṚV 1.53.4 […] *nirundhānó ámatiṃ* ***góbhir aśvínā*** /[218]
'Preventing indigence by means of cows with horses'.
ṚV 1.114.8 […] *mā́ no* ***góṣu*** *mā́ no* ***áśveṣu*** *rīriṣaḥ* /
'do not injure our cattle, nor our horses'.
ṚV 2.15.4 *sáṃ* ***góbhir áśvair*** *asṛjad ráthebhiḥ* […]
'he brought [him] together with cattle, horses, chariots'.
ṚV 3.30.20 *imáṃ kā́mam mandayā* ***góbhir áśvaiś*** […]
'quench this desire by means of cattle and horses'.
ṚV 3.50.4 *imáṃ kā́mam mandayā* ***góbhir áśvaiś*** […]
'quench this desire by means of cattle and horses'.
ṚV 4.57.1 […] ***gā́m áśvam*** *poṣayitnv* […]
'[…] what makes the cow and the horse thrive […]'.
ṚV 6.46.2 ***gā́m áśvaṃ*** *rathyàm indra sáṃ kira* […]

[218] In this case *aśvin-* is a *taddhita* derivative form meaning 'rich in horses'. In this case the understood referent might be 'wealth'. I choose to list this instance under this section due to its semantic equivalence with the main noun.

‘bestow liberally a cow, a horse, a carriage, o Indra […]’.

ṚV 7.18.2 *piśā́ gíro maghavan* ***góbhir áśvais*** […]

‘adorn the songs with cattle, with horses, o bounteous (Indra)’

ṚV 7.41.3 *bhága prá ṇo janaya* ***góbhir áśvair*** […]

‘O Bhaga, spread us with cattle, with horses’.

ṚV 7.54.2 […] *gayasphā́no* ***góbhir áśvebhir*** […]

‘[…] promoting domestic wealth by means of cattle and horses’.

ṚV 7.90.6 *īśānā́so yé dádhate svàr ṇo* ***góbhir áśvebhir*** […]

‘Those masters who hold the sun for us by means of horses’.

ṚV 7.104.10 *yó no rásaṃ dípsati pitvó agne yó* ***áśvānāṃ*** *yó* ***gávāṃ*** […]

‘the one who wants to deprive us of the essence of food (pitú), o Agni, of the horses, of the cows and of our bodies […]’.

ṚV 8.14.3 *dhenúṣ* […] ***gā́m áśvam*** *pipyúṣī duhe* //

‘the thriving milk cow gives the cow and the horse as her milk’.

ṚV 8.32.5 *sá* ***gór áśvasya*** *ví vrajám mandānáḥ somyébhyaḥ* /

‘o hero, exhilarated, may you open the enclosure of the cow and of the horse like a stronghold to the to fellow soma drinkers!’.

ṚV 8.52.5 […] ***gór áśvasya*** *prá dātu naḥ* //

‘[…] let him give us of cow and of horse’.

ṚV 8.74.10 ***áśvam*** *íd* ***gā́ṃ*** *rathaprā́ṃ tveṣám índraṃ ná sátpatim* /

‘a horse, a cow, the one (acc.) who vehement fills the chariot like Indra, the lord of settlements’.

ṚV 8.78.2 *ā́ no bhara vyáñjanaṃ* ***gā́m áśvam*** *o*[…]

‘bring here to us the ornament, the cow, the horse […]’.

ṚV 8.97.2 *yám indra dadhiṣé tvám* ***áśvaṃ gā́m*** […]

‘what you hold, o Indra: the cow, the horse […]’.

ṚV 9.9.9 *pávamāna máhi śrávo* ***gā́m áśvaṃ*** […]

‘o Pavamāna, grant great fame, a cow, a horse’.

ṚV 9.61.20 ***goṣā́*** *u* ***áśvasā́*** *asi* //

‘you are a winner of cows and a winner of horses’.

ṚV 10.7.2 […] ***góbhir áśvair*** *abhí gṛṇanti rā́dhaḥ* /

‘[…] they proclaim the favour with cattle, with horses’.

ṚV 10.65.11 […] ***gā́m áśvaṃ*** *janáyanta* […]

‘[…] generating (pl.) the cow, the horse […]’.

ṚV 10.68.12 […] *sá hí* ***góbhiḥ*** *só* ***áśvaiḥ*** […] *no váyo dhāt* //

‘[…] indeed, let him give power with cattle, let him (give it) with horses’.

ṚV 10.97.4 *sanéyam* ***áśvaṃ gā́ṃ*** […]

‘may I obtain a horse, a cow […]’.

ṚV 10.108.7 *ayáṃ nidhíḥ* […] ***góbhir áśvebhir*** […] *nyr̥ṣṭaḥ* /

‘this treasure […] overflowing with cattle, with horses […]’.

ṚV 10.119.1 […] ***gā́m áśvaṃ*** *sanuyām íti* /

‘[…] I could obtain a cow, a horse’.

- Among the many instances of same-level interaction between the two words *go-* and *aśva-* in the ṚV, consider, e.g., ṚV 1.103.5, ṚV 7.71.1 and ṚV 9.2.10.
- *Dvandva* compounds formed from the combination of the two words *go-* and *aśva-* are attested, e.g., in BĀU 6.2.7.1 […] ***goaśvānāṃ*** […] and, with a different more productive *sandhi* form e.g., MBh 2.67.18.2 ***gavāśvaṃ*** […].
- From a Pāṇinian point of view, the monosyllabic word *go-* should be placed first in a *dvandva* compound. This trend is mirrored by the attested *dvandva* compounds Also consider rule A 2.4.11 ***gavāśva****prabhṛtīni ca*, where *gavāśva-* is the name of a specific class of *dvandva* compounds that are inflected in neuter gender and singular number (*samāhāra*).

6. *nakta-* n. ‘night’+ *uṣas-* n.f. ‘dawn’

ṚV 1.13.7 ***náktoṣā́sā*** *supéśasāsmín* […] *hvaye* /

‘I summon the well adorned night and dawn [to come] in this place […]’.

ṚV 1.73.7 ***náktā ca*** *cakrúr* ***uṣásā*** *vírūpe* […]

‘they made the night and the dawn multiform […]’.

ṚV 1.96.5 ***náktoṣā́sā*** *várṇam āmémiyāne dhāpáyete śíśum ékaṃ samīcī́* /

‘the night and the dawn bending together towards the single child, changing each the other's colour, suckle one single child’.

ṚV 1.113.3 […] ***náktoṣā́sā*** *sámanasā vírūpe* //

‘[…] the night and the dawn, with the same mind are multiform’.

ṚV 1.122.2 *pátnīva* […] ***uṣā́sānáktā*** […]

‘like two wives […] the dawn and the night […]’.

ṚV 1.142.7 […] ***náktoṣā́sā*** *supéśasā* /

‘[…] the well-adorned night and dawn’.

ṚV 1.186.4 *úpa va éṣe námasā jigīṣ****óṣā́sānáktā*** […]

‘Indeed I tend towards night and dawn with reverence wishing to win (their attention)’.

ṚV 2.3.6 […] ***uṣā́sānáktā*** […] *tántuṃ tatáṃ saṃváyantī* […]

‘[…] the dawn and the night, […] fastening together the extended thread’.

ṚV 2.31.5 *utá tyé devī́ subháge mithūdṛ́ś****oṣā́sānáktā*** […]

‘and these two goddesses appearing alternately, dawn and night […]’.

ṚV 4.55.3 […] ***uṣā́sānáktā*** *karatām ádabdhe* //

‘the dawn and the night, the unbroken (du.), have done (it)’.

ṚV 5.41.7 ***uṣā́sānáktā*** *vidúṣīva víśvam ā́ hā vahato mártyāya yajñám* //

‘the dawn and the night, like those (du.) who know all, convey here the sacrifice to the mortal’.

ṚV 7.2.6 […] ***uṣā́sānáktā*** *sudúgheva dhenúḥ* /

‘[…] the dawn and the night like a milk-cow which gives milk’.

ṚV 7.42.5 *ā́ náktā barhíḥ sadatām* ***uṣā́s*** […]

‘night and dawn sit here upon the *barhis* […]’.

ṚV 8.27.2 *ā́* […] *gāsi* […] ***uṣā́sā náktam*** […]

‘here […] I have sung […] the dawn, the night […]’.

ṚV 9.5.6 ***náktoṣā́sā*** *ná darśaté* //

‘beautiful (women) (du.) like the night and the dawn’.

ṚV 10.36.1 ***uṣā́sānáktā*** *bṛhatī́ supéśasā* […]

‘the dawn and night, great, well-adorned […]’.

ṚV 10.70.6 […] ***uṣā́sānáktā*** *sadatāṃ ní yónau* /

‘the dawn and the night sit down in the womb’.

ṚV 10.110.6 […] ***uṣā́sānáktā*** *sadatāṃ ní yónau* /

‘the dawn and the night sit down in the womb’.

- The whole series of Ṛgvedic interaction between the word *nakta-* and the word *uṣas-* is reported above.
- Other than in the ṚV, *aluk dvandva* compounds formed from the combination of these words can be observed, e.g., in AB 2.4.10 ***uṣāsānaktā***, ŚS 6.3.3 ***uśāsānakta*** […]. To the best of my knowledge, the reversed compound is only attested in the ṚV (see above) and ĀpŚS 16.10.11.1 ***naktoṣāsa*** […], where it is not possible to detect wether it is *aluk* or not due to the *sandhi*.
- From a Pāṇinian point of view, these words do not follow any fixed order. The trend observed in the ṚV shows that ***uśāsānakta-*** is the most attested word-order (10 occurrences

vs 5 of ***naktoṣāsa***-). The remaining two asyndeta do not provide any further data since their word-order is not the same.

7. *rātri*- f. 'night'+ *ahar*- n. 'day'

ṚV 10.10.9 ***rā́trībhir*** *asmā* ***áhabhir*** *daśasyet* […]
'thought night and day (she) would serve him'.
ṚV 10.190.2 ***ahorātrā́ṇi*** *vidádhad* […]
'which (= the year) distributes days and nights […]'

- No further interactions can be observed between these two words in the ṚV.
- *Dvandva* compounds formed from the combination of *rātri*- and *ahar*- are attested in Sanskrit literature with the order featured in the ṚV (with *ahar*- as the first constituent). The occurrences follow each of the three grammatical genders and numbers.
- From a Pāṇinian point of view these words do not follow any fixed order. In any case, the *Aṣṭādhyāyī* features the compound according to the Ṛgvedic word-order twice (A 2.1.45, A 3.3.137). Rule A 2.4.29 teaches that a *dvandva* compound ending with -*rātra*- or -*ahna*- or -*aha*- is mandatorily inflected in the masculine.

8. *samudra*- m. 'sea, ocean' + *parvata*- m. 'mountain'

ṚV 2.16.3 […] *paribhvè* […] *ná* ***samudraíḥ párvatair*** *indra te ráthaḥ* / *ná* […] *aśnoti* […]
'o Indra, the oceans and the mountains cannot turn around your chariot'.

- A further interaction between the two words *samudra*- and *parvata*- can be observed in ṚV 8.34.13 *ā́ yāhi párvatebhyaḥ samudrásyā́dhi viṣṭápaḥ* / 'move from the *parvatas* (pl.) over/from the surface of the *samudra*'.
- *dvandva* compounds formed by combining the two words *samudra*- and *parvata*- are attested, e.g., in R 5.1.119 […] ***parvatasamudrābhyāṃ*** […] and, with the reverse order in ViPur 1.1.6.2 ***samudraparvatānāṃ*** […].
- From a Pāṇinian point of view these words do not follow any fixed order.

9. *sūrya*- m. ‘sun’ + *candramas*- m. ‘moon, lunar month’

ṚV 1.102.2 *asmé* ***sūryācandramásā****bhicákṣe śraddhé kám indra carato vitarturám* //
‘sun and moon walk well alternately for us to see and to believe in you, o Indra’.
ṚV 5.51.15 *svastí pánthām ánu carema* ***sūryācandramásāv*** *iva* /
‘we happily follow the path like the sun and the moon’.
ṚV 10.190.3 ***sūryācandramásau*** *dhātắ yathāpūrvám akalpayat* /
‘the divine Dhātṛ brought into order arranged the sun and the moon according to the right order’

- A further analogous interaction between these two words can be observed in ṚV 10.90.13 ***candrámā*** *mánaso jātáś cákṣoḥ* ***sū́ryo*** *ajāyata* / ‘the moon is born from the mind, the sun was born from the eyes’.
- Numerous occurrences of *dvandva* compounds formed from the combination of these two words can be observed in the literature subsequent to the ṚV.
- From a Pāṇinian point of view, whenever *sūrya*- combines with *candramas*- should be placed first in a *dvandva* compound according to A 2.2.34. This is mirrored by the trend observed in the ṚV, where *sūrya*- always occupies the first slot of the compound.

10. *sūrya*- m. ‘sun’ + *māsa*- m. ‘moon’

ṚV 10.64.3 ***sū́ryāmā́sā*** *candrámasā yamáṃ diví tritáṃ vā́tam uṣásam aktúm aśvínā* //
‘the sun and Moon, the new and full moon, Yama in heaven, Trita, wind, dawn, night, the Aśvins’
ṚV 10.68.10 *anānukṛtyám apunáś cakāra yā́t* ***sū́ryāmā́sā*** *mithá uccárātaḥ* //
‘he made something which cannot be imitated, which will be not repeated as long as the sun and the moon alternately rise’.
ṚV 10.92.12 ***sū́ryāmā́sā*** *vicárantā* […]
‘the sun and the moon, moving separately […]’
ṚV 10.93.5 […] *apā́ṃ* […] *sū́ryāmā́sā sádanāya sadhanyà* /
‘the sun and the moon are bestowing wealth to the residence of the waters’

- No further interaction can be observed in the ṚV between these two words.

- This compound is also attested in ŚS 3.29.5cd ***sūryāmāsáyor***.
- From a Pāṇinian point of view these words do not follow any fixed order. However, *sūrya-* is always placed first in the ṚV.

11. *uṣas-* f. 'dawn' + *svar-* 'sun'

ṚV 2.21.4 […] *índraḥ suyajñá* ***uṣásaḥ svàr*** *janat* //
'[…] Indra of good sacrifice originates the dawns and the sun'.
ṚV 6.60.2 *tā́ yodhiṣṭam abhí gā́ indra nūnám apáḥ* ***svàr uṣáso*** *agna ūḷhā́ḥ* /
'may you, Indra and Agni, fight for the cows now, for the waters, for the sun, for the dawns which were carried away'.
ṚV 6.60.2 *díśaḥ* ***svàr uṣása*** *indra citrā́ apó gā́ agne yuvase niyútvān* //
'May you, o Indra, unite the cardinal points, the sun, the shining dawns; may you, o Agni, unite the waters, the cows, forming a series'.
ṚV 9.90.4 *apáḥ síṣāsann* ***uṣásaḥ svàr*** […]
'seeking to winning the waters, the dawn, the sun […]'.

- Further non-coordinative interactions between *uṣas-* and *svar-* can be observed in the ṚV. Consider, e.g., ṚV 5.80.1 *devī́m* ***uṣásaṃ svàr*** *āváhantīm* […] 'goddess dawn brings near the sun', where the manifestation of the *svar-* is chronologically subsequent to that of the *uṣas-*.
- To the best of my knowledge, there are no *dvandva* compounds formed by combining these two words not even in the literature subsequent to the ṚV.
- From a Pāṇinian point of view these words do not follow any fixed order.

Summary

NON-NATURAL PAIRINGS						
RITUAL						
COORDINATIVE PAIRS (ṚV)	LINGUISTIC HIERARCHY	ASYNDETON	PARTICLE	ṚV *DVANDVA*	TOTAL	POST ṚV

						DVANDVA [219]
Coordinative strings with *yajña-* m. 'act of worship, sacrifice'						
1. *yajña- + adhvara-*	≠	6	-	-	6	NO
2. *yajña- + brahman-*	≠	1	2 (*ca*)	-	3	NO
3. *yajña- + dakṣiṇa-*	≠	2	-	-	2	NO
4. yajña- + dhī-	≠	-	1 (ca)	-	1	NO
5. yajña- + gir-	≠	6	-	-	6	NO
6. yajña- + go-	≠	1	-	-	1	NO
7. yajña- + havis-	≠	6	1 (ca)	-	7	NO
8. yajña- + rajas-	≠	-	1 (ca)	-	1	NO
9. yajña- + samidh-	≠	1	-	-	1	NO
10.yajña- + stoma-	≠	-	3 (ca)	-	3	NO
11.yajña- + uktha-	≠	5	-	-	5	NO
Coordinative strings involving specific names of ritual songs and relevant technical terminology						
1. arka- + brahman-	=	-	1 (ca)	-	1	NO
2. brahman- + gir-	=	4	4 (ca)	-	8	YES
3. brahman- + uktha-	=	4	3 (ca)	-	7	NO
4. brahman- + stoma-	=	3	-	-	3	NO
5. gāyatra- + traiṣṭubha-	=	-	1 (ca)	-	1	NO
6. stoma- + gir-	=	6	-	-	6	NO
7. stoma- + uktha-	=	1	2 (ca)	-	3	NO
8. uktha- + arka-	=	1	1 (ca)	1	3	1 (ṚV)
9. uktha- + mati-	=	2	1 (ca)	-	3	NO
10. ṛc- + sāman-	=	1	-	2	3	YES

[219] I.e., in the subsequent literature.

Coordinative strings involving specific names of ritual offerings						
1. gṛtha- + ājya-	=	1	-	-	1	NO
2. ghṛta- + āśira-	=	2	-	-	2	NO
3. ghṛta- + madhu-	=	6	1 (ca)	-	7	YES
4. ghṛta- + payas-	=	5	-	-	5	NO
5. havis- + ghṛta-	≠	3	-	-	3	NO
GODS AND MEN						
1. deva- + mānuṣa-	≠	-	2 (ca, uta)	-	2	YES
2. deva- + marta-	≠	3	7 (4 ca, 3 uta)	-	10	NO
3. deva- + nṛ-	≠	1	-	-	1	NO
MATERIAL LEXICON						
1. adhvan- + pathin-	= (?)	1	1 (ca)	-	2	NO
2. arvat- + vāja-	≠ (?)	1	-	-	1	NO
3. khadi- + kṛti-	= (?)	-	1 (ca)	-	1	NO
4. pṛtana- + viś-	≠ (?)	1	-	-	1	NO
5. ratha- + aśva-	≠ (?)	11	-	-	11	YES
6. ratha- + gṛha-	≠ (?)	-	1 (uta)	-	1	NO
7. ratna- + draviṇa-	= (?)	-	1 (ca)	-	1	NO
8. ratna- + vasu-	= (?)	2	-	-	2	YES
9. saṃga- + samad-	(?)	2	-	-	2	NO
10. śayaka- + dhanvan-	(?)	1	-	-	1	NO
11. vastra- + peśana-	(?)	1	-	-	1	NO
12. vāśī- + añji-	(?)	1	-	-	1	NO
NATURAL PAIRINGS						
HUMAN BODY						

1. aṅga- + tanu-	(?)[220]	1	-	-	1	NO
2. ās- + jihva-	= (?)	2	-	-	2	NO
3. karṇa- + grīva-	= (?)	1	-	-	1	YES
4. manas- + hṛd-	= (?)	8	2 (ca)	-	10	YES
5. pāṇi- + hasti-	≠ (?)	2	-	-	2	NO
6. uras- + aṃsa-	=	1	-	-	-	NO
FAMILIAR LEXICON						
1. nṛ- + nārī-	= (?)	2	-	-	2	YES
2. gnā- + nṛ-	= (?)	-	1 (ca)	-	1	NO
3. pitṛ- + mātṛ-	= (?)	15	7	1	23	YES
4. toka- + tana-	= (?)	37	4 (ca)	-	41	NO
5. putra- + naptṛ-	= (?)	1	-	-	1	YES
NATURAL LEXICON						
1. ajāvaya-	= (?)	-	-	1	1	YES
2. ajra- + giri-	= (?)	2	-	-	2	NO
3. apas- + oṣadhī-	= (?)	23	-	-	23	NO
4. apas- + svar-	= (?)	8	1 (ca)	-	9	NO
5. div- + bhūmi-	= (?)	6	3 (ca, uta)	5	11	YES
6. div- + kṣam-	= (?)	5	6 (ca)	8	19	YES
7. div- + pṛthivī-	= (?)	79	46 (15 ca, 31 uta)	80	205	YES
8. go- + aśva-	= (?)	34	-	-	34	YES
9. nakta- + uṣas-	=	1	1	16	18	YES
10. rātri- + ahar-	=	1	-	1	2	YES
11. samudra- + parvata-	= (?)	1	-	-	1	YES
12. sūrya- + candramāsa-	= (?)	-	-	3	3	YES
13. sūrya- + māsa-	= (?)	-	-	4	4	YES
14. uṣas- + svar-	≠ (?)	4	-	-	4	NO

[220] In this case, as also happens elsewhere, it could be possible to virtually recognise a hypernymic relationship. Anyway, often the textual occurrences analysed above do not allow the reader to reach any definite conclusion.

On the basis of the analysis of the selection of Ṛgvedic syntactic strings, through the observation of our summary chart, we can attempt to draw some conclusions.

- Apart from the explicitly theonimic type (*devatādvandva*), which is not the object of this research, one can observe that the lexicon that combines in the ṚV to form *dvandva* compounds mostly belongs to the section titled 'Natural Pairings', that is, *pitṛ- + mātṛ-*, *ajāvaya-*, *div- + bhūmi-*, *div- + kṣam-*, *div- + pṛthivi-*, *nakta- + uṣas-, rātri- + ahar-, sūrya- + (candra)māsa-*. In the section titled 'Non-natural Pairings', only the strings *uktha- + arka-* and *ṛc- + sāman-* originate *dvandva* compounds in the ṚV.

A morphological *caveat*: among the mentioned compounds attested in the ṚV, there are cases that feature two accents, one per constituent (both inflected in the dual case ending). Even if these cases are observed in a diachronic perspective, i.e., as primordial instances of *dvandva* compounds, see, e.g., Macdonell (1957: 156), the issue of the double accent leaves room for debate about the process of univerbation of a given syntactic string. On this account, consider that the absence of coordinative particles is common in the ṚV, where one can observe a large use of asyndeta.

This overview of the literature after the ṚV once again reveals that the lexicon belonging to the section headed 'Natural Pairings' is the best candidate to form *dvandva* when this type of compound became more established in the language. This is the case of *karṇa- + grīva-*, *nṛ- + nārī-*, *pitṛ- + mātṛ-*, *putra- + naptṛ-*, *ajāvaya-*, *div- + bhūmi-*, *div- + kṣam-*, *div- + pṛthivi-*, *go- + aśva-*, *nakta- + uṣas-*, *rātri- + ahar-*, *parvata- + samudra-*, *sūrya-* + (*candra*)*māsa-*. Within the section titled 'Non-natural Pairings', the following syntactic strings are attested as *dvandva* compounds in the subsequent literature: *ṛc- + sāman-*, *ghṛta- + madhu-*, *deva- + mānuṣa-*, *ratha- + aśva-*, *ratna- + vasu-*. Apart from the fact that they share the same level, a condition that is not accomplished in the case, e.g., of *deva- + mānuṣa-*, it can be observed that the words involved in the latter strings happen to have undergone non-casual pairing, since they are semantically related for belonging, e.g., to a specific phase of the Vedic ritual, to a cultural environment that places gods in opposition to men and conceives chariots and horses as a single entity. It has to be noted that extremely common coordinative syntactic strings or strings denoting very closely related items do not give rise to a compound in the subsequent literature when one of the terms involved in the given string stops being productive in the language.

- If one adopts a Pāṇinian point of view on the surveyed Ṛgvedic material, it has to be noted that the phrasing of rule A 2.2.29, involving *cārthe*, 'in the sense of *ca*' sounds odd in comparison to the coordinative syntactic strings analysed above, where asyndeton (the absence of *ca* or similar) is the most observable type of coordination.[221] Two main points need to be considered:

  (1) does the *Aṣṭadhyāyī* correctly account for the '*dvandva* compounds' featured in the ṚV?

[221] It is followed by strings connected by means of *ca*, then by those connected by means of *utà* and finally by compounds. This general trend cannot be observed in the cases of syntactic strings such as *div- + pṛthivi-*.

ṚV 6.34.1 ***ukthārkā***	YES[222]
ṚV 10.85.11 ***ṛksāmābhyām***[223]	YES.
ṚV 6.6.7 ***mātarāpitarā***	? This compound is not covered by rules A 6.3.33-34.[224]
ṚV 10.90.10 ***ajāvayaḥ***	NO
ṚV 4.55.1 ***dyāvābhūmī***[225]	YES
ṚV 1.96.5 ***dyāvākṣāmā***[226]	YES
ṚV 1.31.8 ***dyāvāpṛthivī***[227]	YES
ṚV 3.46.5 ***pṛthivīdyāvā***	NO
ṚV 1.13.7 ***naktoṣāsā***[228]	NO
ṚV 1.122.2 ***uṣāsānaktā***[229]	YES
ṚV 10.190.2 ***ahorātrāṇi***	NOT-DETECTABLE CONSISTENCY
ṚV 1.102.2 ***sūryācandramasā*** […]	YES
ṚV 10.64.3 ***sūryāmāsā***[230]	NOT-DETECTABLE CONSISTENCY

Out of the 14 cases analysed above, only 3 are unpāṇinian (2 of which are also featured in the reverse order, so that they result as being correct according to the teachings of the *Aṣṭādhyāyī*).

(1) are rules about *dvandva* word-order mirrored and justified by corresponding Ṛgvedic coordinative syntactic strings?

NON-NATURAL PAIRINGS								
RITUAL								
COORDINATIVE PAIRS (WO1)	ṚV ANALYTIC STRINGS		ṚV *DVANDVA*		POST ṚV *DVANDVA* [231]		PĀṆINI	
	WO1	WO2	WO1	WO2	WO1	WO2	WO1	WO2

[222] This compound would have been Pāṇinian also in the reversed order.
[223] Matched by ṚV 10.114.6.
[224] See above.
[225] Matched by ṚV 7.62.4; 10.12.4; 10.65.4; 10.81.3.
[226] Matched by ṚV 1.102.2; 1.121.11; 140.13; 3.8.8; 6.31.2; 8.18.16; 10.36.1.
[227] Matched by ṚV 1.35.9; 1.52.14; 1.61.8; 1.101.3; 1.112.1; 1.115.1; 1.115.3; 1.159.5; 1.160.1; I 160.5; 1.185.11; 2.1.15; 2.2.7; 2.32.1; 3.3.11; 3.25.3; 3.26.8; 3.30.4; 3.32.10; 3.58.8; 4.14.2; 4.54.6; 4.56.1; 5.47.2; 5.51.11; 5.55.7; 5.63.2; 5.83.8; 6.18.15; 6.44.24; 6.50.3; 6.70.1; 6.70.4; 6.70.5; 6.75.10; 7.35.5; 7.44.1; 7.52.1; 7.53.2; 7.53.3; 8.22.5; 8.42.2; 48.13; 8.96.16; 9.68.10; 9.69.10; 9.81.5; 9.97.42; 10.1.7; 10.2.7; 10.31.7; 10.31.8; 10.35.1; 10.36.1; 10.37.6; 10.45.12; 10.47.8; 10.63.9; 10.64.14; 10.65.8; 10.66.4; 10.66.6; 10.66.9; 10.67.12; 10.70.10; 10.81.4; 10.82.1; 10.92.11; 10.93.1; 10.93.10; 10.110.9; 10.113.1; 10.113.5; 10.125.6; 10.149.2; 10.89.6.
[228] Matched by ṚV 1.96.5; 1.113.3; 1.142.7; 9.5.6.
[229] Matched by ṚV 1.186.4; 2.3.6; 2.31.5; 4.55.3; 5.41.7; 7.2.6; 7.42.5; 10.36.1; 10.70.6; 10.110.6.
[230] Matched by ṚV 10.68.10; 10.92.12; 10.93.5.
[231] I.e., word-order in subsequent literature.

arka- + brahman-	1x WO1	-	-	-	-	-	WO1	WO2
brahman- + gir-	5x WO1	3x WO2	-	-	WO1	-	-	WO2
uktha- + arka-	2x WO1	-	WO1	-	-		WO1	WO2
ṛc- + sāman-	1x WO1	-	WO1	-	WO1	-	WO1	-
gṛtha- + ājya-	-	1x WO2	-	-	-	-	WO1	-
ghṛta- + madhu-	3x WO1	4x WO2	-	-	-	WO2	-	WO2
ghṛta- + payas-	5x WO1	-	-	-	-	-	WO1	WO2
GODS AND MEN								
deva- + mānuṣa-	2x WO1	-	-	-	WO1	WO2	WO1	-
deva- + nṛ-	1x WO1	-	-	-	-	-	-	WO2
MATERIAL LEXICON								
ratha- + aśva-	4x WO1	7x WO2	-	-	-	WO2	WO1	-
ratna- + vasu-	1x WO1	1x WO2	-	-	-	WO2	-	WO2
NATURAL PAIRINGS								
HUMAN BODY								
karṇa- + grīva-	1x WO1	-	-	-	-	WO2(?)	WO1	WO2
manas- + hṛd-	3xWO1	7x WO2	-	-	WO1	WO2	WO1	WO2
FAMILIAR LEXICON								
nṛ- + nārī-	2x WO1		-	-	WO1	WO2	WO1	-
pitṛ- + mātṛ-	17x WO1	5x	-	WO2	WO1 (?)	WO2	WO1	WO2
putra- + naptṛ-	1x WO1	-	-	-	WO1	-	WO1	WO2
NATURAL LEXICON								
ajāvaya-	-	-	WO1	-	WO1	-	-	WO2
div- + bhūmi-	6x WO1	3x	WO1	-	WO1	-	WO1	-
div- + kṣam-	6x WO1	-	WO1	-	-	-	WO1	WO2
div- + pṛthivī-	83x WO1	41x	WO1	WO2	WO1	-	WO1	-
go- + aśva-	24x WO1	5x	-	-	WO1	-	WO1	-
nakta- + uṣas-	1x WO1	1x WO2	WO1	WO2	-	WO2	WO1	WO2
rātri- + ahar-	1x WO1	-	-	WO2	-	WO2	-	WO2
samudra- + parvata-	1x WO1	-	-	-	WO1	WO2	WO1	WO2
sūrya- + candramāsa-	-	-	WO1	-	WO1	-	WO1	-
sūrya- + māsa-	-	-	WO1	-	WO1	-	WO1	WO2

A brief note on *devatādvandva*s

The topic of *devatādvandva*s has already been studied by many scholars. In the present section a brief overview of the *status quaestionis* will be provided along with an overview of Pāṇini's rules which govern such linguistic formations. Whitney (1889: 495ff) underlines the rarity of copulative compounds in the ṚV, where they are prevalently represented by "dual combinations of the names of divinities and other personages, and of personified natural objects".[232] These combinations also bear two dual case endings[233] and two accents (one per constituent).[234] Delbruck (1900: 191) maintains that the second constituent of a *devatādvandva* such as *mitrāvaruṇa* was added to the first one (conceived as an elliptic dual) for the sake of clarity ("[…] die kopulative Zusammensetzung ist bei weitem am stärksten entwickelt im Altindischen. Sie entstand dort zunächst dadurch, dass zu elliptischen Dualen wie *mitrā́* der Deutlichkeit wegen ergänzende wie *váruṇā* hinzugefügt wurden."). This view is shared by Brugmann (1922: 301) and by Edgerton (1910: 110), who also points out that other scholars "especially early investigators, as G. Meyer […] and formerly Wackernagel […], lookt upon *Mitrā* as an abbreviation of *Mitrā-varunāu*." Nonetheless, Oliphant (1912), who provides a

[232] According to Macdonell (1919), in the ṚV they are three times more frequent than the classic type of *dvandva* compounds.

[233] In the nominative, accusative and vocative case.

[234] With respect to the various stages of the formation of *dvandva* compounds, Ditrich (2016: 75-76) resumes the evolution of *dvandva* compounds in the ṚV as follows (see also Insler 1998): "Several types of *dvandva* compounds, consisting of two coordinate constituents, can be identified in the Ṛgveda as those with:
1. both constituents in the dual and declinable, each having its own accent [e.g., ṚV 1.2.9a *mitrā́ váruṇā* (N. A. Du.) "Mitra and Varuṇa"; ṚV 7.66.1a *mitráyorváruṇayoḥ* (G. L. Du.)];
2. both constituents in the dual, the first constituent being indeclinable and each constituent having its own accent [e.g., ṚV 1.23.5c *mitrā́ váruṇā* (N. A. Du) "Mitra and Varuṇa": ṚV 10.130.5a *mitrā́ váruṇāyoḥ* (G.L.Du.)];
3. both constituents in the dual, the first constituent being indeclinable and the whole compound having only one accent on the last syllable of the final constituent [e.g., ṚV 1.162.2d *indrāpūṣṇóḥ* (G. L. Du) "of Indra and Pūṣan"];
4. the first constituent in stem form and the whole compound having only one accent [e.g., ṚV 1.14.3a *indravāyū́* (N. A. Du.) "Indra and Vāyu"];
5. the first constituent in stem form, the whole compound having one accent and plural endings [e.g., ṚV 10.190.2c *ahorātrā́ṇi* (N. A. Pl.) "days and nights"];
6. the compound having only one accent and appearing in the collective neuter singular [e.g., ṚV 10.14.8b *iṣṭāpūrtám* "what was offered and given"].
[…]. It is generally accepted that different types of *dvandva* compounds represent different stages in their historical development, beginning with types 1 and 2, the most archaic and frequently used types in the Ṛgveda, followed by types 3 and 4, where the compound received one accent and gradually the first constituent occurred in stem form. Types 5 and 6 represent the last stages in the development: they are very rare in the Ṛgveda and no theonyms occur in these *dvandva*s."

very rich and valuable contribution to the problem of both elliptic duals and *devatādvandva*s, moves away from these interpretations which he defines "too mechanical". In sum, he maintains with disarming clearness that *devatādvandva*s, conceived as an Indo-European phenomenon, originate from "a simple asyndeton". Oliphant (1912: 57) does not fail to consider the religious, rhetorical and artistic implication in observing such linguistic formations undergoing what he calls an "organic evolution". A similar position is shared by Renou (1952: 124), who refers to *devatādvandva* as an "association de deux noms animés" originated by a mere case of juxtaposition "comme le montrent plusieurs phénomènes" such as, for instance, the possibility of having the two nouns separated "soit par des mots faibles, soit même par des mots pleins" – on this account, see the collection of relevant strings provided in the present research. Renou concludes that this type of formation "ne présuppose nullement la coexistence d'un composé".

In any case, it is not easy to determine whether the so-called *devatādvandva*s can be considered compounds or not. On this matter, see Insler (1998), who does not consider forms such as *mitrā́váruṇā* as a compound. The author provides syntactic and metrical arguments to support his view: the former refers to the fact that there are other linguistic formation that bear two accents in the ṚV; the latter refers to the fact that these combination of words usually appear in the middle of the verse and they are split by the caesura (which needs to take place after the 4th or 5th syllable). See also, e.g., Ryan (2006) and Tan (2021).

As far as the interpretation of the lengthening of the final vowel of the first constituent of *devatādvandvas* is concerned, Kiparsky (2010: 4) writes as follows: "If it is not a dual case ending, what is it? I will argue that it is an associative dual morpheme, related to the dual case ending etymologically rather than synchronically, and that both are descended from the Indo-European instrumental ending -h1 in its comitative/sociative function." Note that, according to (Moravcsik 2003) associative duals/plurals work with specific semantic classes such as those involving humans and divinities. As noticed by Kiparsky (2010: 32), "In spite of the fact that the combination of an associative dual and asyndetic conjunction was present in a number of Indo-European languages, only the Indic branch seems to have grammaticalized them into a productive morphological operation of *dvandva* compounding".

The A devotes a series of rules dealing with the lengthening of the vowel of the first constituent of *devatādvandva*s and with these linguistic formations in general.

In fact, the substitution with the vowel -ā of -ṛ as the final sound of the first constituent of a *dvandva* compound is taught by rule A 6.3.26, a rule which does not refer to the domain of *devatādvandva*s. Then, the operation (the substitution with -ā) is extended to the domain of

*devatādvandva*s (A 6.3.26) with respect to the final sound (which is not better specified) of the first constituent of the given compound. Rule A 6.3.27 teaches the substitution with -ī of the final sound of the word *agni-* occurring as the first constituent, provided that the last constituent is represented by *soma-* or *varuṇa-*. The same operation cannot be taken into account in the cases of *devatādvandva*s undergoing a *vṛddhi* derivation: rule A 6.3.28 teaches the substitution with -i of the final sound of the word *agni-* occurring as the first constituent. It is obvious that Pāṇini deals with the topic from a purely phonetic perspective.

It is worth noting that A 6.3.28 was considered incomplete by later commentators even though it essentially deals with the Vedic language. The rule teaches the formation of compounds such as, e.g., *āgn**i**vāruṇī,* whose meaning refers to something devoted to the divine pair instead of the mere coordination of Agni's and Varuṇa's names. Kātyāyana (vt. 1 ad A 6.3.28) introduces the prohibition to apply the substitution of the final sound of of *agni-* with -i when the second constituent is represented by *viṣṇu-*. This *varttika* basically allows for the formation of the compound *āgn**ā**vaiṣṇava-* and it is accepted and supported by Patañjali despite his tendency to be conservative with respect to the A.

The compound *āgn**ā**vaiṣṇava-* is quite common in the Vedic corpus, even in the original core of the *Aitareya Brāhmaṇa*, a text usually considered as being composed close to the Pāṇinian age. See AB.1.1.2 *āgnāvaiṣṇavam,* AB 1.1.5 *āgnāvaiṣṇavam,* AB 1.4.8 *āgnāvaiṣṇavasya,* AB 1.4.9 *āgnāvaiṣṇavyau,* AB 1.4.10 *āgnāvaiṣṇavaṃ.*[235]

The section devoted to the *devatādvandva* in the A goes on with rule A 6.3.29, which teaches to substitute the word *div-* with the dual form *dyāvā* when the former occurrs as the first constituent. Then, rule A 6.3.30 introduces the form *divasa* as a substitute for *div-*, provided that the last constituent of the *devatādvandva* is represented by the word *pṛthivī-*. An analogous operation is taught by rule A 6.3.31, namely the substitution of *uṣas-* with the dual form *uṣāṣā* when the former occurs as the first constituent.

The further two rules of this section are characterised by the involvement of special constraints (respectively *udīcām* 'in the speech of northeners'[236] and *chandasi* 'in sacred literature'[237]) which restrict the application of the given teaching to specific fields. A 6.3.32 introduces via *nipātana* the form *mātarapitarau* and A 6.3.33, analogously, the form *pitarāmātarā*. It is interesting to note that Pātañjali supports this last teaching by means of a direct quotation: *ā mā gantām pitarāmātarā cā mā somo amṛtatvāya gamyāt*. This passage corresponds exactly to

[235] Note that this compound is also attested also in the older VSM (24.8 *āgnāvaiṣṇavá́*).

[236] Tr. Joshi-Bhate (1984).

[237] Tr. Joshi-Bhate (1984).

TS 1.7.8.3.4 […] *á mā gantām pitárā // mātárā cá mā sómo amṛtatváyagamyāt* ‘come to me, father and mother; may Soma come to me for immortality’[238], while VSM 9.19.2 only differs with respect to the word *amṛtatva-* since it features the instrumental form *amṛatvéna* instead of the dative *amṛtatváya*. This passage is matched by KS 14.1: 200.16. It is obvious that the passage quoted by Pātañjali does not contain any compound, since the particle *ca* directly connects the two words inflected in the dual[239] and the form taught as such by the A does not appear in the surviving Vedic literature. An analogous observation can be related to the form *mātarapitarau* introduced by rule A 6.3.32

The last rule devoted to the formation of *devatādvadva*s belongs to another section of the grammar: A 7.3.21 teaches the proper *vṛddhi* derivation of constituents combining to form a *devatādvandva* provided that specific *anubhandas* characterise the given *taddhita*.

It can be concluded that some significant discrepancies emerge from a comparison between the teachings of the A and the occurrences found in the literature usually considered close to Pāṇini also with respect to this specific topic.

2. Analysis of Vedic *dvandva* Compounds

A survey from the *Aitareya Brāhmaṇa*

Non-natural Pairings

Ritual

Specific names of Vedic Sacrifices

AB 1.1.12 *ārabdhayajño vā eṣa ārabdhadevato yo* ***darśapūrṇamāsābhyāṃ*** *yajate*
‘he who offers the new and full moon sacrifices is the one who has started the sacrifice and who has started the (summoning) of the deity’.

- This passage is taken from the section devoted to the Consecration sacrifice. Note that immediately after the present quotation, the words *āmāvāsya-* and *paurṇamāsa-* are used outside a compound to respectively denote the sacrifices related to the new and to the full moon sacrifices in the context of a disjunctive phrase (conjoined by means of *vā*).

[238] Tr. Keith (1914).
[239] See, e.g., Keith (1914).

- From a Pāṇinian point of view, the compound formed out of the combination of the word *darśa-* with the word *pūrṇamāsa-* is consistent with rule A 2.2.34 since *darśa-*, having fewer number of syllables, is placed first in this *dvandva* compound.

Specific names of Ritual Verses

AB 1.4.8 *āgnāvaiṣṇavasya haviṣo* ***yājyānuvākye*** *bhavataḥ*
'[…] there are the invitatory and offering verses of the oblations for Agni and Viṣṇu'.

- This passage is taken from the section devoted to the Consecration sacrifice. The same compound is also found, e.g., in AB 1.10.1, AB 1.11.10 etc.
- From a Pāṇinian point of view, the compound formed out of the combination of the word *yājyā-* with the word *anuvākya-* is consistent with rule A 2.2.34 since *yājyā-*, having fewer number of syllables, is placed first in this *dvandva* compound.

AB 1.17.14 *prāṇā vai* ***prayājānuyājās*** *te*
'indeed, the fore-offerings and the after-offerings are the breaths'.[240]

- From a Pāṇinian point of view, the compound formed out of the combination of the word *prayāja-* with the word *anuvājya-* is consistent with rule A 2.2.34 since *prayāja-*, having fewer number of syllables, is placed first in this *dvandva* compound.

AB 6.14.9 *kasmād asyāgneyau* ***stotriyānurūpau*** *bhavataḥ*
'why are its strophes and the antistrophes consecrated to Agni?'

- Note that this compound, here included in a sentence belonging to the section that Keith titled 'The *śastras* of the Hotrakas', is once again employed in the same passage with a slightly different syntactic context (*tasmād asyāgneyau stotriyānurūpau bhavataḥ*). Moreover, the same compound appears inflected in the plural number, e.g., in AB 6.14.10 (*sotriyānurūpā*).

[240] This passage belongs to the description of the Soma sacrifice.

- From a Pāṇinian point of view, the compound formed out of the combination of the word *stotriya-* with the word *anurūpa-* is consistent with rule A 2.2.34 since *stotriya-*, having fewer number of syllables, is placed first in this *dvandva* compound.

AB 1.21.3 ***bṛhadrathantaravantam*** *evainaṃ tat karoti*
'he truly makes him provided with the *Bṛhat* and the *Rathantara*'.

- This passage mentioning the two different *sāman*s (see Haug 1976) belongs to a section devoted to the Soma sacrifice. Note the use of the suffix *-vat* after the compounded nominal stem.
- From a Pāṇinian point of view, the compound formed out of the combination of the word *bṛhat-* with the word *rathantara-* is consistent with rule A 2.2.34 since *bṛhat-*, having fewer number of syllables, is placed first in this *dvandva* compound.

Men and gods

AB 3.31.5 *sarveṣāṃ vā etat pañcajanānām uktham* ***devamanuṣyāṇāṃ*** *gandharvāpsarasāṃ sarpāṇāṃ ca pitṝṇāṃ ca*[…]
'this is the saying of all the five classes of beings, i.e., of gods and of men, of Gandharvas and Apsaras, of snakes and of ancestors'.

- Note that the quoted passage features a list of coordinated elements where only the pairs (a) gods and men and (b) Gandharvas and Apsaras form a *dvandva* compound. The combination of the two words *sarpa-* and *pitṛ-* is expressed by means of the particle *ca*.
- From a Pāṇinian point of view, the compound formed out of the combination of the word *deva-* with the word *manuṣya-* is consistent with rule A 2.2.34 since *deva-*, having fewer vowels, is placed first in this *dvandva* compound.

Natural Pairings
Parts of Human Body

AB 1.25.1 *samānaṃ hi* ***śirogrīvam***
'because the head and the neck are the same'.

- The context of this passage refers to the respective parallelism between the *ātithyam* ("rite of hospitality")[241] and the *upasad* with the head and the neck, in the main frame of the *yajña*; the strong relationship between these significant body parts is emphasised by the use of the dvandva compound. According to Keith, this section is devoted to the Soma sacrifice.
- From a Pāṇinian point of view, the compound formed out of the combination of the word *śiras-* with the word *grīva-* cannot be related to any teaching of the A as far as the word-order is concerned since both words are disyllabic. The compound *śirogrīva-* is governed by rule A 2.4.2.

Familiar Lexicon

AB 3.48.9 *catuḥṣaṣṭiḥ kavacinaḥ śaśvaddhāsya te* ***putranaptāra*** *āsuḥ*
'there were at once sixty-four men covered in armour, they were his sons and his grandsons'.

- This sentence refers to Śucivṛkṣa Gaupalāyana.[242] According to Keith, the present passage belongs to the context of Soma sacrifice.
- From a Pāṇinian point of view, the compound formed out of the combination of the word *putra-* with the word *naptṛ-* cannot be related to any teaching of the A as far as the word-order is concerned since both words are disyllabic.

Natural Lexicon

AB 1.1.14 *pañcartavo* ***hemantaśiśirayoḥ*** *samāsena*
'there are five seasons because of the conjunction of winter and cool season'.[243]

- The context of this passage is again the Soma sacrifice (specifically, the Consecration ritual).
- From a Pāṇinian point of view, the compound formed out of the combination of the word *hemanta-* with the word *śiśira-* cannot be related to any teaching of the A as far as the word-

[241] Sen (1978).
[242] Cf. with the form Gaupālāyana, analogously used as the patronymic of Śucivṛkṣa, e.g., in MS 1.16.5 (see Macdonell- Keith 1912).
[243] The translation of *śiśira-* is in accordance with Keith for etymological reasons. See also Haug (1976), who interprets it as 'between winter and spring'. Macdonell and Keith (1912:111 fn6) provide detailed explanations about the numbering of the year's seasons, noting that in some ancient Vedic texts such as AV, TS, MS and so on, *hemanta* and *śiśira* are not conjoined so that, in those passages, the final number of the seasons is six.

order is concerned since both words are trisyllabic. Cases such as the present compound are dealt with by Kātyāyana in Vt. 3 ad A 2.2.29: *ṛtunakṣatrāṇām ānupūrvyeṇa samānākṣarāṇām pūrvanipāto vaktavyaḥ*, '[constituents] denoting *ṛtu* and *nakṣatra* having the same number of syllables are according to the natural order', and the example provided by Patañjali is *śiśiravasantau*, 'winter and spring'.

AB 1.23.6 *te vā ardhamāsebhyo nuttā asurā* ***ahorātre*** *aśrayanta*
'pushed away from the half-months, indeed the Asuras resorted to the day and the night'.

- This passage belongs to a section devoted to the narration of the victory of the gods over the asuras in the battle for control of the worlds. Note that this compound is found elsewhere in this text (see, e.g., AB 1.24.3).
- From a Pāṇinian point of view, the compound formed out of the combination of the word *ahar-* with the word *rātri-* cannot be related to any teaching of the A as far as the word-order is concerned since both words are disyllabic.

AB 8.20.1 *raso vā eṣa* ***oṣadhivanaspatiṣu*** *yan madhu*
'this sap which is honey is indeed in plants and trees'.

- This sentence belongs to the section dealing with the Rājasūya.
- From a Pāṇinian point of view, the compound formed out of the combination of the word *oṣadhi-* with the word *vanaspati-* is consistent with rule A 2.2.34 since *deva-*, having fewer number of syllables, is placed first in this *dvandva* compound.

Abstract Nouns

AB 1.28.34 *adabdha****vratapramatir*** *vasiṣṭhaḥ*
'the most excellent one, of unbroken vow and forethought'.

- This sentence refers to Agni in the context of the Soma sacrifice.
- From a Pāṇinian point of view, the compound formed out of the combination of the word *vrata-* with the word *pramati-* is consistent with rule A 2.2.34 since *vrata-*, having fewer number of syllables, is placed first in this *dvandva* compound.

AB 1.8.12 ***prāṇāpānāv*** *agnīṣomau*
'Agni and Soma are inspiration and expiration'.

- This passage is taken from the section devoted to the Soma sacrifice.
- From a Pāṇinian point of view, the compound formed out of the combination of the word *prāṇa-* with the word *apāna-* is consistent with rule A 2.2.34 since *prāṇa-*, having fewer vowels, is placed first in this *dvandva* compound.

AB 1.14.3-4 *yad yuktayor* ***ayogakṣemaḥ*** *prajā vindet tāḥ prajāḥ pariplaveran yo 'naḍvān vimuktas tacchālāsadām prajānāṃ rūpaṃ yo yuktas tac cakriyāṇāṃ te ye yukte 'nye vimukte 'nya upāvaharanty ubhāv eva te* ***kṣemayogau*** *kalpayanti*
"If they were to take down [the King Soma] when both [oxen] were unloosed, they would make the King have the forefathers as his deity (i.e., they would bring him into the power of the ancestors - *pitṛyāna*), but if when yoked, the lack of *yogakṣema* (i.e., lack of the exertion combined with the rest) incurs to his (sacrificer's) subjects/ offspring. His subjects/ offspring would move restlessly. The ox when unyoked is the visible appearance of subjects/ offspring sitting in the enclosure/ residing in the house; when yoked, [it is the visible appearance] of them being on a journey [= going in a carriage]. Those who take it down when one is yoked and one unyoked, make both rest and exertion available."[244]

- From a Pāṇinian point of view, the compound formed out of the combination of the word *kṣema-* with the word *yoga-* cannot be related to any teaching of the A as far as the word-order is concerned since both words are disyllabic.

AB 3.7.8 *kiṃ sa yajamānasya* ***pāpabhadram*** *ādriyeta*
'why should he consider the evil and the good of the sacrificer?'

- This sentence belongs to the context of the Soma sacrifice. Note the use of the *samāhāra* type.

[244] Tr. Neri-Pontillo (2019).

- From a Pāṇinian point of view, the compound formed out of the combination of the word *pāpa-* with the word *bhadra-* cannot be related to any teaching of the A as far as the word-order is concerned since both words are disyllabic.

AB 8.7.10 ***brahmakṣatre***

'the *brahman-* and the *kṣatra*-power'.[245]

- Note that the same compound occurs again at the end of AB 8.7.10, in the section devoted to the Rājasūya.
- From a Pāṇinian point of view, the compound formed out of the combination of the word *brahma-* with the word *kṣatra-* cannot be related to any teaching of the A as far as the word-order is concerned since both words are disyllabic.

Summary

AITAREYA BRĀHMAṆA	**CONSISTENCY WITH THE A**
AB 1.1.12 *darśapūrṇamāsābhyāṃ*	YES (A 2.2.34)
AB 1.4.8 *yājyānuvākye*	YES (A 2.2.34)
AB 1.17.14 *prayājānuyājās*	YES (A 2.2.34)
AB 6.14.9 *stotriyānurūpau*	YES (A 2.2.34)
AB 1.21.3 *bṛhadrathantaravantam*	YES (A 2.2.34)
AB 3.31.5 *devamanuṣyāṇāṃ*	YES (A 2.2.34)
AB 1.25.1 *śirogrīvam*	YES (A 2.4.2)
AB 3.48.9 *putranaptāra*	NOt-DETECTABLE
AB 1.1.14 *hemantaśiśirayoḥ*	NOT-DETECTABLE
AB 1.23.6 *ahorātre*	NOT-DETECTABLE
AB 8.20.1 *oṣadhivanaspatiṣu*	YES (A 2.2.34)
AB 1.28.34 *adabdhavratapramatir*	YES (A 2.2.34)
AB 1.8.12 *prāṇāpānāv*	YES (A 2.2.34)
AB 1.14.3 *ayogakṣemaḥ*	NOT-DETECTABLE
AB 1.14.4 *kṣemayogau*	NOT-DETECTABLE
AB 3.7.8 *pāpabhadram*	NOT-DETECTABLE

[245] Cfr. Keith 'the holy power and the lordly power'. My translation is in line with Pontillo (2016), who dealt with the *samāhāra* version of this compound while analysing MBh 8.51.15–17.

AB 8.7.10 *brahmakṣatre*	NOT-DETECTABLE

As can be observed in the present chart, the survey of *dvandva* compounds taken from the AB shows a clear consistency with the teachings of the A, especially as far as the word-order is concerned. Note, indeed, that the most often applied rule is A 2.2.34, which teaches to place the constituent that has fewer vowels first in a *dvandva* compound. The increased use of *dvandva* compounds to denote non-theonimic pairs is self-evident in the AB.

A survey from the *Bṛhadāraṇyaka Upaniṣad*

Non-natural pairings

Ritual

Specific names of Vedic Sacrifices

BĀU 1.2.7.13 *tāv etāv* ***arkāśvamedhau***
'these two here are the *arka* and the *aśvamedha'*.

- From a Pāṇinian point of view, the compound formed out of the combination of the word *arka*- with the word a*śvamedha*- is consistent with rule A 2.2.34 since *arka*-, having fewer vowels, is placed first in this *dvandva* compound.

BĀU 1.5.2.9 *atho āhur* ***darśapūrṇamāsāv*** *iti*
'now, they called them the new-moon and the full-moon sacrifices.'

- From a Pāṇinian point of view, the compound formed out of the combination of the word *darśa*- with the word *pūrṇamāsa*- is consistent with rule A 2.2.34 since *darśa*-, having fewer vowels, is placed first in this *dvandva* compound.

Material Lexicon

BĀU 1.4.16.6 *atha yat paśubhyas* ***tṛṇodakaṃ*** *vindati* […]
'now, if he found herb and water for the domestic animals […]'

- From a Pāṇinian point of view, the compound formed out of the combination of the word *tṛṇa-* with the word *udaka-* is consistent with rule A 2.2.34 since *tṛṇa-*, having fewer vowels, is placed first in this *dvandva* compound.

Natural Pairings
Familiar Lexicon

BĀU 1.4.3.4 *sa haitāvān āsa yathā* ***strīpumāṃsau*** *sampariṣvaktau* /
'he was indeed as great as a woman and a man embraced.'

- From a Pāṇinian point of view, the compound formed out of the combination of the word *stri-* with the word *puṃs-* cannot be related to any teaching of the A as far as the word-order is concerned since both words are monosyllabic.

Natural Lexicon

BĀU 1.1.3 ***ahorātrāṇi*** *pratiṣṭhā*
'the day and the night are the foundations'.

- From a Pāṇinian point of view, the compound formed out of the combination of the word *ahar-* with the word *rātri-* cannot be related to any teaching of the A as far as the word-order is concerned since both words are disyllabic.

BĀU 3.7.11.1 *yaś* ***candratārake*** *tiṣṭhaṃś* ***candratārakād*** *antaro*
'what exists in the moon and in the star and is different from the moon and the stars'.

- Note that in this passage there are three other occurrences of this compound, always of the *samāhāra* type.
- From a Pāṇinian point of view, the compound formed out of the combination of the word *candra-* with the word *tāraka-* is consistent with rule A 2.2.34 since *candra-*, having fewer vowels, is placed first in this *dvandva* compound.

BĀU 3.8.9.1 *etasya vā akṣarasya praśāsane gārgi* ***sūryacandramasau*** *vidhṛtau tiṣṭhataḥ*

‘o Gārgī, at whose command the sun and the moon indeed remain separated’.

- From a Pāṇinian point of view, the compound formed out of the combination of the word *sūrya-* with the word *candramas-* is consistent with rule A 2.2.34 since *candra-*, having fewer vowels, is placed first in this *dvandva* compound.

Abstract Nouns

BĀU 1.4.7.2 *tan* ***nāmarūpābhyām*** *eva vyākriyata*
‘it was only divided as *nāma* and *rūpa* [are divided]’.

- From a Pāṇinian point of view, the compound formed out of the combination of the word *nāma-* with the word *rūpa-* cannot be related any teaching of the A as far as the word-order is concerned since both words are disyllabic.

BĀU 1.5.3.3 ***śraddhāśraddhā***
‘faith and absence of faith’.

- This compound is part of a list of elements which together make up the mental activity.
- From a Pāṇinian point of view, the compound formed out of the combination of the word *śraddha-* with the word *aśraddha-* is consistent with rule A 2.2.34 since *śraddha-*, having fewer vowels, is placed first in this *dvandva* compound.

BĀU 3.5.1.5 *yo ‘****śanāyāpipāse*** *śokaṃ mohaṃ jarāṃ mṛtyum atyeti*
‘he who overcome hunger and thirst, sorrow and delusion, old age and death’.

- Note that the present compound is the only one formed out of the three pairs listed in this passage.
- From a Pāṇinian point of view, the compound formed out of the combination of the word *aśanāyā-* with the word *pipāsā-* is not consistent with rule A 2.2.34 since *pipāsā-*, even though it has fewer vowels, is not placed first in this *dvandva* compound.

Summary

BṚHADĀRAṆYAKA UPANIṢAD	**CONSISTENCY WITH THE A**
BĀU 1.2.7.13 *arkāśvamedhau*	YES (A 2.2.34)
BĀU 1.4.16.6 *tṛṇodakaṃ*	YES (A 2.2.34)
BĀU 1.4.3.4 *strīpumāṃsau*	NOT-DETECTABLE
BĀU 1.1.3 *ahorātrāṇi*	NOT-DETECTABLE
BĀU 3.7.11.1 *candratārake*	YES (A 2.2.34)
BĀU 3.8.9.1 *sūryacandramasau*	YES (A 2.2.34)
BĀU 1.4.7.2 *nāmarūpābhyām*	NOT-DETECTABLE
BĀU 1.5.3.3 *śraddhāśraddhā*	YES (A 2.2.34)
BĀU 3.5.1.5 *'śanāyāpipāse*	NO

As can be observed in the present chart, the survey of *dvandva* compound taken from the BĀU shows a clear consistency with the teachings of the A, especially as far as word-order is concerned. Note, indeed, that the most applied rule is A 2.2.34, which teaches to place the constituent that has fewer vowels first in a dvandva compound (note the exception of BĀU 3.5.1.5 *'śanāyāpipāse*). The increased use of *dvandva* compounds to denote pairs of non theonyms is self-evident also in the BĀU.

A survey from the *Āśvalāyana Gṛhyasūtra*

Non-natural pairings

Ritual

ĀśvGS 1.4.1.1 *udagayana āpūryamāṇapakṣe kalyāṇe nakṣatre*
caulakarmopanayanagodānavivāhāḥ

'the tonsure ceremony, the initiation[246], the hair cutting and marriage [take place] during the northern course of the sun, when the moon waxes, under an auspicious *nakṣatra*.'

- From a Pāṇinian point of view, the compound formed out of the combination of the words *caula-*, *karman-*, *upanayana-*, *godāna-* and *vivāha-* cannot be be related to any teaching of the A.

ĀśvGS 1.10.3 ***idhmābarhiṣoś*** *ca saṃnahanam*
'and the stringing together of fuel and grass'.

- From a Pāṇinian point of view, the compound formed out of the combination of the word *idhma-* with the word *barhis-* is consistent with rule 2.2.33 since *idhma-*, beginning with aC (any vowel) and ending with aT (the short vowel a), is placed first in this *dvandva* compound. Note the lengthening of the final -a of the first constituent, a condition that recalls the formation of *devatādvandva*s (see above §): could it represent the morphological fossil of a Vedic instrumental case ending, meaning 'grass together with the fuel'?

ĀśvGS 1.15.1 ***sarpirmadhunī*** […] *prāśayet*
'he should give (him) butter and honey to eat'.

- From a Pāṇinian point of view, the compound formed out of the combination of the word *sarpis-* with the word *madhu-* is not consistent with rule A 2.2.32 since *madhu-*, even though it falls under the label of GHI is not placed first in this *dvandva* compound.

Specific names of Vedic sacrifices

ĀśvGS 1.23.4 *ye '**hīnaikāhair** yājayanti*
'the ones who make sacrifice through *ahīna*s and sacrifices lasting one-day'.

- From a Pāṇinian point of view, the compound formed out of the combination of the word *ahīna-* with the word *ekāha-* cannot be be related to any teaching of the A as far as the word-

[246] See Oldenberg (1886).

order is concerned since both words are trisyllabic and fall under the condition expressed by rule 2.2.33.

Specific names of Vedic hymns

ĀśvGS 1.13.6 ***prajāvajjīvaputrābhyāṃ*** *haike*
'indeed some (say) [that they should do it] by means of the Prajāvat and the Jīvaputra hymns'.

- From a Pāṇinian point of view, the compound formed out of the combination of the word *prajāvant-* with the word *jīvaputra-* is consistent with rule A 2.2.34 since *prajāvant-*, having fewer vowels, is placed first in this *dvandva* compound.

ĀśvGS 2.6.1 ***bṛhadrathantare*** *te cakre*
'your two wheels are *bṛhat* and *rathantara*'.

- From a Pāṇinian point of view, the compound formed out of the combination of the word *bṛhant-* with the word *rathantara-* is consistent with rule A 2.2.34 since *bṛhant-*, having fewer vowels, is placed first in this *dvandva* compound.

Natural pairings
Parts of human body

ĀśvGS 1.18.6 ***keśaśmaśrulomanakhāny*** *udaksaṃsthāni kuru*
'make sure that hair, beard, body-hairs and fingernails will be placed in the north![247]

- From a Pāṇinian point of view, the compound formed out of the combination of the words *keśa-*, *śmaśru-*, *loman-*, *nakha-* cannot be related to any teaching of the A.

Familiar Lexicon

[247] Cfr. Oldenberg (1886), 'ending in the north'.

ĀśvGS 1.15.8 *tan* ***mātāpitarau*** *vidyātām opanayanāt*
‘[only] the mother and the father should know it (i.e., the name of the child) until the initiation’.

- From a Pāṇinian point of view, the compound formed out of the combination of the word *mātṛ-* with the word *pitṛ-*, whose final form is consistent with A 6.3.25, cannot be related to any teaching of the A as far as the word-order is concerned, nor is it governed by rules A 6.3.32-33. This form is mentioned by Patañjali e.g., in the comment on vt. 4 *ad* A 2.2.29.

ĀśvGS 1.24.4 ***ācāryaśvaśurapitṛvyamātulānāṃ*** *ca*
‘and of an *ācārya*, a father-in-law, a paternal uncle and a maternal uncle.’

- This long compound denotes the recipients of the Madhuparka.
- From a Pāṇinian point of view, the compound formed out of the combination of the words *ācarya-, śvaśura-, pitṛvya-, mātula-* cannot be related to any teaching of the A.

Natural Lexicon

ĀśvGS 1.2.4.1 ***oṣadhivanaspatibhyaḥ***
‘to plants and trees’.

- This compound is part of a list of items that receive the so-called *bali* (an oblation). Note that the present compound appears elsewhere in the same text, see, e.g., ĀśvGS 2.7.3.
- From a Pāṇinian point of view, the compound formed out of the combination of the word *oṣadhi-* with the word *vanaspati-* is consistent with rule A 2.2.34 since *oṣadhi-*, having fewer vowels, is placed first in this *dvandva* compound.

ĀśvGS 1.8.6 *kalyāṇeṣu* ***deśavṛkṣacatuṣpatheṣu*** *mā vidan paripanthina iti japet*
“in auspicious regions, trees and places where four roads meet he should whisper: ‘may no adversary come upon (us)’”.

- From a Pāṇinian point of view, the compound formed out of the combination of the words *deśa-, vṛkśa-, catuṣpatha-* cannot be related to any teaching of the A.[248]

ĀśvGS 1.11.3 ***vrīhiyavamatībhir*** *adbhiḥ purastāt prokṣaty*
'from the front he sprinkles (the sacrificial animal) with water containing rice and barley.'

- From a Pāṇinian point of view, the compound formed out of the combination of the words *vṛīhi-* with the word *yava-* is consistent with rule A 2.2.32 since *vrīhi-* falls under the label of GHI.

ĀśvGS 1.16.5.1 ***dadhimadhughṛta****miśram annaṃ prāśayed*
'he should give (him) food mixed with yogurt/curd honey and ghee'.

- From a Pāṇinian point of view, the compound formed out of the combination of the words *dadhi-, madhu- gṛtha-* cannot be related any teaching of the A.

ĀśvGS 2.4.1 ***hemantaśiśirayoś****caturṇām aparapakṣāṇām aṣṭamīṣu*
'On the eighth days of the four latter halves of the months of winter and cool seasons'.

- This passage refers to the description of the chronological cycle of the Aṣṭakas.
- From a Pāṇinian point of view, the compound formed out of the combination of the word *hemanta-* with the word *śiśira-* cannot be related to any teaching of the A as far as the word-order is concerned since both words are trisyllabic.

ĀśvGS 2.4.14.3 *'****horātre*** *kṛṇutāṃ dīrgham āyuḥ*
'may the day and the night produce a long life'.

- From a Pāṇinian point of view, the compound formed out of the combination of the word *ahar-* with the word *rātri-* cannot be related to any teachings of the A as far as the word-order is concerned since both words are disyllabic.

[248] Note that rule A 5.2.89 *chandasi paripanthiparipariṇau paryasvasthātari* teaches that the affix *-inI* is employed to derive the forms *paripanthin* and *pariparin* provided that they denote a *paryavasthātṛ-*, i.e., an antagonist, something in opposition. This definition fits the quotation taken from ṚV 10.85.32.

ĀśvGS 2.7.4 *yasmin* ***kuśavīriṇaṃ*** *prabhūtam*
"In which there is an abundance of Kuśa and Vīriṇa grasses".

- From a Pāṇinian point of view, the compound formed out of the combination of the word *kuśa-* with the word *vīriṇa-* is consistent with rule A 2.2.34 since *kuśa-*, having fewer vowels, is placed first in this *dvandva* compound.

Summary

ĀŚVALĀYANA GṚHYASŪTRA	**CONSISTENCY WITH THE A**
ĀśvGS 1.4.1.1 *caulakarmopanayanagodānavivāhāḥ*	NOT-DETECTABLE
ĀśvGS 1.10.3 *idhmābarhiṣoś*	YES (2.2.33)
ĀśvGS 1.15.1 *sarpirmadhunī*	NO
ĀśvGS 1.23.4 *'hīnaikāhair*	NOT-DETECTABLE
ĀśvGS 1.18.6 *keśaśmaśrulomanakhāny*	NOT-DETECTABLE
ĀśvGS 1.15.8 *mātāpitarau*	NOT-DETECTABLE
ĀśvGS 1.24.4 *ācāryaśvaśurapitṛvyamātulānāṃ*	NOT-DETECTABLE
ĀśvGS 1.2.4.1*oṣadhivanaspatibhyo*	YES (2.2.34)
ĀśvGS 1.8.6 *deśavṛkṣacatuṣpatheṣu*	NOT-DETECTABLE
ĀśvGS 1.11.3 *vrīhiyavamatībhir*	YES (2.2.32)
ĀśvGS 1.16.5.1 *dadhimadhughṛta-*	NOT-DETECTABLE
ĀśvGS 2.4.1 *hemantaśiśirayoḥ-*	NOT-DETECTABLE
ĀśvGS 2.4.14.3 *'horātre*	NOT-DETECTABLE
ĀśvGS 2.7.4 *kuśavīriṇaṃ*	YES (2.2.34)
ĀśvGS 1.13.6 *prajāvajjīvaputrābhyāṃ*	YES (2.2.34)
ĀśvGS 2.6.1 *bṛhadrathantare*	YES (2.2.34)

As can be observed in the present chart, the survey of *dvandva* compounds taken from the ĀśvGS shows the increasing tendency to employ such linguistic formations to coordinate more than two words. To a certain extent, this fact opacifies the teachings of the A, especially as far as word-order is concerned. Note that, in this case too, the most applied rule is A 2.2.34 even

if A 2.2.32 and A 2.2.33 can also be involved in the description of the present linguistic material. The increasing use of *dvandva* compounds to denote pairs of non theonyms is self-evident in the ĀśvGS.

3. On Numerals

Within the frame of modern interpretations regarding Sanskrit numeral compounds, Macdonell (1910: 307) states that "the numbers intermediate between 'ten' and 'twenty' are *dvandva* compounds formed by prefixing the accented unit to *daśa* 'ten'". Ditrich (2016: 87-89) precisely defines the status of the rest of the series: "the cardinal numerals from eleven to nineteen and those between the decades form *dvandva* compounds which are from Indo-European origin".
According to Pāṇini, this kind of linguistic formation is taught under the domain of *dvandva*s in force of the following passages:

- General rules of nominal composition:

(1) A 2.1.4 *saha supā* - '[An item ending in (1.1.72) *sup* triplets 2] combines with another item (ending in 1.1.72) *sup* triplets [to form a compound 3]'.

That is to say, two inflected words create a new linguistic formation that results in a nominal compound. Note the phrasing of this rule: the basic scheme of the whole compositional theory is 'X with Y' (where Y is represented by the instrumental *supā*). As such, X stands as the *upasarjana* according to A 1.2.43 *prathamānirdiṣṭaṃ samāsa upasarjanam*, 'What is stated in the nominative in a compound-[rule] is called *upasarjana*'.

(2) A 2.4.71 *supo dhātuprātipadikayoḥ* - '[*luk* zero-replacement 58 replaces] a nominal ending [of a pada 1.4.14] constituting a (derived) verbal stem or a (derived) nominal stem'.

This rule allows for the phonic substitution of the nominal endings of the constituents with zero, so that the result will be a compound nominal stem made up of two nominal stems, ready

to be inflected according to the syntax of the sentence which involves it, so that at first glance, only the first slot is occupied by a word-form in its thematic status.

- Now, the next step is represented by the observance of rules that allow for the accentuation of compounds on the *pūrvapada*:

(a) A 6.2.1 *bahuvrīhau prakṛtyā pūrvapadam* – 'In a *bahuvrīhi* compound, the first member retains its original accent'.
(b) A 6.2.35 *saṃkhyā* – '[In a *dvandva* compound 34 the first member 1] constituting a numeral word [retains its original accent 1]'.

- Process of elimination of the wrong interpretation by exploring the *bahuvrīhi* possibility for the designation of cardinal numeral compounds:[249]

(a) A 6.3.47 *dvyaṣṭanaḥ saṃkhyāyām abahuvrīhyaśītyoḥ* - '[The substitute long vowel ā(T) 46 replaces the final phoneme] of *dvi*- 'two' and *aṣṭan*- 'eight' [before a final member consisting] of a numeral, excluding a *bahuvrīhi* compound, or before -*aśīti*- 'eighty''.

According to this rule, the numerals *dvi*- and *aṣtan*- undergo the substitution of their final phoneme so that, at the end of the whole process, the forms *dvā*- and *aṣtā*- are obtained. Then, with this linguistic form they become the first constituents in compounds whose *uttarapada* consists of another numeral. The final locative of this *sūtra* represents a constraint: this operation must not be applied when the given compound is a *bahuvrīhi* (as, on the contrary, the formations governed by rule A 2.2.25 are described) and in the whole decade of 'eighty'.

e.g., the form for 'twelve' is *dv**ā**daśa* (*dvi*- > *dvā*-), but in compounds such as *dv**i**trāḥ* 'consisting of two or three', the final phoneme of *dvi*- is not substituted by -*ā*: in fact, *dvitrāḥ* is considered a bahuvrihi by A 2.2.25. Analogously, *dv**y**aśīti*- 'eighty-two' features the form *dvi*- (with no phonic substitution) because the *uttarapada* of this compound is -*aśiti*.

[249] Pāṇini probably had to disambiguate these kinds of numeral compounds from those taught in rule A 2.2.25 *saṃkhyayāvyayāsannādūrādhikasaṃkhyāḥ saṃkhyeye* - (An indeclinable (*avyaya*) and [the nominal padas 1.2] *āsanna*- 'near', *adūra*- 'not distant', *adhika*- 'surplus' and numerals (*saṃkhyā*) [combine with 1.4] another numeral (*saṃkhyayā)* in the sense of enumeration (*saṃkhyeye*) [to form a *bahuvrīhi* 23 compound 1.3]).

(b) A 6.3.48 *tres trayaḥ* - 'The substitute morpheme *trayas-* replaces [the whole of the numeral 47] *tri-* 'three' [before a final member consisting of a numeral, excluding a *bahuvrīhi* compound or before *-aśīti-* 'eighty']'.

The teachings of the previous rule are also extended here to the numeral *tri-*: this will be replaced by *trayas-* under the same conditions expressed by the constraint of rule A 6.3.47, so that ***trayo****daśa* 'thirteen', with *trayas-* instead of *tri-*, will be the correct form for a cardinal numeral compound. On the contrary, ***tri****daśāḥ* 'consisting of three or ten' will not follow the process described in this rule (since it is taught as a *bahuvrīhi* compound by A 2.2.25). The numeral *tryaśīti-* 'eighty-three' does not need any substitution of the final phoneme of its first constituent, since this numeral is included in the decade of eighty (which, as in the case of *bahuvrhī*s, represents a constraint for the non-application of the substitution).

(c) A 6.3.49 *vibhāṣā catvāriṃśatprabhṛtau sarveṣām* – 'Before the numerals of the series beginning with *-catvāriṃśat-* 'forty' [other than in a *bahuvrīhi* compound or before *-aśīti-* 'eighty'] operations introduced for all (i.e., *dvi-*, *tri-*, and *aṣṭan-*) take place marginally'.

The last rule of this brief section provides for the expression of a marginal degree of optionality (see Kiparsky 1979) in applying the operations taught for *dvi-*, *tri-*, and *aṣṭan-* in the decades from 'forty' onward: in other words, both forms can be found in this series, e.g., *dvi-/dvā-* + *catvāriṃśat-*. However, Pāṇini considers the second form *dvā-* as a borderline possibility (i.e., linguistically non recommended and rarely used).[250]
Even if Pāṇini never mentions the class of cardinals in the phrasing of his rules,[251] it is possible to infer that he refers to such a class due to the constraints of the *sūtra*s themselves.

[250] In the following detailed analysis, one can observe that, as far as the alternative form *tri-* is concerned, there are no attestations within the Vedic corpus that were close to Pāṇini. With respect to the form *aṣṭa-* in the decade of 'forty' (without the lengthening of the final vowel) there are no occurrences found in the corpus analysed below; however, it is interesting to note that such a case does appear once in the *Suśrutasaṃhitā* (40.5.2) and, with three attestations, also in the *Caraka Saṃhitā* (4.4.1; 19.3.1; 29.7.1).
[251] With respect to the series of cardinal and ordinal numbers, in later grammarians' treatises there are two specific names employed to denote these categories, respectively: *mūlarāśi* and *pūraṇi*. In fact, Pāṇini might have been aware of this lexical pair since he uses the latter term in rule A 6.3.34 *striyāḥ puṃvadbhāṣitapuṃskādanūṅ samānādhikaraṇe striyām a****pūraṇī****priyādiṣu*.

- Considering the just discussed impossibility of considering them as *bahuvrīhi*s, it is mandatory to apply rule A 6.2.35 *saṃkhyā* (see above). This *sūtra* definitely implies the belonging of numeral compounds to the domain of *dvandva*s governed by rule A 2.2.29 *cārthe dvandvaḥ* - 'a *dvandva* compound is formed in the sense of *ca*.'

Early commentators

Towards the end of his comment on rule A 2.2.29 (M. 1.434 ll. 15 -16 *ad* A 2.2.29)[252] Patañjali introduces the problem of the classification of numeral compounds.
Indeed, beginning from vt. 16,[253] Kātyāyana points out the existence of an automatic involvement (*prasaṅga*) with respect to the application of the correct combination of gender and number in numerals over twenty, since the last *pada* of this series consists of a feminine stem (i.e., all the decades are nouns ending in *-i*).
The present condition should leave no room for the possibility of having a numeral higher than twenty inflected in the singular number since, according to A 2.4.17 *sa napuṃsakam*, a *dvandva* compound in the singular number is mandatorily inflected in the neuter gender. However, the behaviour of the real language (see e.g., ṚV 1.45.2; 1. 162.18; 10.55.3) speaks against the assumption of the Pāṇinian prediction and justifies Kātyāyana's doubts (as well as demonstrating an internal inconsistency within the *Aṣṭādhyāyī*).
In fact:

(a) Numeral compounds are taught as *dvandva* compounds by Pāṇini (see A 6.2.35).
(b) *dvandva* compounds inflected in the singular number (*samāhāra*) follow the neuter declension by A 2.4.17.
(c) Linguistic data certainly available to Pāṇini show that numeral compounds, interpreted by Pāṇini as *dvandva*s, can feature the combination of singular number and feminine gender.

[252] *ekādaśa dvādaśeti ko 'yam samāsaḥ │ ekādīnāṃ daśādibhirdvandva ḥ │ ekādīnāṃ daśādibhirdvandva ḥ samāsaḥ* │ 'What (kind of) compound is this: *ékādaśa-* 'eleven', *dvādaśa-* 'twelve'? The combination of items, starting with *éka-* 'one' with items starting with *daśa-* 'ten' is a *dvandva*. A compound formed by the combination of items, starting with *éka-* 'one' with items, starting with *daśa-* 'ten' is a *dvandva*'.
[253] *ekādīnāṃ daśādibhirdvandva iti cedviṃśatyādiṣu vacanaprasaṅgaḥ* ││ 'If it is maintained that the combination of items starting with *eka-* 'one' with items starting with *daśa-* 'ten' is a *dvandva* , there is the automatic involvement of the (unpredicted) grammatical number in the case of [numerals] starting with *viṃśati-* 'twenty''.

In order to solve the conflict, Kātyāyana (vt. 17)[254] proposes to switch to the domain of tatpuruṣas (i.e., to read the derivation of numeral compounds under the section headed by A 2.1.49 *pūrvakālaikasarvajaratpurāṇanavakevalāḥ samānādhikaraṇena*) and to construct the nominal compound as follows:

(1) [(X numeral + *-adhika-*) + (X numeral)]
e.g., [(*eka-* + *-adhika-*) + (*-daśa-*)] = **ekādhikadaśa*

(2) *lopa* of *-adhika-*
e.g., [(*eka-* + Ø) + (*-daśa-*)] = *ekadaśa*

In this way, we obtain a final compound whose members share a common frame of reference (i.e., they both share the common ground of the given counted objects). Finally, this compound undergoes a *madhyamapadalopa* (i.e., the word *-adhika-* is phonically substituted with zero). However, this solution is unpāṇinian since:

- the derivation process taught by the *Aṣṭādhyāyī* does not contemplate any possibility of reading numeral compounds as *tatpuruṣas*.
- the *madhyamapadalopa* does not belong to Pāṇini's *usus* (since he resorts to this expedient only once, in rule A 5.3.82 in order to form a *taddhita* derivative stem).

Therefore, Patañjali (who is extremely conservative with respect to the rules handed down by Pāṇini) criticises the emendation advanced by Kātyāyana and claims the congruity of the grammar by means of two arguments:

(a) It is taught that not only *samāhāra* compounds can be inflected in the singular, but also any other *dvandva*.
(b) Gender and number need not be taught according to rule A 1.2.53 *tad aśiṣyaṃ saṃjñāpramāṇatvāt*.

[254] *siddhaṃ tv adhikāntā saṃkhyā saṃkhyayā samānādhikaraṇādhikāre 'dhikalopaś ca* ‖ 'But this is settled [by reading] under the *adhikāra* about the reference to the same object that [there is a combination of] a numeral ending with *adhika* with (another) numeral; then, *adhika-* is zero-replaced'.

Now, let us investigate the reliability of both cases. First, let us note that the assumption *sarvo dvandvo vibhāṣā ekavad bhavati* ‘every *dvandva* is optionally treated as denoting singularity’ in point (a) derives from a *paribhāṣā*, already quoted by Patañjali while commenting on rule A 1.2.63. Rule A 1.2.63 teaches that *dvandva*s denoting names of asterisms are dual in number instead of being inflected in the expected plural. This condition, (i.e., the fact that the singular is not mentioned as a possible number in which the compound can be inflected), is the argument Patañjali uses to endorse the above-mentioned *paribhāṣā*: if there is the need to overtly teach the use of the dual it means that it is also possible to apply the singular number to the compound. As such, the singular number can still be potentially used in the given compound.

This is but a speculative approach to the grammar: there is no evidence that forces us to accept such a view (since such a statement is not declared anywhere and this is not a Pāṇinian rule). Note, above, the use of the term *ekavat* in the enunciation of the *paribhāṣā*: within the *Aṣṭādhyāyī* there are in fact 2 occurrences of this term, but according to rule A 1.4.102 *ekavacana* is the technical term used in the sense of singular in opposition to *dvivacana* ‘dual’ and *bahuvacana* ‘plural’. Moreover, *ekavacana* is part of the phrasing of rule A 2.4.1 which means that it is continued by *anuvṛtti* in the following *sūtras* providing for the formation of *dvandva samāhāra*.

As regards issue (b), which refers to the fact that numeral compounds over twenty do not respect the correct combination of gender and number by the part of numeral compounds above twenty, Patañjali recurs to rule A 1.2.53 to justify the inconsistency regarding the co-occurrence of singular number and feminine gender which is not accounted for by the *Aṣṭadhyāyī*. The reliability of the given *sūtra*, which states that the application of gender and number only relies on the speaker’s competence, has been much discussed by scholars: Wezler (1976: 366) states that “this is the first of five *sūtras* that apparently do not go back to Pāṇini, and it is the only one of them which was already known to Patañjali (M I, 229, 6-8)”.

In sum, whilst modern scholars, along with Patañjali and even Pāṇini collocate the series of numeral compounds under the domain of *dvandva*s, there are still a few problems in totally accepting this classification since Pāṇini only allows the neuter gender to combine with the singular, while numerals are declined according to the feminine declension.

Indeed, the data about the actual behaviour of numerals in the language shows that this is not the only shortcoming.

The next passage in this study consists of an analysis of the collection of numerical words comprised between 11 and 99, expressed both in compound and outside nominal composition, that is, connected by means of a particle or in asyndeton. All the occurrences are taken from selected works belonging to the Vedic corpus that could have been known to Pāṇini.

The section will be articulated in this way:

1. Analysis of data collected from the *Ṛgveda*.
2. Analysis of data collected from the *Atharvaveda Śaunakiyā*
3. Analysis of data collected from the *Atharvaveda Paippalāda*
4. Analysis of data collected from the *Aitareya Brāhmaṇa*
5. Analysis of data collected from the *Bṛhadāraṇyaka Upaniṣad*
6. Analysis of data collected from the *Āśvalāyana-Gṛhyasūtra*

1. *Ṛgveda*

1. eleven

(a) ṚV 1.34.11 ***tribhír ekādaśaír*** […] <u>devébhir</u>	'with the thrice eleven gods'[255]
(b) ṚV 1.139.11 <u>devāso</u> […] ***ekādaśa*** […] ***ekādaśa*** […] ***ekādaśa***[256]	'eleven gods […] eleven (gods) […] eleven [gods]'
(c) ṚV 8.35.3 <u>devaís</u> ***tribhír ekādaśaír***	'with the thrice eleven gods'
(d) ṚV 8.39.9 ***trīṃr ekādaśāṃ***	'the thrice eleven'
(e) ṚV 8.57.2 <u>devā́s</u> ***tráya ekādaśā́saḥ***	'the thrice eleven gods'
(f) ṚV 9.92.4 <u>devā́s</u> ***tráya ekādaśā́saḥ***	'the thrice eleven gods'

First, it must be noted that there are no occurrences of this term in the older books of the ṚV (the books of family). Each of the 8 occurrences of the word standing for 'eleven' is represented by the compound *ekādaśa-*, with the peculiar lengthening of the final vowel of *eka-* before the

[255] The right column of each paragraph henceforth aims to provide only a literal translation of the listed occurrences. Where the occurrence does not present any expressed referent, the translation will use the determinative article 'the' before the numeral if it behaves as a substantivized adjective (e.g., 'the fifteen-fold' to denote a specific recitation composed of fifteen verses; 'the thirty-three', to denote the whole divine group). The numeral will be translated without adding any item when it denotes the results of a given operation (such as the final number of verses to be recited or the total number of gods).

[256] See AB 5.12.5.

last constituent. According to Roodbergen (1974: fn. 763a), «Pāṇini give no rule for the lengthening of *eka* in *ekādaśa*»; moreover, "*eka* in 11 becomes *ekā*, but is elsewhere unchanged", as stated by Whitney (1879: 178). Macdonell (1910: 307 fn. 4) added that this phenomenon was developed "under the influence of *dvā-daśa*". Now, let us analyse the interaction of the numeral word *ekādaśa-* in the context of the hymns where it appears. With the exception of (d), whose referent is understood, every occurrence of this term agrees with the noun that it qualifies: *deva-*.[257] Analogously, *tri-* also follows this pattern since it works as a multiplier of the numeral compound, so that the denoted number is 'thirty-three' (3x11); the operation is not employed in the case of (b), where the term *ekādaśa-* is overtly expressed thrice: in fact, these occurrences are the only ones which actually mean 'eleven'. Note that in this case the numeral is placed AFTER the counted items (i.e., the gods); (c), (e) and (f) also follow this pattern. The only example of a numeral placed BEFORE is (a).

2. Twelve

(a) ṚV 1.25.8 *māsó dvā́daśa*	'twelve months'
(b) ṚV 1.164.11 *dvā́daśāraṃ*	'twelve-spoked'
(c) ṚV 1.164.12 *dvādaśākṛtiṃ*	'[the one having] twelve forms'[258]
(d) ṚV 1.164.48 *dvā́daśa pradhā́yaś*	'twelve fellies'
(e) ṚV 4.33.7 *dvā́daśa dyū́n*	'twelve days'
(f) ṚV 7.103.9 *dvādaśasya*	'of the twelve'
(g) ṚV 10.114.5 *gráhān […] dvā́daśa*	'twelve cupfuls'

Just as happens for the numeral 'eleven', here too this number only occurs in the ṚV as a nominal compound. Apart from (f), the counted items are always expressed, with the following pattern: in the case of (a) and (g) the compound is placed AFTER the given referent, while in (b), (c), (d) and (e) the numeral occurs BEFORE the noun to which it refers. More specifically, (a) takes into account the twelve months, (b) refers to the spoke of a wheel. In (c) twelve happen to be the parts make up a year. The next occurrence, (d) literally refers to the 'wheel-segments' of a main 'chariot-wheel', a metaphor employed to denote the Sun (see Jamison-Brereton 2014); in fact, despite lengthy academic debates, ṚV 1.164 is still considered of difficult

[257] The gods are the counted items of each occurrence.

[258] See Jamison-Brereton 2014.

interpretation. The case of (e) represent an example of narrative section regarding the divine *Ṛbhus*: twelve are the days that they spent as Agohya's guests: for the enigmatic nature of this character, see (Jamison-Brereton 2014). The next compound (f), along with (e), is taken from the oldest nucleus of the ṚV. Even though there is no expressed referent in the verse, the general context helps in understanding that this number has again to be related to the months of the year. A certain degree of obscurity also surrounds the hymn from which the last example is taken; in a strict sense, the objects denoted by the numeral compound of (g) are cupfuls of Soma.

3. fourteen

The word *caturdaśa-* occurs only once in the ṚV and it is not employed in any other way in this *Saṃhitā* to convey the sense of 'fourteen'.

(a) ṚV 10.114.7 *cáturdaśānyé mahimā́no*	'fourteen are the other powers of this one'[259]

The expressed referent is contained in a series of enigmatic verses whose message is considered of difficult interpretation (see above); Jamison and Brereton (2014) translate *mahimā́no* as "the other powers of this one [= chariot of the sacrifice]". Indeed, the sacrifice is paralleled with a chariot whose wheels are *ṛc* and *sāman*.

Note that, even though rule A 6.2.35, teaches the preservation of the *prakṛtisvara* of the first pada in case of *dvandva* compounds made up of numerical words, in actual fact "*catúr* in composition is accented *cátur*" as stated by Whitney (1879: 161). The numerical word is placed BEFORE the referent.

4. fifteen

The compound *pañcadaśa-* occurs twice in the ṚV, as the sole means of expressing the meaning 'fifteen'. The behaviour of this word follows a different pattern each time:

(a) ṚV 10.86.14 *ukṣṇó* […] *páñcadaśa*	'fifteen oxen'

[259] See Jamison-Brereton 2014.

(b) ṚV 10.114.8 *pañcadaśā́ny <u>ukthā́</u>*	‘fifteen praises’

Even if both attestations are found within the same book, these numerals follow slightly different patterns, since in (a) the numeral compound does not agree with the grammatical number of the word standing as its denotatum and is placed AFTER its referent; while, in (b) the compound is inflected in the plural in syntactic agreement with the noun that it qualifies and it is placed BEFORE its referent. As far as their *denotata*, (a) indicates the number of oxen sacrificed to Indra, while in (b) there is reference to the so-called *uktha*s, i.e., sacred recitations.

5. twenty-one

(a) ṚV 7.18.11*ékaṃ ca* […] *viṃśatíṃ ca* […] *<u>jánān</u>*	‘one and twenty people’

The only attestation[260] of this numeral is found in one of the oldest books of the ṚV, in a passage that deals with the narration of a mythic period of war: the *janā*s referred to are the peoples of the two *Vaikarṇa*s, defeated by Indra during the Battle of the Ten Kings. This number is expressed by means of a syntactic string that follows the pattern UNIT + CA + DECADE + CA [+ REFERENT].

6. thirty-three

(a) ṚV 1.34.11	***tribhír ekādaśaír*** […] *<u>devébhir</u>**[261]	‘with the thrice eleven gods’
(b) ṚV 1.45.2	*tráyastriṃśatam*	‘the thirty-three’
(c) ṚV 3.6.9	*triṃśátaṃ trī́ṃś ca <u>devā́n</u>*	‘thirty and three gods’
(d) ṚV 8.28.1	*triṃśáti tráyas paró <u>devā́so</u>*	‘three beyond thirty gods’
(e) ṚV 8.35.3	*<u>devaís</u>* ***tribhír ekādaśaír****	‘with the thrice-eleven gods’
(f) ṚV 8.30.2	*tráyaś ca triṃśác ca […] <u>devā</u>*	‘three and thirty gods’
(g) ṚV 8.39.9	***trīṃr ekādaśāṁ****	‘the thrice eleven’
(h) ṚV 8.57.2	*<u>devā́s</u>* ***tráya ekādaśā́saḥ****	‘thrice eleven gods’

[260] In fact, as in the case of §1.VI (a), (e), (g), (h) and (i), this number can also be conveyed by means of a different syntactic and stylistic expedient; see e.g., ṚV I 191.1 *triḥ sapta* […], where *tri-* works as a multiplier of the following number.

[261] See § II 3.1.1.

(i) ṚV 9.92.4 *<u>devás</u> **tráya ekādaśā́saḥ****	'thrice eleven gods'

Within the hymns of the ṚV, it is possible basically to detect the three different ways the authors use to convey the sense of this number:
(1) a singular feminine compound (see b),

(2) by means of syntactic strings that follows various patterns, namely
DECADE + UNIT + CA + REFERENT (see c),
DECADE + UNIT+ PARA [+ REFERENT] (see d),
UNIT + CA + DECADE + CA [+ REFERENT] (see f)

(3) the already described system in which the numeral word standing for 'eleven' is preceded by a form of *tri-* which works as a multiplier in cases (a), (e), (g), (h) and (i).

As a matter of fact, one can note that (1) and (3) coexist in the same half part of the first book (1-50); (2) and (3) are all found in book eight. This is consistent with the theory that assigns a chronological proximity to the just mentioned sections of the ṚV (other than the common assignment to the Kaṇva family); (3) also occurs in the later-written nineth book. With the exception of (c), which follows (2) with the pattern DECADE + UNIT + CA [+ REFERENT], there are no attestations deriving from the nucleus of the family books. Finally, let us note that whether the referent of the number thirty-three is openly expressed or merely understood, it always alludes to the deities comprised in the Ṛgvedic pantheon.

7. thirty-four

(a) ṚV 1.162.18 *cátustriṃśad* […] *<u>váṅkrīr</u>*	'thirty-four ribs'
(b) ṚV 10.55.3 *cátustriṃśatā*	'with the thirty-four'

The numeral in (a) refers to the number of ribs of the sacrificial horse: the context of the hymn is that of the *Aśvamedha*. On the contrary, the counted objects of (b) are not expressed: according to Jamison-Brereton (2014), they consist of 'lights', in the general frame of symbolic images that permeate such a «puzzling and enigmatic hymn».[262]

[262] Jamison-Brereton (2014: 1465).

The two occurrences of this numeral are both in compound: while in (a) the numeral is placed BEFORE the referent, in the case of (b), as noted above, the referent is understood.

8. thirty-nine

(a) ṚV 3.9.9 *triṃśác ca devā́ náva ca* […]	'thirty and nine gods'
(b) ṚV 10.52.6 *triṃśác ca devā́ náva ca* […]	'thirty and nine gods'

Even if it one can count two attestations of the considered number, it must be noted that (a) and (b) are taken from a repeated verse that is identical in both passages from the ṚV, so that one could be a quotation or a reminder of the other. The main contexts of these occurrences are two hymns that deal with the worship of Agni conceived as the Hotṛ of the sacrifice. They are preceded by other numerals (*triśata-* and *trisahasra-*) which, just like (a/b) refers to the number of gods that honour Agni.

The peculiar feature of this string is represented by the pattern DECADE + CA + [REFERENT +] UNIT + CA.

9. seventy-seven

(a) ṚV 5.93.15 *saptatíṃ ca saptá ca*	'the seventy and seven'

The only occurrence of this number in the ṚV follows the pattern DECADE + CA + UNIT + CA with an understood referent that, according to Jamison-Brereton (2014) implies the number of patrons of the sacrifice in the final *dānastuti*.

10. ninety-nine

(a) ṚV 1.32.14 *náva ca* […] *navatíṃ ca srávantīḥ*	'nine and ninety rivers'
(b) ṚV 1.54.6 *púro navatíṃ* […] *náva*	'ninety-nine fortifications'
(c) ṚV 1.84.13 *vṛtrā́ṇy* […] / […] *navatī́r náva*	'ninety-nine obstacles'
(d) ṚV 1.191.13 *navānā́ṃ navatīnā́ṃ* […] *rópuṣīṇām*	'of the ninety-nine tormentors'
(e) ṚV 2.14.4 *náva* […] *navatíṃ ca bāhū́n*	'ninety-nine arms'

(f) ṚV 2.19.6 […] *navatíṃ ca náva* […] *púro*	‘ninety and nine fortifications’
(g) ṚV 4.26.3 *púro* […] *náva* […] *navatī́ḥ*	‘ninety-nine fortifications’
(h) ṚV 4.48.4 *yuktā́so navatír náva*	‘ninety nine yoked ones’
(i) ṚV 5.29.6 *náva* […] *navatíṃ ca bhogā́n*	‘nine and ninety coils’
(j) ṚV 6.47.2 *navatíṃ náva ca dehyò*	‘ninety and nine walls’
(k) ṚV 7.19.5 *náva* […] *púro navatíṃ ca*	‘nine and ninety fortifications’
(l) ṚV 7.99.5 *náva púro navatíṃ ca*	‘nine and ninety fortifications’
(m)ṚV 8.93.2 *náva* […] *navatím púro*	‘ninety-nine fortifications’
(n) ṚV 9.61.1/2 *navatī́r náva // púraḥ*	‘ninety-nine fortifications’
(o) ṚV 10.39.10 *navábhir vā́jair navatī́ ca*	‘nine and ninety prizes’
(p) ṚV 10.49.8 *náva vṛ́dhato navatíṃ ca*	‘nine and ninety strenghened’
(q) ṚV 10.104.8 *navatíṃ srotyā́ náva ca*	‘ninety and nine rivers’

The ninety-nine flowing rivers mentioned in (a) are those over which Indra, like a falcon, flew over when his heart was filled with fear after he had killed Vṛtra (see Jamison-Brereton 2014); even the expressed referent of (q) refers to the number of rivers crossed by Indra. The mythical battle against the demon is recalled in the case (i): in fact, ninety-nine are said to be Vṛtra’s coils. In (b), (f), (g), (k), (l), (m), (n) the numeral quantifies the fortifications conquered by Indra, who is also the smasher of the ninety-nine obstacles of (c). There is an analogous context also in the case of (j), where ninety-nine happen to be the ‘walls’ of Śambara. Indra is also the main character of ṚV 10.49.8 (p), an *ātmastuti* where the god lists his many deeds, among which are recalled the ninety-nine heroes strengthened by him. Another of Indra’s deeds fall within the wider frame of (e), since ṚV 2.14 consists of a series of invocations to the Adhvaryu priest that recall the reason why this god merits Soma offerings; in particular, verse 4 cites the ninety-nine arms stretched forth by Uraṇa, who was killed by Indra. Occurrence (d) is found in a hymn that serves to protect one from the venom of various creatures; indeed, the referents of the numerals are precisely the names of these animals. In (h), which is taken from a hymn devoted to Vāyu, there is the somewhat obscure mention of ninety-nine *yuktā́so,* the ‘yoked ones’ (see Jamison-Brereton 2014). In (o) the ninety-nine ‘prizes’ provided by the Aśvins are mentioned.

With seventeen occurrences, this is the most represented number in the ṚV. It never occurs in the form of a compound, and is expressed

(1) in asyndeton
(2) by means of a syntactic string involving the particle *ca*.

In particular, the attestations that are to be ascribed to the domain of (1) follow the patterns [REFERENT +] UNIT + DECADE (b, c, g), UNIT + DECADE [+ REFERENT] (m, d), [REFERENT +] DECADE + UNIT (h), DECADE + UNIT [+ REFERENT] (n).
In the case of (2), one can to observe the following pattern: UNIT + CA + DECADE [+ REFERENT] (a), UNIT + DECADE + CA [+ REFERENT] (e, i), DECADE + CA + UNIT [+ REFERENT] (f), DECADE + UNIT + CA [+ REFERENT] (j), UNIT + [REFERENT +[DECADE + CA (k, l, o, p), DECADE + [REFERENT +] UNIT + CA (q).

2. *Atharvaveda* (*Śaunaka*)

1. eleven

(a)	ŚS 5.15	*ékā ca me dáśa ca me*	'one of me and ten of me'
(b)	ŚS 7.4.1	*ékayā ca daśábhiś ca*	'with one and ten'
(c)	ŚS 19.23.8	*ekādaśarcébhyah*	'to the eleven-versed'
(d)	ŚS 19.27.11	*devā* […] *ékādaśa*	'eleven gods'
(e)	ŚS 19.27.12	*devā* […] *ékādaśa*	'eleven gods'
(f)	ŚS 19.27.11	*devā* […] *ékādaśa*	'eleven gods'
(g)	ŚS 19.47.5	*ékādaśa*	'eleven'

The numeral 'eleven' is not represented as a compound in the ŚS; in both (a) and (b) let us note that the unit precedes the decade and *ca* follows both. More specifically, in the first case the main scheme can be summarized as UNIT + CA [+ REFERENT] + DECADE + CA [+ REFERENT], with respect to (a); in the case of (b) the pattern is UNIT + CA + DECADE + CA [+ REFERENT]. As far as the main context from which these occurrences are taken, note that the syntactic string reported in (a) also increases progressively verse by verse, so that in v.1 the resulting number is eleven, in v.2 twenty-two and so on, as reported below. This kind of liturgical repetition is inserted in a hymn that deals with a type of exorcism; in particular, in such a game of variations and repetition, clearly also based on the power derived from the

sound of the given formula, the referent is repeated twice each time and denotes the one who recite the verse. In the case of (b) one can also observe the first of a series of increasing quantities, which characteristically show a logical correspondence between units and decades (one/ten, two/twenty etc.). Note that each numeral refers to a certain category of the so-called *viyúgbhir*; since the nouns are declined in the feminine gender, Whitney suggests that 'mares' should be the final denotatum of the instrumental. (c) refers to the number of verses; the numeral is placed BEFORE its referent. More precisely, the entire hymn which it is taken from constitute of an homage to the various parts that compose the AV. With respect to (d), (e) and (f), which correspond to ṚV 1.139.11, note that as regards the placement of the numeral with respect to the referent (i.e., the gods) the former occurs immediately AFTER the nominative plural and the (here omitted) locative that serves to denote the residence of the considered set of gods. In (g) there is reference to the so-called *draṣṭātaro*, which appears in v. 3; in particular to those considered as being *avama-*; see below ŚS 19.47.3.

2. twelve

(a) ŚS 4.11.11	*dvā́daśa* […] *rā́trīr*	'twelve nights'
(b) ŚS 4.35.4	*dvā́daśāraḥ*	'twelve spokes'
(c) ŚS 9.6.43	*dvādaśāhéna* […]	'with the [one having] twelve days'
(d) ŚS 9.9.12	*dvādaśākṛtiṃ*	'[the one having] twelve forms'
(e) ŚS 9.9.12	*dvā́daśāraṃ*	'twelve-spoked'
(f) ŚS 10.8.4	*dvā́daśa pradhā́yaś*	'twelve fellies'
(g) ŚS 11.6.22	*dvā́daśa ṛtávaḥ*	'twelve sacred seasons'
(h) ŚS 11.7.12	*dvādaśāhó*	'the [one having] twelve days'
(i) ŚS 19.23.9	*dvādaśarcébhyaḥ*	'to the twelve-versed'

In (a) the compound refers to the number of 'nights' for Prajāpati's vow; (b) refers to the symbolic shape of the year (compared to the form of a wheel). In the case of (c) the counted 'days' correspond to the duration of the given sacrifice, while in (h) the compound denotes the specific sacrifice devoted to the pressing of the Soma. In (d) the 'twelve forms' of the five-footed father are mentioned. (e) has to do with the symbolic shape of the given wheel, which is twelve-spoked in this case. The topic of the structure of the wheel returns in (f), where the 'twelve fellies/segments' are considered. Note that the passage is the same in ṚV 1.164.48.

The numeral occurring in (g) denotes the number of the ‘seasons’. Every compound of the series listed above possesses an expressed referent, and the compound is placed BEFORE it. As for (i), see § II 3.2.1.c.

3. thirteen

(a) ŚS 3.21.5 *tráyodaśa bhauvanā́ḥ*	‘thirteen months’
(b) ŚS 19.23.10 *trayodaśarcébhyaḥ*	‘to the thirteen-versed’

The compound standing for the numeral thirteen stands BEFORE the noun to which refers; Whithey (1905: 125) comments on the whole passage as follows: “The unusual and obscure number "thirteen" here seduces the comm. into declaring first that *bhauvaná* signifies ‘month’, coming from *bhuvana* "year"; and then the *mānavā́s* [five according to the rest of the stanza] are the seasons! But he further makes the latter to be the four castes, with the *niṣādas* as fifth, and the former the thirteen sons, Viśvakarman etc., of a great sage named *bhuvana* (because of *viśvakarman bhauvana* in AB. viii. 21. 8-11). Ppp. reads *bhuvanā* for *bhāuvanā́s*”. As regards (b), see § II 3.2.1.c.

4. fourteen

(a) ŚS 19.23.11 *caturdaśarcébhyaḥ*	‘to the fourteen-versed’

As for the meaning of this occurrence, see § II 3.2.1.c.

5. fifteen[263]

(a) ŚS 8.9.20 *pañcadaśéna*	‘with the fifteen-fold’[264]
(b) ŚS 11.1.19 *paktā́ pañcadaśás*	‘fifteen-fold cooker’[265]
(c) ŚS 19.23.12 *pañcadaśarcébhyaḥ*	‘to the fifteen-versed’
(d) ŚS 20.126.14 *ukṣṇó* […] *páñcadaśa*	‘fifteen oxen’

[263] The doubtful case of ŚS 8.9.15 is not analysed.
[264] The context of the verse definitely suggests this translation.
[265] See Whitney 1905.

The occurrence found in (a) refers to the Stoma, whose name derives from its extension; analogously, in (b) the numeral denotes in how many 'parts' the *paktṛ-* is actually divided into. Note that in this case the external referent *paktắ* is placed so that the compound comes AFTER it. For (c), see § II 3.2.1.c. (c) corresponds to ṚV 10.86.14 (see above).

6. sixteen

(a) ŚS 19.23.13	*ṣoḍaśarcébhyaḥ*	'to the sixteen-versed'

As for the meaning of this occurrence, see § II 3.2.1.c.

7. seventeen

(a) ŚS 19.23.15	*saptadaśarcébhyaḥ*	'to the seventeen-versed'

As for the meaning of this occurrence, see § II 3.2.1.c.

8. eighteen

(a) ŚS 19.23.16	*aṣṭādaśarcébhyaḥ*	'to the eighteen-versed'

As for the meaning of this occurrence, see § II 3.2.1.c.

9. twenty-two

(a) ŚS 5.15.2	*dvé ca me viṃśatíś ca me*	'two of me and twenty of me'
(b) ŚS 7.4.1	*dvắbhyām* […] *viṃśatyắ ca*	'with two and twenty'
(c) ŚS 19.47.5	*dváu ca te viṃśatíś ca te*	'two of you and twenty of you'

(a) follows this pattern: UNIT + CA [+ REFERENT] + DECADE + CA [+ REFERENT]. With respect to the explanation of its referent, see § II 3.2.1.a. As far as (b) is concerned, see § II 3.2.1.b; the pattern is UNIT + CA + DECADE + CA [+ REFERENT]. As far as the referent of (c) is concerned, see § II 3.2.1.g.

10. thirty-three

(a) ŚS 5.15.3	*tisráś ca me triṃśác ca me*	'three of me and thirty of me'
(b) ŚS 6.139.1	*tráyastriṃśan nitānā́ḥ*	'thirty-three down-stretchers'[266]
(c) ŚS 7.4.1	*tisṛ́bhiś ca* […] *triṃśátā ca*	'with three and thirty'
(d) ŚS 10.7.13	*tráyastriṃśad devā́*	'thirty-three gods'
(e) ŚS 10.7.23	*tráyastriṃśad devā́*	'thirty-three gods'
(f) ŚS 10.7.27	*tráyastriṃśad devā́*	'thirty-three gods'
(g) ŚS 10.7.27	*tráyastriṃśad devā́*	'thirty-three gods'
(h) ŚS 11.3.52	*tráyastriṃśataṃ lokā́n*	'thirty-three worlds'
(i) ŚS 11.5.2.2	*trayastriṃśat*	'the thirty-three'
(j) ŚS 12.3.16	*tráyastriṃśad devátās*	'thirty-three gods'
(k) ŚS 19.27.10	*tráyastriṃśad devátās*	'thirty-three gods'
(l) ŚS 19.37.1	*tráyastriṃśad* […] *vīryā̀ṇi*	'thirty-three heroisms'[267]
(m)ŚS 19.47.4	*tráyas triṃśác ca*	'the three and thirty'
(n) ŚS 19.56.3	*trayastriṃśā́saḥ*	'the thirty-three [gods]'
(o) ŚS 20.13.4	*triṃśátaṃ trī́ṃś ca devā́n*	'thirty and three gods'

The first occurrence of the number thirty-three (a) is not attested in a compound and follows the pattern already shown above for the similar situation: UNIT + CA [+ REFERENT] + DECADE + CA [+ REFERENT]. As far as (b) is concerned, the compound is placed BEFORE the noun that it quantifies, i.e., *nitānā́ḥ* translated by Whitney as 'down-stretchers'; the frame of this example is that of a hymn used to bestow success on the one who has fallen in love with a woman. As for (c), see § 2.I.b; its pattern is UNIT + CA + DECADE + CA [+ REFERENT]. The number of the gods is taken into account in most of the data in this section: while (d), (e), (f), (g), (j), (k), (n) and (o) explicitly state the referent and the compounds are placed BEFORE the noun that they count, in (i) the referent is only understood. In (h), the compound goes BEFORE the referent, i.e., *lokān*, standing for the worlds created by Prajāpati. In the case of (l) Whitney (1905) translates the referent as '*heroisms*'; the numeral is placed BEFORE it. As for (m) see below ŚS 19.47.3.

[266] See Whitney 1905.
[267] See Whitney 1905.

11. forty-four

(a) ŚS 5.15.4 *cátasraś ca me catvāriṃśác ca me*	‘four of me and forty of me’
(b) ŚS 19.47.4 *catvā́raś catvāriṃśác ca*	‘four and forty’

See § II 3.2.1.a; the pattern is UNIT + CA [+ REFERENT] + DECADE + CA [+ REFERENT]. As for (b), see below ŚS 19.47.3.

12. fifty-five

(a) ŚS 5.15.5 *páñca ca me pañcāśác ca me*	‘five of me and fifty of me’
(b) ŚS 6.25.1 *páñca ca* […] *pañcāśác ca*	‘five and fifty’
(c) ŚS 19.47.4 *pañcāśát páñca*	‘fifty-five’

With respect to (a), see § II 3.2.1.a; the pattern is UNIT + CA [+ REFERENT] + DECADE + CA [+ REFERENT]. As far as (b) is concerned, this numeral expressed by means of a syntactic string (UNIT + CA + DECADE + CA) is part of a hymn that deals with the healing of the nape, neck and shoulders accomplished by placing a specific number of ‘leaves’ on the body-part that has to be medically treated.[268] According to Whitney (1905) this is the understood referent of the numeral, which increases verse by verse. As for (c), see below ŚS 19.47.3.

13. sixty-six

(a) ŚS 5.15.6 *ṣáṭ ca me ṣaṣṭíś ca me*	‘six of me and sixty of me’
(b) ŚS 19.47.4 *ṣaṣṭíś ca ṣáṭ ca*	‘sixty and six’

See § II 3.2.1.a; the pattern is UNIT + CA [+ REFERENT] + DECADE + CA [+ REFERENT]. As for (b), see below ŚS 19.47.3.

14. seventy-seven

[268] See also Singh (1997: 232).

(a) ŚS 5.15.7	*saptá ca me saptatíś ca me*	‘seven of me and seventy of me’
(b) ŚS 6.25.2	*saptá ca […] saptatíś ca*	‘seven and seventy’
(c) ŚS 19.47.3	*saptá saptatíḥ*	‘seventy-seven’

As far as (a) is concerned, see § II 3.2.1.a; the pattern is UNIT + CA [+ REFERENT] + DECADE + CA [+ REFERENT]. In the case of (b), which shows the pattern UNIT + CA + DECADE + CA, see § II 3.2.7.b. As for (c), see below ŚS 19.47.3.

15. eighty-eight

(a) ŚS 5.15.8	*aṣṭá ca me 'śītíś ca me*	‘eight of me and eighty of me’
(b) ŚS 19.47.3.	*aśītíḥ* […] *aṣṭā́*	‘eighty-eight’

See § II 3.2.1.a; the pattern is UNIT + CA [+ REFERENT] + DECADE + CA [+ REFERENT]. As for (b), see below ŚS 19.47.3.

16. ninety-nine

(a) ŚS 5.15.9	*náva ca me navatíś ca me*	‘nine of me and ninety of me’
(b) ŚS 5.19.11	*nava* […] *tā navatayo*	‘ninety-nine ones’
(c) ŚS 6.25.3	*náva ca* […] *navatíś ca*	‘nine and ninety’
(d) ŚS 19.47.4	*navatír náva*	‘ninety-nine’
(e) ŚS 20.7.2	*náva* […] *navatíṃ púro*	‘ninety-nine fortifications’
(f) ŚS 20.37.5	*náva* […] *púro navatíṃ ca*	‘nine and ninety fortifications’
(g) ŚS 20.41.1	*vṛtrā́ny* […] / […] *navatī́r náva*	‘ninety-nine obstacles’

As for (a), see § II 3.2.1.a; the pattern is UNIT + CA [+ REFERENT] + DECADE + CA [+ REFERENT]. The hymns from which (b) is taken seem to suggest that the referent of the pronoun expressed as (*tā*) could be a word such as ‘cows’. (c), whose scheme is UNIT + CA + DECADE + CA, has to be understood in exactly the same way as § 5.VII.b. In the case of (d), the referent is understood even if there is explicit mention of the attribute of this group, i.e., *draṣṭā́ro* in the same verse. (e) and (g) refers to the fortification destroyed by Indra; as for (h), see above RV 1.84.3.

3. *Atharvaveda* (*Paippalāda*)

1. eleven

(a) PS 6.20.5	*ekādaśa*[…]	‘eleven’
(b) PS 8.5.1	*ekā ca me daśa ca*	‘one and ten of me’
(c) PS 9.21.11	*ekādaśaśarāvaṃ*	‘a set of eleven dishes’
(d) PS 10.8.1	*devā* […] *ekādaśa*	‘eleven gods’
(e) PS 10.8.2	*devā* […] *ekādaśa*	‘eleven gods’
(f) PS 10.8.3	*devāh* […] *ekādaśa*	‘eleven gods’
(g) PS 15.9.6	***trir ekādaśā***	‘the thrice eleven’

The first occurrence, (a), matches ŚS 19.47.5, dealt with above. As far as (b) is concerned, note that it corresponds to ŚS 8.5.1 (but *me* appears only once in the string in the PS). In the case of (c), which only occurs in the PS, there is reference to *śarāva*s. (d), (e), (f) correspond to ṚV 1.139.11 (and ŚS 19.27.11). In the case of (g), note that the whole occurrence does not mean ‘eleven’, but the thrice-eleven (i.e., the gods); and the referent is understood.

2. twelve

(a) PS 1.102.3	*dvādaśartava*	‘twelve sacred seasons’
(b) PS 8.19.8	*dvādaśāhena*	‘[the one having] twelve days’
(c) PS 9.21.12	*dvādaśaśarāvam*	‘a set of twelve dishes’
(d) PS 11.10.1	*dvādaśa*	‘twelve’
(e) PS 13[269].2.2	*samudrā dvādaśā*	‘twelve oceans’
(f) PS 14.6.4	*dvādaśāhena*	‘with [the one having] twelve days’
(g) PS 14.7.7	*dvādaśāhaṃ*	‘[the one having] twelve days’
(h) PS 15.1.2	*dvādaśā iṣṭaya*	‘with the twelve venerations’[270]

[269] See Lopez 2010.

[270] See Lelli 2015.

(i) PS 15.14.10 *dvādaśartavaḥ*	'twelve divine seasons'
(j) PS 15.23.1 *dvādaśāhnāni*	'[the ones having] twelve days'
(k) PS 16.67.1 *dvādaśāraṃ*	'twelve-spoked'
(l) PS 16.67.2 *dvādaśākrtiṃ*	'twelve forms'
(m)PS 16.71.9 *dvādaśāhaṃ*	'[the one having] twelve days'
(n) PS 16.83.2 *dvādaśāho*	'twelve days'
(o) PS 16.101.7 *dvādaśa pradháyaś*	'twelve fellies'
(p) PS 16.103.9 *dvādaśabhir agnibhiḥ*	'with twelve fires'
(q) PS 16.114.4 *dvādaśāhnena*	'with [the one having] twelve days'
(r) PS 17.42.3 *dvādaśāhāḥ*	'twelve days'

Both (a) and (i) refers to the 'divine seasons' (see Whitney 1905: 643); (b) is also represented in ŚS 4.11.11 and (c) has to do with the ritual procedure. As far as (d) is concerned, the hymn from which it is taken only occurs in the PS: the analysis of the context allows one to assume that the understood referent of *dvādaśa* could be *śalya*-.[271] In the case of (e), the referent is the *samudra*s. The ritual context is overtly considered due to the mention of the sacrifice of twelve 'days' in (f), (g), (j), (m), (n) and (q). (h) refers to the *iṣṭayaḥ* 'venerations' (see Lelli 2015). In the case of (p) there is reference to the sacrificial fires. As far as (k) is concerned, see above ŚS 11.6.22. In the case of (l) we find a reference to the number of days (likely related to the context of the ritual practice). As far as (k) and (l) are concerned, let us note that they correspond to ŚS 9.9.13 and ŚS 9.9.11 respectively. (n) appears also in ŚS 11.7.12, while (o) in ŚS 10.8.4. All the occurrences of numeral compounds, where expressed, are placed BEFORE their referent.

3. fifteen

(a) PS 15.1.4 *pañcadaśena*	'with the fifteenfold'
(b) PS 16.19.5 *pañcadaśena*	'with the fifteenfold'
(c) PS 16.90.10 *paktvā pañcadaśas*	'the fifteen-fold'

The referent of (a) is understood; nonetheless, Lelli (2015) integrated it with '*stoma*'. (b) corresponds to ŚS 8.9.15 and (c) to ŚS 11.1.19.

[271] See Griffith-Lubotsky (2014: 34).

4. sixteen

(a) PS 16.83.1 *ṣoḍaśī*	'sixteen'

The first occurrence (a) is also represented in ŚS 11.7.11.

5. seventeen

(a) PS 15.1.6 *saptadaśena*	'with the seventeen-fold'

This occurrence does not feature an expressed referent; however, it can be understood '*stoma*' (see Lelli 2015).

6. twenty-two

(a) PS 6.20.5	*dvā ca viṃśatiś ca*	'two and twenty'
(b) PS 8.5.2	*dve ca <u>me</u> viṃśatiś ca*	'two and twenty of me'

As for (a), see ŚS 19.47.5 dealt with above. (b) corresponds to ŚS 5.15.2.

7. twenty-one

(a) PS 16.71.9	*ekaviṃśatyā*	'with the twenty-one'
(b) PS 16.71.10	*ekaviṃśatyā*	'with the twenty-one'

Both (a) and (b) does not feature an expressed referent, which, however, could be interpreted as 'days'.

8. twenty-five

(a) PS 15.18.10	*pañcaviṃśatiḥ*	'with the twenty-five'

In the present case the numeral refers to the group of *Uluṅgulukā Apsarases* who have long hair (*keśinīḥ*). As such, while the attribute of the understood referent (i.e., 'people', 'men') is expressed in the verse, it cannot be considered as the referent itself.

9. thirty-one

(a) PS 15.18.10	*ekatriṃśad*	‘the twenty-one’

For the explanation of this occurrence, see above. In the present case, the thirty-ones are characterized by their being *aśvavat*, rich in horses.

10. thirty-three

(a) PS 1.54.2	*trayastriṃśad*	‘the thirty-three’
(b) PS 3.8.3	*trayastriṃś<u>āsah</u>*	‘thirty-three [gods]’
(c) PS 3.37.6	*trayastriṃśat […] devā*	‘thirty-three gods’
(d) PS 6.20.4	*trayas triṃśac ca*	‘the three and thirty’
(e) PS 8.5.3	*tisraś ca <u>me</u> triṃśac ca*	‘three and thirty of me’
(f) PS 8.15.6	*trayastriṃśad […] <u>devāh</u>*	‘thirty-three gods’
(g) PS 10.7.10	*trayastriṃśad <u>devatās</u>*	‘thirty-three gods’
(h) PS 15.9.6	***trir ekādaśā****	‘the thrice eleven’
(i) PS 16.57.19	*trayastriṃśataṃ <u>lokān</u>*	‘thirty-three worlds’
(j) PS 16.57.20	*<u>devāh</u>* […] *trayastriṃśat*	‘thirty-three gods’
(k) PS 16.71.10	*trayastriṃśat*	‘the thirty-three’
(l) PS 16.153.3	*trayastriṃśataṃ*	‘the thirty-three’
(m) PS 17.8.4	*trayastriṃśad devā*	‘thirty-three gods’
(n) PS 17.9.4	*trayastriṃśad devā*	‘thirty-three gods’
(o) PS 17.9.8	*trayastriṃśad devā*	‘thirty-three gods’
(p) PS 17.9.8	*trayastriṃśad devān*	‘thirty-three gods’
(q) PS 17.51.6	*trayastriṃśad devatās*	‘thirty-three gods’

As for the explanation of (a) see ŚS 19.37 (dealt with above); (b) is also represented in ŚS 19.56.3. (d) corresponds to ŚS 19.47.4. While (e) overlaps with ŚS 5.15.3, (c), (f), (j) and (k) clearly refer to the number of gods. In the case of (g), one can observe that this occurrence is also found in ŚS 19.27.10. As for (i), see above ŚS 11.3.52; (l) matches ŚS 11.5.2. (m) and (n) correspond to ŚS 10.7.13, (o) and (p) to ŚS 10.7.27

11. forty-four

(a) PS 6.20.4 *catvāraś catvāriṃśac ca*	'the four and forty'
(b) PS 8.5.4 *catasraś ca <u>me</u> catvāriṃśac ca*	'four and forty of me'

As for (a), see ŚS 19.47.4; (b) corresponds to ŚS 5.15.4.

12. fifty-five

(a) PS 6.20.4 *pañcāśat pañca*	'the fifty-five'
(b) PS 8.5.5 *pañca ca <u>me</u> pañcāśac ca*	'five and fifty of me'
(c) PS 8.16.3 *pañca ca […] pañcāśac*	'the five and fifty'
(d) PS 19.5.6 *pañca ca […] pañcāśac ca*	'the five and fifty'

As far as (a) is concerned, see the corresponding passage from SS 19.47.4 analysed above; (b) corresponds to ŚS 5.15.4. (b), (a) and (d) correspond to ŚS 5.15.5.

13. sixty-six

(a) PS 6.20.4	*ṣaṣṭiś ca ṣaṭ ca*	'the sixty and six'
(b) PS 8.5.6	*ṣaṭ ca <u>me</u> ṣaṣṭiś ca*	'six and sixty of me'

(a) matches SS 19.47.4 while (b) correspond to ŚS 5.15.6.

14. seventy-seven

(a) PS 5.32.1 *<u>pāśā</u>* […] *sapta saptatīs*	'seventy-seven bonds'
(b) PS 6.20.3 *sapta saptatiḥ*	'with the seventy-seven'
(c) PS 8.5.7 *sapta ca <u>me</u> saptatiś ca*	'seven and seventy of me'
(d) PS 8.16.2 *sapta ca […] saptatiś*	'the seven and seventy'
(e) PS 9.5.14 *sapta saptatīḥ*	'with the seventy-seven'
(f) PS 19.5.5 *sapta ca […] saptatiś ca*	'seven and seventy'

The *pāśa-* 'bonds' referred to in (a) are related to Varuṇa: this occurrence is taken from a hymn entirely devoted to praising him, as Lubotsky (2002) noted, "against treachery". As far as (b) is concerned, note that it overlaps with SS 19.47.4, dealt with above; (b), (c) and (f) to ŚS 5.15.7. As for (d), see ŚS 19.6.16.

15. eighty-eight

(a) PS 6.20.3 *aśītiḥ […] aṣṭā*	'eighty-eight'
(b) PS 8.5.8 *aṣṭa ca me 'śītiś ca*	'eight and eighty of me'

Note that (a) correspond to ŚS 19.47.3 and (b) to ŚS 5.15.8.

16. ninety-nine

(a) PS 3.9.7 *navānāṃ navatīnāṃ* […] *ropuṣīnām*	'of the ninety-nine tormentors.'[272]
(b) PS 4.17.7 *navānāṃ navatīnām* […] *ropuṣīṇām*	'of the ninety-nine tormentors'[273]
(c) PS 4.19.8 *navānāṃ navatīnām* […] *ropuṣīnām*	'of the ninety-nine tormentors'[274]
(d) PS 6.20.3 *navatir nava*	'the ninety-nine'
(e) PS 8.5.9 *nava ca me navatiś ca*	'nine and ninety of me'
(f) PS 8.16.1 *nava ca yā navatiś*	'nine and ninety'
(g) PS 12.13.4 *nava ca +yan+ navatiṃ ca sravantīh*	'nine and ninety rivers'
(h) PS 19.5.4 *nava ca yā navatiś ca*	'nine and ninety'

As for (a), (b) and (c) see ṚV 1.191.13; in the case of (d), note that the same passage is found in ŚS 19.47; (b), (f) and (h) correspond to ŚS 5.15.9. In the case of (g) there is a reference to the rivers (see also the passage from ṚV 10.104.8) and note that the verses are almost overlapping: the passage from the PS, in fact, presents a *crux* where the ṚV has *srotyā*.

4. *Aitareya Brāhmaṇa*

[272] See Jamison-Brereton 2014.
[273] See Jamison-Brereton 2014.
[274] See Jamison-Brereton 2014.

As already stated above, all the occurrences of cardinal numerals comprised between 11 and 99 found in this text are attested in compounds. This fact may be evidence of the massive spread and increase of this kind of formation throughout the centuries that separate this text from the composition of the ṚV.

1. eleven

(a) AB 1.1.2	*ekādaśa<u>kapālam</u>*	'eleven potsherds'
(b) AB 1.1.6	*ekādaśa<u>kapālaḥ</u>*	'eleven potsherds'
(c) AB 1.16.2	*ekādaś<u>ākṣarāṇi</u>*	'[the one having] eleven syllables'
(d) AB 1.10.7	*ekādaśa <u>rudrā</u>*	'eleven Rudras'
(e) AB 2.2.33	*ekādaśa*	'eleven'
(f) AB 2.2.33	*ekādaś<u>ākṣarā</u>*	'[the one having] eleven syllables'
(g) AB 2.18.8	*ekādaśa <u>rudrā</u>*	'eleven Rudras'
(h) AB 2.18. 8	*ekādaśa <u>prayājā</u>*	'eleven fore-offerings'[275]
(i) AB 2.18.8	*ekādaś<u>ānuyājā</u>*	'eleven post-offerings'[276]
(j) AB 2.18.8	*ekādaś<u>opayājā</u>*	'eleven subordinate offerings'[277]
(k) AB 2.23.4	*ekādaśa<u>kapālam</u>*	'eleven potsherds'
(l) AB 2.23.5	*ekādaśa<u>kapālān</u>*	'eleven potsherds'
(m)AB 2.37.10	[…] *ekādaśa*	'eleven'
(n) AB 2.37.14	*ekādaśa <u>rudrā</u>*	'eleven Rudras'
(o) AB 2.12.3	*ekādaś<u>ākṣaram</u>*	'[the one having] eleven syllables'
(p) AB 2.12.3	*ekādaś<u>ākṣarā</u>*	'[the one having] eleven syllables'
(q) AB 2.12.3	*ekādaś<u>ākṣaram</u>*	'[the one having] eleven syllables'
(r) AB 2.12.4	[..]*ekādaś<u>ākṣaram</u>*	'[the one having] eleven syllables'
(s) AB 3.22.9	*ekādaśa <u>rudrā</u>*	'eleven Rudras'
(t) AB 3.28.2	[…] *ekādaś<u>ākṣarā</u>*	'[the one having] eleven syllables'
(u) AB 3.28.4	*ekādaśabhir <u>akṣarair</u>*	'with [the one having] eleven syllables'
(v) AB 3.28.4	*ekādaś<u>ākṣarā</u>*	'[the one having] eleven syllables'

[275] See Keith 1920.
[276] See Keith 1920.
[277] See Keith 1920.

(w) AB 4.4.14	*ekādaśākṣareṣu*	'in [the one having] eleven syllables'
(x) AB 4.4.14	*ekādaśākṣareṣu*	'in [the one having] eleven syllables'
(y) AB 8.2.1	*ekādaśarcam*	'[the one having] eleven verses'
(z) AB 8.2.1	*ekādaśākṣarā*	'[the one having] eleven syllables'

(a), (b), (k) and (l) refers to the eleven potsherds used during the ritual, while (c), (f), (p), (v) and (z) denoted the eleven syllables that compose the Triṣṭubh metre; (w) and (x) give a general mention of *pada*s endowed with this number of syllables. In (o), which features the same compound, the denotatum refers to the sum of the syllables that make up the invocations (1) *adhvaryo śoṃsāvom* and (2) *śaṃsāmodaivom*; analogously (q) is the sum of the syllables composing (1) *ukthaṃ vācīndrāyety* and (2) *om ukthaśā*. The compound in (r) refers to the eleven syllables that form a given line to which the Adhvaryu must reply in a single syllable so as to eventually obtain, a total of twelve syllables; in (t) and (u) the eleven syllables again refer to specific verses recited during the ritual of the pressing of soma. Even if in (e) and (m) there is no expressed referent for the numeral compound, its nature is easily understandable from the context. Indeed, the previous lines, describe a special ritual procedure in which the Adhvaryu recite 7 verses, with the first and the last ones being repeated thrice; as such, the number of verses uttered by the priest will be 11 (and, as a consequence, the 'Anuṣṭubh verses' will constitute the final denotatum). (y) denotes the verses that constitute ṚV 10.73. The eleven *yājās* referred to by (h), (i) and (j) are, according to Keith (1920), the fore-offerings, the after-offerings and the subordinate offerings respectively. The reference to the Rudras in (d), (g), (n) and (s) has to do with the explanation of how the group of the thirty-three gods is composed. All the numerals are placed BEFORE the nouns standing for the counted objects.

2. twelve

(a) AB 1.1.14	*dvādaśa māsāḥ*	'twelve months'
(b) AB 1.10.7	*dvādaśādityāḥ*	'twelve Ādityas'
(c) AB 1.3.33	*dvādaśa*	'twelve'
(d) AB 1.13.33	*dvādaśa* […] *māsāḥ*	'twelve months'
(e) AB 1.16.44	*dvādaśa māsāḥ*	'twelve months'
(f) AB 1.23.4	*dvādaśa*	'twelve'

(g) AB 1.23.4	*dvādaśa* […] *māsas*	'twelve months'
(h) AB 1.23.5	*dvādaśa* […] *upasado*	'twelve Upasads'
(i) AB 1.28.41	*dvādaśa*	'twelve'
(j) AB 1.28.41	*dvādaśa* […] *māsāḥ*	'twelve months'
(k) AB 1.29.24	*dvādaśa*	'twelve'
(l) AB 1.29.24	*dvādaśa* […] *māsāḥ*	'twelve months'
(m) AB 1.30.29	*dvādaśa māsāḥ*	'twelve months'
(n) AB 2.18.8	*dvādaśādityāḥ*	'twelve Ādityas'
(o) AB 2.23.4	*dvādaśakapālam*	'twelve potsherds'
(p) AB 2.33.5	*dvādaśakṛtvaḥ*	'twelve times'
(q) AB 2.33.5	*dvādaśapadā*	'[a set of] twelve *pada*s'
(r) AB 2.37.14	*dvādaśādityāḥ*	'twelve Ādityas'
(s) AB 2.39.7	*dvādaśapadām*	'[a set of] twelve padas'
(t) AB 2.39.7	*dvādaśa* […] *māsāḥ*	'twelve months'
(u) AB 2.41.2	*dvādaśapadām*	'[a set of] twelve padas'
(v) AB 2.41.2	*dvādaśa* […] *māsā*	'twelve months'
(w) AB 3.12.4	*dvādaśākṣaraṃ*	'[the one having] twelve syllables'
(x) AB 3.12.4	*dvādaśākṣarā*	'[the one having] twelve syllables'
(y) AB 3.12.4	*dvādaśākṣaraṃ*	'[the one having] twelve syllables'
(z) AB 3.12.4	*dvādaśākṣarā*	'[the one having] twelve syllables'
(aa) AB 3.22.9	*dvādaśādityāḥ*	'twelve Ādityas'
(bb) AB 3.28.3	*dvādaśākṣarā*	'[the one having] twelve syllables'
(cc) AB 3.28.4	*dvādaśākṣarā*	'[the one having] twelve syllables'
(dd) AB 3.41.2	*dvādaśa rātreḥ paryāyāḥ*	'twelve night rounds'[278]
(ee) AB 3.47.2	*dvādaśakapālaṃ*	'twelve potsherds'
(ff) AB 4.6.11	*dvādaśa stotrāṇy*	'twelve stotras'
(gg) AB 4.16.2	*dvādaśāhāni*	'[the one having] twelve days'
(hh) AB 4.16.2	*dvādaśa* […] *māsā*	'twelve months'
(ii) AB 4.23.1	*dvādaśāham*	'[the one having] twelve days'
(jj) AB 4.23.3	*dvādaśāham*	'[the one having] twelve days'
(kk) AB 4.23.3	*dvādaśāham*	'[the one having] twelve days'

[278] See Keith 1920.

(ll) AB 4.23.5	*dvādaśāhas*	'[the one having] twelve days'
(mm) AB 4.24.1	*dvādaśāhaḥ*	'[the one having] twelve days'
(nn) AB 4.24.2	*dvādaśāhāni*	'[the one having] twelve days'
(oo) AB 4.24.3	*dvādaśa rātrīr*	'twelve nights'
(pp) AB 4.24.4	*dvādaśāham*	'[the one having] twelve days'
(qq) AB 4.24.6	*dvādaśāhaḥ*	'[the one having] twelve days'
(rr) AB 4.24.6	*dvādaśāhaḥ*	'[the one having] twelve days'
(ss) AB 4.25.1	*dvādaśāhaḥ*	'[the one having] twelve days'
(tt) AB 4.25.1	*dvādaśāhena*	'[the one having] twelve days'
(uu) AB 4.25.1	*dvādaśāhena* […]	'[the one having] twelve days'
(vv) AB 4.25.3	*dvādaśāhe*	'in [the one having] twelve days'
(ww) AB 4.25.3	*dvādaśāhena* […]	'[the one having] twelve days'
(xx) AB 4.25.5	*dvādaśāhena*	'[the one having] twelve days'
(yy) AB 4.25.5	*dvādaśāhena*	'[the one having] twelve days'
(zz) AB 4.25.6	*dvādaśāhaḥ*	'[the one having] twelve days'
(aaa) AB 4.25.6	*dvādaśāhaḥ*	'[the one having] twelve days'
(bbb) AB 4.25.7	*dvādaśāhena*	'[the one having] twelve days'
(ccc) AB 4.25.8	*dvādaśāhena* […]	'[the one having] twelve days'
(ddd) AB 4.27.1	*dvādaśāham*	'[the one having] twelve days'
(eee) AB 4.30.8	*dvādaśāham*	'[the one having] twelve days'
(fff) AB 5.25.21	*dvādaśa* […] *tanva*	'twelve bodies'
(ggg) AB 6.19.7	*dvādaśa*	'twelve'
(hhh) AB 6.19.7	*dvādaśa* […] *māsāḥ*	'twelve months'
(iii) AB 6.21.10	*dvādaśāhaṃ*	'[the one having] twelve days'
(jjj) AB 6.26.9	*dvādaśākṣarāṇi*	'[the one having] twelve syllables'
(kkk) AB 6.26.11	*dvādaśākṣaram*	'[the one having] twelve syllables'
(lll) AB 7.9.1	*dvādaśakapālam*	'twelve postsherds'

Each of the 64 occurrences of the numeral standing for 'twelve' in the AB is placed, when expressed, BEFORE the noun that denotes the items it quantifies. Moreover, all the series reported above consists of numeral compounds and there are no cases of asyndeton or syntactic strings characterized by the presence of a particle. Due to the great amount of data, as far as

the present paragraph is concerned, it seems useful to organize them according to the topic to which they are related to; more specifically:

- number of months: (a), (d), (e), (g), (j), (l), (m), (t), (v) and (hh);
- number of Ādityas: (b), (n), (r) and (aa);
- number that results from the various sums of verses (with no expressed referent): (c), (f), (i), (k) and (ggg);
- number of *kapāla*s: (o), (ee) and (lll);
- number of *pada*s; (q), (s) and (u);
- number of *akśara*s: (w), (x), (y), (z), (bb), (cc), (jjj) and (kkk);
- number of nights: (dd) and (oo);
- number of days (duration of a rite): (gg), (ii), (jj), (kk), (ll), (mm), (nn), (pp), (qq), (rr), (ss), (tt), (uu), (vv), (ww), (xx), (yy), (zz), (aaa), (bbb), (ccc), (ddd), (eee) and (iii);
- remaining cases, such as the number of Upasads (h), (p), the number of *stotra*s (ff), the number of Prajāpati's bodies (fff).

3. thirteen

(a) AB 1.16.42	*trayodaśa […]*	'the thirteen'
(b) AB 7.9.8	*trayodaśa<u>kapālam</u>*	'thirteen potsherds'

As far as this numeral is concerned, let us note that the first occurrence, (a), stands for the number of verses that must be recited during the given sacrifice and (b) to the correct number of potsherds on which the libation should be offered. Note that it is placed BEFORE its referent.

4. fifteen

(a)	AB 3.17.4	*pañcadaśo*	'the fifteen-fold'
(b)	AB 3.17.4	*pañcadaśo*	'the fifteen-fold'
(c)	AB 3.17.8	*pañcadaśo*	'the fifteen-fold'
(d)	AB 3.40.4	*pañcadaśa […] <u>sāmidhenīr</u>*	'fifteen kindling-verses'
(e)	AB 3.40.4	*pañcadaśa*	'the fifteen-fold'
(f)	AB 3.41.1	*pañcadaśa […] <u>stotrāṇi</u>*	'fifteen *stotra*s'

(g)	AB 3.41.1	*pañcadaśa śastrāṇi*	‘fifteen śastras’
(h)	AB 3.41.2	*pañcadaśās*	‘the fifteen-fold’
(i)	AB 3.41.2	*pañcadaśo*	‘the fifteen-fold’
(j)	AB 3.42.2	*pañcadaśena stomena*	‘the fifteen-fold *stoma*’
(k)	AB 4.6.10	*pañcadaśastotram*	‘fifteen *stotra*s’
(l)	AB 4.6.10	*pañcadaśastotrā*	‘fifteen *stotra*s’
(m)	AB 4.6.10	*pañcadaśastotre*	‘fifteen *stotra*s’
(n)	AB 4.6.11	*pañcadaśastotrā*	‘fifteen *stotra*s’
(o)	AB 4.6.11	*pañcadaśastotre*	‘fifteen *stotra*s’
(p)	AB 4.12.6	*pañcadaśa stotrāṇi*	‘fifteen *stotra*s’
(q)	AB 4.12.6	*pañcadaśa śastrāni*	‘fifteen *śastra*s’
(r)	AB 4.31.1	*pañcadaśaḥ stomo*	‘the fifteen-fold stoma’
(s)	AB 5.4.6	*pañcadaśānuṣṭubha*	‘fifteen *anuṣṭubh*’
(t)	AB 7.16.9	*pañcadaśabhiḥ*	‘with the fifteen-fold’
(u)	AB 7.23.1	*pañcadaśaḥ stomena*	‘with the fifteen-fold *stoma*’
(v)	AB 7.23.1	*pañcadaśaḥ stoma*	‘the fifteen-fold *stoma*’
(w)	AB 7.23.3	*pañcadaśāt stomān*	‘the fifteen-fold *stoma*’
(x)	AB 7.23.3	*pañcadaśaḥ stoma*	‘the fifteen-fold *stoma*’
(y)	AB 7.23.4	*pañcadaśaḥ stoma*	‘the fifteen-fold *stoma*’
(z)	AB 7.24.3	*pañcadaśaṃ stomam*	‘the fifteen-fold *stoma*’
(aa)	AB 8.3.3	*pañcadaśarcam*	‘[the one having] fifteen verses’
(bb)	AB 8.3.3	*pañcadaśa*	‘the fifteen-fold’
(cc)	AB 8.4.2	*pañcadaśaḥ*	‘the fifteen-fold’
(dd)	AB 8.4.2	*pañcadaśa*	‘the fifteen-fold’
(ee)	AB 8.4.3	*pañcadaśaḥ*	‘the fifteen-fold’
(ff)	AB 8.4.5	*pañcadaśo*	‘the fifteen-fold’
(gg)	AB 8.4.5	*pañcadaśaḥ*	‘the fifteen-fold’
(hh)	AB 8.12.4	*pañcadaśena stomena*	‘with the fifteen-fold *stoma*’
(ii)	AB 8.17.4	*pañcadaśena stomena*	‘with the fifteen-fold *stoma*’

Just as we saw previous paragraph, all the occurrences of this numeral are found BEFORE the object which they quantify (when it is expressed); moreover, in this case too, they are all expressed in a compound. A certain number of occurrences feature *stotra* as the referent: (f),

(k), (l), (m), (n), (o) and (p). The ritually marked context also emerges from the word *sāmidhenī-*, which appears in (d) and, albeit not overly expressed, also constitutes the logic reference of (e). (g) and (q) overtly mention the *śastra*s, (recitation of praise); also note the symbolism of the number of Anuṣṭubh metres (s) and the specific term *ṛc*, i.e., the referent of (aa). As far as (t) is concerned, the translation of its unexpressed referent has been integrated by Keith: as 'verses'. An interesting subgroup is made up of those attestations that refers to the specific stoma with fifteen verses: there are cases in which the referent is understood, even if the numeral is used as a noun to directly denote the special type of composition, namely (a), (b), (c), (h), (bb), (cc), (dd), (ee), (ff) and (gg). On the contrary, the extra word is clearly expressed (j), (r), (u), (v), (w), (x), (y), (z), (gg) and (hh).

5. sixteen

(a) AB 2.37.10	*ṣoḍaśa gāyatryaḥ*	'sixteen *gāyatrī*s'
(b) AB 4.1.5	*ṣoḍaśabhir akṣarair*	'with sixteen syllables'
(c) AB 4.1.5	*ṣoḍaśapadāṃ*	'[the one having] sixteen *pada*s'
(d) AB 4.3.4	*ṣoḍaśākṣarā*	'[the one having] sixteen syllables'
(e) AB 5.26.5	*ṣoḍaśakalam*	'[the one having] sixteen parts'
(f) AB 5.26.5	*ṣoḍaśakalena*	'with [the one having] sixteen parts'
(g) AB 5.26.7	*ṣoḍaśakalam*	'[the one having] sixteen parts'
(h) AB 5.26.8	*ṣoḍaśakalena*	'with [the one having] sixteen parts'

The number 'sixteen' is represented in the AB only in the form of a nominal compound which is always placed BEFORE its referent. As easily observable from the reported occurrences, there are no numeral words without an expressed term denoting the given counted object. While in (a) the metre called Gayatrī is specifically mentioned (b) and (d) only feature the word *akśara*; analogously, in (c) the considered objects are the *pada*s. Finally, in (e), (f), (g), (h) the referents are the 'parts' of the rite described in AB 5.26.

6. seventeen

As in the previous case, the attestation of this numeral is not featured in the ṚV.

(a) AB 1.1.13	*saptadaśa sāmidhenīr*	‘with seventeen kindling verses’
(b) AB 1.16.44	*saptadaśa*	‘seventeen’
(c) AB 1.30.29	*saptadaśa* […]	‘seventeen’
(d) AB 4.26.10	*saptadaśa sāmidhenīr*	‘with seventeen kindling verses’

As often happens in this text, there is a huge number of references to the correct procedure to follow during the sacrificial act: in the cases of (a) and (d) the seventeen verses recited while kindling the fire are mentioned; in (b) although the referent is understood, it is easy to infer that it consist of the final number of verses that must be recited (they are actually 13, but the first and the last one are repeated thrice). A parallel situation is represented by (c), but the numeral compound in this case stands for the initial number of verses (and since the first and the last are repeated thrice, once again, the final number of verses will be 21). Note that, where expressed, the numeral stands BEFORE its referent.

7. eighteen

(a) AB 4.16.3 *aṣṭādaśāhāni*	‘[the one having] eighteen days’

The example reported above shows a numeral compound placed BEFORE its referent, the number of ‘days’ that, even if encompassed in the description of a ritual procedure, seem to possess a symbolic significance.

8. twenty-one

(a) AB 1.3.8 *ekaviṃśatyā darbhapiñjūlaiḥ*	‘with twenty-one handfuls of Darbha’
(b) AB 1.5.8 *ekaviṃśatyaikaviṃśatyā* […]	‘with twenty-one [verses] each’
(c) AB 1.19.10 *ekaviṃśatir*	‘twenty-one’
(d) AB 1.22.2 *ekaviṃśatir*	‘twenty-one’
(e) AB 1.30.29 *ekaviṃśatiḥ*	‘twenty-one’
(f) AB 1.30.31 *ekaviṃśatyaikaviṃśatyā*	‘with twenty-one [verses] each’
(g) AB 4.19.6 *ekaviṃśatiṃ sāmidhenīr*	‘twenty-one kindling verses’

The only way that the numeral 'twenty-one' is noted in the AB is in a compound, which is placed BEFORE the referent (where expressed). This is the first of the series of numeral compounds that present the combination of singular and feminine, which was already questioned by Kātyāyana. The ritual prominence of the context emerges from (a), since the twenty-one handfuls of *Dharba* grass are employed by the priest to purify the one who is to be consecrated during the sacrifice. In (b), (f), (d) there is reference to the final number of the considered verses and 'verses' is also the word integrated by Keith to clarify the understood noun to which they are connected: note that, in (d), there is the overt mention of the attribute of the unsaid referent, i.e., *abhirūpā* 'appropriated'. In the case of (g), the numeral compound actually quantifies the 'kindling verses'. A slightly more complicated explanation is needed when considering the nature of (c) and (e): in these cases, the numerals may be employed in a distributive sense.

9. twenty-two

(a) AB 7.16.7	*dvāviṃśatyā*	'with the twenty-two'

The context of this attestation is that of the praising of Agni, worshipped by means of the 'next' (the passage only mentions the attribute *uttarābhir*) twenty-one verses (understood in the text).

10. twenty-four

(a) AB 1.23.5	*caturviṃśatiḥ*	'the twenty-four'
(b) AB 1.23.5	*caturviṃśatir* […] *ardhamāsās*	'twenty-four half-months'
(c) AB 3.39.4	*caturviṃśatyakṣarā*	'[the one having twenty-four] syllables'
(d) AB 3.3.4	*caturviṃśatir*[…] *stutaśastrāṇi*	'twenty-four *stuta*s and *śastra*s'
(e) AB 3.39.6	*caturviṃśatyardhamāso*	'twenty-four half-months'
(f) AB 3.39.6	*caturviṃśatir*[…] *stutaśastrāṇi*	'twenty-four *stuta*s and *śastra*s'
(g) AB 4.12.4	*caturviṃśatir* […] *ardhamāsā*	'twenty-four half-months'
(h) AB 4.16.4	*caturviṃśatir ahāni*	'twenty-four days'
(i) AB 4.16.4	*caturviṃśatir* […] *ardhamāsā*	'twenty-four half-months'
(j) AB 8.4.6	*caturviṃśatiḥ stutaśastrāṇi*	'twenty-four *stuta*s and *śastra*s'

(k) AB 8.4.6	*caturviṃśaty<u>ardhamāso</u>*	‘twenty-four half-months’

This numeral is expressed in a compound inflected in the feminine gender and singular number and always occurs BEFORE its referent (when expressed). In the case of (a) the reference is to the number of Upasads: they are twelve but each has to be repeated twice; in (b), (e), (g), (i) and (k) there is the notation of the number of half-months. The twenty-four syllables referred to by (c) belongs to the Gāyatrī metre, while (d) and (f) mention the tenty-four *Stotras* and the *Śastra*s in the *Agniṣṭoma* (that represents the year) in the form of an *itaretarayoga dvandva*; note that in (j), they are said to belong to the more general *Jyotiṣṭoma*. In (h) the referent of the numeral compound consists of the days involved in the ritual explained in that specific section of the AB.

11. twenty-six

(a) AB 2.6.15	*ṣaḍviṃśatir* […] *<u>vaṅkrayas</u>*	‘twenty-six ribs’

This numeral compound, placed BEFORE the noun it quantifies, features an inflection in the singular number and in the feminine gender, a debated combination that has also been noted for the attestations taken from the ṚV. This is the shortcoming detected by Kātyāyana. The referent of the compound is the nominative plural *vaṅkrayas,* which denote the number of the sacrificial victim’s ribs.

12. thirty-one

(a) AB 7.16.6	*ekatriṃśatā*	‘with the thirty-one’

Note, also in this case, the combination of feminine and singular in the inflection of the numeral compound. Even if the referent is not expressed, the noun qualified by the instrumental that immediately precedes (a), i.e., *uttarabhiḥ*, is completed by Keith’s translation with the integration of the word ‘verses’.

13. thirty-three

(a) AB 1.6.2 *trayastriṃśadakṣarā*	'[the one having] thirty-three syllables'
(b) AB 1.10.4 *trayastriṃśadakṣare*	'[those having] thirty-three syllables'
(c) AB 1.10.7 *trayastriṃśadakṣare*	'[those having] thirty-three syllables'
(d) AB 1.10.7 *trayastriṃśad* […] *devā*	'thirty-three gods'
(e) AB 2.18.8 *trayastriṃśad* […] *devāḥ somapās*	'thirty-three gods'
(f) AB 2.18.8 *trayastriṃśad asomapā*	'thirty-three of those who are not allowed to drink Soma'
(g) AB 2.37.14 *trayastriṃśadakṣarā*	'[the one having] thirty-three syllables'
(h) AB 2.37.14 *trayastriṃśad* […] *devā*	'thirty-three gods'
(i) AB 3.22.8 *trayastriṃśadakṣarā*	'[the one having] thirty-three syllables'
(j) AB 3.22.9 *trayastriṃśad* […] *devā*	'thirty-three gods'
(k) AB 6.2.2 *trayastriṃśatā*	'with thirty three'
(l) AB 6.2.2 *trayastriṃśato* […] *devānām*	'of the thirty-three gods'
(m) AB 6.2.2 *trayastriṃśad* […] *devā*	'thirty-three gods'

As is self-evident, all the numerals are expressed in compound and BEFORE the objects to which they refer to (when expressed). If in the ṚV all the occurrences serve to denote the number of the gods, as in the cases of (d), (e), (f), (h), (j), (l), (m), there are more possibilities in the AB: (a) refers to the number of syllables in an Anuṣṭubh, while (b), (c), (g) and (i) to that of the Virāj metre; in the case of (k) the understood referent also consists of 'syllables': more specifically, this is one of the answers to a previously asked question, namely, how many syllables are needed to worship the gods.

14. thirty-six

(a) AB 4.24.6	*ṣaṭtriṃśadaho*	'[the one having] thirty-six days'
(b) AB 4.24.6	*ṣaṭtriṃśadakṣarā*	'[the one having] thirty-six syllables'
(c) AB 7.1.3	*tā* […] *ṣaṭtriṃśatam*	'the thirty-six ones'

(d) AB 7.1.3	*ṣaṭtriṃśadakṣarā*	'[the one having] thirty-six syllables'

In the case of (a) there is reference to the duration of a specific rite, while in (b) and (d) the mentioned *akṣara*s belong to the *Bṛhatī* metre. As regards (c), note that the pronoun to which the compound refers to stands for *vibhakti-*, which is mentioned in v. 1. Note that every numeral listed above is expressed in a compound and, while in (c) the number is placed AFTER the referent, in all the other comes BEFORE.

15. fifty-one

(a) ṚV 4.19.7	*ekapañcāśataṃ*	'the fifty-one'

This compound follows the usual inflection of the decades (feminine and singular). For the explanation of its understood denotatum see § II 3.4.9.a.

16. fifty-two

(a) ṚV 4.19.7	*dvipañcāśataṃ*	'the fifty-two'

In exactly the same way as the compound that immediately precedes this numeral (see § 3.XV), the present accusative is inflected in singular number and feminine gender. By analysing the whole passage from which these two occurrences are taken (AB 4.19.7 *ekapañcāśataṃ dvipañcāśataṃ vā śastvā* […]) it is possible to note the gerund form *śastvā* (√*śaṃs*) meaning 'recite'; let us infer that, even if there is no referent directly expressed, the word understood may be 'verses'.

The form of the first constituent of this compound is what makes it interesting. According to A 6.3.47 *dvyaṣṭanaḥ saṃkhyāyām abahuvrīhyaśītyoḥ* (see §1), the form *dvi-* should be employed in the case of *bahuvrīhi* compounds and in the whole series of the decade 'eighty'. However, we are forced to exclude this possibility since the numeral in its cardinal form immediately follows the preceding number 'fifty-one'; as such, it seems unlikely that it means, as a *bahuvrīhi* should, 'twice-fifty' i.e., 'one-hundred'. Thus, since (a) does not accomplish the constraint of A 6.3.47, one can affirm that the present compound is in a sense unpāṇinian. An attempt to draw some conclusions, with respect to the study of numerals, will be given infra,

but some questions immediately arise in cases like this: was Pāṇini aware that *dvi-* could be chosen instead of *dvā-* nonetheless decided to neglect in the *Aṣṭādhyāyī*? It is unlikely that this assumption is correct: if during the composition of the specific section of the sixth *adhyāya* (i.e., the one that contains the set of three *sūtra*s dealing with the substitution in special conditions of *dvi-* and *tri-* with *dvā-* and *trayas-* respectively - see §1), if Pāṇini, or anybody else, had been aware of form (a), they should have added a further *sūtra* along the same lines of A 6.3.49 *vibhāṣā catvāriṃśatprabhṛtau sarveṣām*. Indeed, this rule offers the chance to have *dvi-* and *dvā-* (and, of course, of *tri-* and *trayas-*) co-exist in the series of numerals comprised in the decades from 'forty' onward. Moreover, if the traditional teachings of the A failed to include a case such as (a), perhaps to try and fashion (or influence) a specific style of the language, the chance of expressing a degree of optionality with three degrees (*vā*, *vibhāṣā*, *anyatarasyām* - see Kiparsky 1979) may have been used to make the user of the grammar understand which form should best be employed. This is far from being a rare, unexpected device to be found in the A: in fact, in rule A 6.4.49 (see above) Pāṇini, overtly expresses the marginality (*vibhāṣā*) of having the unit noted by means of both forms in the given decade. In light of this, the main question should be the following: was Pāṇini truly aware of the existence of compounds that featured the present characteristic?

The expected form *dvāpañcāśat-* occurs twice in the corpus of Sanskrit literature: once in the *Mahābhārata* (8.35.29.2), which is probably close to the date of composition of the A (According to Hiltebeitel 2018 the *Mahābhārata* was composed between the mid-second century BCE and the beginning of the Common Era. I suggest that what is now an almost universally accepted date should be included.) and once in the *Viṣṇu Purāṇa* (1.13.19.2) which, even if considered as one of the oldest expressions of this literary genre, is chronologically set in the Common Era. As regards compound *dvipañcāśat-* (with the form *dvi-*, inconsistent with A 6.3.47), out of a total number of 12 occurrences, only two cases can be considered interesting in comparison with Pāṇini's grammar: AB 4.19.7 (i.e., the one analysed here) and Ca. 25.41.2.[279] Consequently, there is no special trend detectable in the literature (by means of e-texts) that justifies the choices of the author of the A with respect to the present topic.

[279] The other attestations are taken from latter works such as the *Rasādhyāya*, *Rasādhyāyaṭīkā* and the *Skandapurāṇa*.

17. fifty-five

(a) AB 8.23.5	*pañcapañcāśataṃ <u>hayān</u>*	‘fifty-five horses’

This compound features the usual characteristics previously observed in the AB: it is placed BEFORE the noun to which it refers, and it takes the singular feminine declension. The horses mentioned in this occurrence refer to a mythic sacrifice devoted to Indra, celebrated at the river Gañgā.

18. sixty-four

(a) AB 1.5.8	*catuḥṣaṣṭir <u>akṣarāṇi</u>*	‘with sixty-four syllables’
(b) AB 3.48.9	*catuḥṣaṣṭiḥ <u>kavacinaḥ</u>*	‘with sixty-four armoured men’

Inflected in the singular number and feminine gender, both the compounds occurring in (a) and (b) feature an expressed referent. In the first case, the mentioned number of syllables refer to the sum of two Anuṣṭubhs, that is eight syllables per each of the four verses that constitute the metres [(8x4) x2]. As far as (b) is concerned, the *kavacina*s are the armed warriors who are the offspring of Śucivṛkṣa Gaupalāyana.

19. seventy-eight

(a) AB 7.23.5	*aṣṭāsaptatim*	‘the seventy-eight’

The present compound does not feature an expressed referent. However, its context allows one to infer that the numeral word of (a) denotes the number of beasts king Bharata Dauhṣanti sacrificed to Indra near the river Yamunā.

5. *Bṛhadāraṇyaka Upaniṣad*

1. eleven

(a) BĀU 3.9.2	*ekādaśa rudrāḥ*	‘eleven Rudras’

The only occurrence of this numeral is in compound, and its expressed referent is the *Rudras*.

2. twelve

(a) BĀU 3.9.2.4	*dvādaśādityāh*	‘twelve Ādityas’
(b) BĀU 3.9.5.2	*dvādaśa* […] *māsāh*	‘twelve months’
(c) BĀU 6.3.1.1	*dvādaśāham*	‘[the one having] twelve days’

Each occurrence of the present numeral is found in nominal composition BEFORE the noun that it quantifies. In (a) there is a reference to the *Āditya*s; (b) deals with the number of the months as symbolically related to the number of the *Āditya*s and (c) with the duration in days of the rites for the preparation to accomplish the purpose of becoming a great man.

3. fifteen

(a) BĀU 1.5.14.2	*pañcadaśa kalāh*	‘fifteen parts’
(b) BĀU 1.5.15.2	*pañcadaśa kalāḥ*	‘fifteen parts’

Both (a) and (b) feature a numeral in compound (used as a qualifier) placed BEFORE their referent (i.e., their qualificand), which is exactly the same for each of them: there are actually sixteen *kala*s, i.e., the parts into which Prajāpati is divided within the symbolic depiction of him intended as the year. The occurrences listed above refer to the relevant explanation of the composition of these portions.

4. sixteen

(a) BĀU 1.5.14.1	*ṣoḍaśakalaḥ*	‘made of sixteen parts’
(b) BĀU 1.5.15.1	*ṣoḍaśakālaḥ*	‘made of sixteen parts’

The Vedic word standing for ‘sixteen’ is found twice in the BĀU, both in a compound. Its position is BEFORE the referent, as a qualifier with respect to its qualificand. In both (a) and

(b) the total amount of parts in which Prajāpati/the year is divided (see above) is expressed, to form a *bahuvrīhi* compound agreeing with the theonym *prajāpati.*

5. thirty-one

(a) BĀU 3.9.2	*ekatriṃśad*	'thirty-one'

The present occurrence does not feature an expressed referent, even though it quite obvious that the author was referring to the gods: in fact, thirty-one is the sum of the eight Vasus, the eleven Rudras and the twelve Ādityas.

6. thirty-two

(a) BĀU 3.3.2.5	*dvātriṃśataṃ* […] *ahnyāny*	'thirty-two days'

The numeral compound in (a), is placed BEFORE its referent, i.e. the qualifier precedes the qualificand, as expected. It is singular in number and has a neuter ~~g~~ender; it quantifies the number of days (i.e., the distance travelled by the chariot of the gods) which are equivalent to the dimension of the world. This is how Yājñavalkya replies to Bhujyu Lāhyāyani when asked about the place where the Pārikṣitas lived (see also Van Buitenen 1973: XXV).

7. thirty-three

(a) BĀU 3.9.1.6	*trayastriṃśad*	'thirty-three'
(b) BĀU 3.9.2.2	*trayastriṃśat* […] *devāḥ*	'thirty-three gods'
(c) BĀU 3.9.2.3	*trayastriṃśad*	'the thirty-three'

The passage from the BĀU from which these occurrences are taken consist of a rapid volley of questions and answers; Vidagdha Śākalya asks Yājñavalkya about the number of the gods: he says 'thirty-three' (a); after a few lines, he repeats that the gods are, in fact, thirty-three (b). Then, Yājñavalkya is asked about their identity (c). Thus, even if the only expressed referent is found in the second occurrence above (and the numeral compound is set BEFORE it), it is obvious that the counted items in the first and last examples are also the gods.

6. *Āśvalāyanagṛhyasūtra*

1. eleven

(a) ĀśvGS 1.11.13	*ekādaśa* […] *avadānāni*	‘eleven Avadānas’

The only occurrence of the numeral ‘eleven’ in the ĀśvGS refers to the number of *Avadāna*s (i.e., portions of the sacrificial animal – see Oldenberg 1886). The compound is placed BEFORE its referent as a qualifier word.

2. twelve

(a) ĀśvGS 1.6.1	*dvādaśa<u>avarān</u>*	‘twelve descendants’
(b) ĀśvGS 1.6.1	*dvādaśa<u>parān</u>*	‘twelve ancestors’
(c) ĀśvGS 1.8.10	*dvādaśa<u>rātram</u>*	‘twelve nights’
(d) ĀśvGS 1.22.3	*dvādaśa <u>varṣāṇi</u>*	‘twelve years’
(e) ĀśvGS 1.22.19	*dvādaśa<u>rātram</u>*	‘twelve nights’
(f) ĀśvGS 4.4.17	*dvādaśa<u>rātram</u>*	‘twelve nights’

The occurrences of (a) and (b) belong to a section devoted to the *Brāhma* wedding; in particular, it is explained that a son conceived within this sacred union does in fact purify, respectively, twelve descendants and twelve ancestors of both his parents. Even in (c) the context is that of marriage, i.e., the rites that immediately follow the couple’s entrance into their new house: during the mentioned ‘twelve nights’ they should sleep lying on the ground. The analogous instruction is advanced for the student who is completing the study of the Vedas (e). In the case of (f), the nights to which the number refers to should be not spent, in case of the dead of one of the *Guru*s, in studying or distributing gifts. The *varṣāṇi* of (d) denotes the duration, in years, of a *Brahmacarya* (with respect to each Veda). Note that in all the occurrences listed above, the numeral is placed BEFORE the referent

3. twenty-one

(a) ĀśvGS 1.17.4	*ekaviṃśati<u>kuśapiñjūlāny</u>*	‘twenty-one handfuls of Kuśa’

The feminine and singular compound is set BEFORE the referent, which has to be considered in the frame of ritual practices (see the parallel of § II 3.2.8.a)

Summary

Chart 1.

1. EXPRESSION OF NUMERALS COMPRISED BETWEEN 11-99 IN THE *ṚGVEDA*			
ASYNDETON	SYNCTACTIC STRING	COMPOUND	TOTAL
7	17	21	45
2. NUMERALS AND EXTERNAL REFERENT			
EXPRESSED	NOT EXPRESSED		TOTAL
40	5		45
3.POSITION OF NUMERALS IN ASYNDETON WITH RESPECT TO THE COUNTED ITEMS			
SET BEFORE	SET AFTER		TOTAL
3	4		7
4. POSITION OF NUMERAL SYNTACTIC STRINGS WITH RESPECT TO THE COUNTED ITEMS			
SET BEFORE	SET AFTER	REFERENT IN THE MIDDLE	REFERENT NOT EXPRESSED	TOTAL
9	-	7	1	18
5. POSITION OF NUMERAL COMPOUNDS WITH RESPECT TO THE COUNTED ITEMS			
SET BEFORE	SET AFTER	REFERENT NOT EXPRESSED	TOTAL
8	9	4	21

6. POSITION OF CONNECTIVE PARTICLES IN SYNCTACTIC STRING STRUCTURES			
X1 ca X2 ca	X1 X2 ca (+ para)	X1 ca X2	TOTAL
6	10	1	17
7. WORD-ORDER OF NUMERALS IN ASYNDETON			
UNIT + DECADE		DECADE + UNIT	TOTAL
3		4	7
8. WORD-ORDER OF NUMERALS IN COMPOUNDS			
UNIT + DECADE		DECADE + UNIT	TOTAL
21		-	21
9. WORD-ORDER OF NUMERALS IN SYNTACTIC STRINGS			
UNIT + DECADE		DECADE + UNIT	TOTAL
9		8	17

Chart 2.

1. EXPRESSION OF NUMERALS COMPRISED BETWEEN 11-99 IN THE *ATHARVAVEDA (ŚAUNAKA)*				
ASYNDETON	SYNCTACTIC STRING	COMPOUND		TOTAL
7	21	35		63
2. NUMERALS AND EXTERNAL REFERENT				
EXPRESSED	NOT EXPRESSED			TOTAL
57	6			63
3. POSITION OF NUMERALS IN ASYNDETON WITH RESPECT TO THE COUNTED ITEMS				
SET BEFORE	SET AFTER	REFERENT IN THE MIDDLE	REFERENT NOT EXPRESSED	TOTAL

1	1	1	4	7

4. POSITION OF NUMERAL SYNTACTIC STRINGS WITH RESPECT TO THE COUNTED ITEMS				
SET BEFORE	SET AFTER	REFERENT REPEATED BOTH AFTER AND IN THE MIDDLE	NOT EXPRESSED REFEENT	TOTAL
1	-	11	9	21

5. POSITION OF NUMERAL COMPOUNDS WITH RESPECT TO THE COUNTED ITEMS			
SET BEFORE	SET AFTER	REFERENT NOT EXPRESSED	TOTAL
30	3	2	35

6. POSITION OF CONNECTIVE PARTICLES IN SYNCTACTIC STRING STRUCTURES			
X1 ca X2 ca	X1 X2 ca	X1 ca X2	TOTAL
17	4	-	21

7. WORD-ORDER OF NUMERALS IN ASYNDETON		
UNIT + DECADE	DECADE + UNIT	TOTAL
3	4	7

8. WORD-ORDER OF NUMERALS IN COMPOUNDS		
UNIT + DECADE	DECADE + UNIT	TOTAL
35	-	35

9. WORD-ORDER OF NUMERALS IN SYNTACTIC STRINGS		
UNIT + DECADE	DECADE + UNIT	TOTAL
19	2	21

Chart 3.

1. EXPRESSION OF NUMERALS COMPRISED BETWEEN 11-99 IN THE *ATHARVAVEDA (PAIPPALĀDA)*

ASYNDETON	SYNCTACTIC STRING	COMPOUND	TOTAL
9	20	47	76

2. NUMERALS AND EXTERNAL REFERENT

EXPRESSED	NOT EXPRESSED	TOTAL
47	29	76

3. POSITION OF NUMERALS IN ASYNDETON WITH RESPECT TO THE COUNTED ITEMS

SET BEFORE	SET AFTER	REFERENT IN THE MIDDLE	REFERENT NOT EXPRESSED	TOTAL
3	1	-	5	9

4. POSITION OF NUMERAL SYNTACTIC STRINGS WITH RESPECT TO THE COUNTED ITEMS

SET BEFORE	SET AFTER	REFERENT IN THE MIDDLE	REFERENT NOT EXPRESSED	TOTAL
-	1	9	10	20

5. POSITION OF NUMERAL COMPOUNDS WITH RESPECT TO THE COUNTED ITEMS

SET BEFORE	SET AFTER	REFERENT NOT EXPRESSED	TOTAL
28	5	14	47

6. POSITION OF CONNETIVE PARTICLES IN SYNCTACTIC STRING STRUCTURES

X1 ca X2 ca	X1 X2 ca	X1 ca X2	TOTAL
15	2	3	20

7. NUMERALS' WORD-ORDER IN ASYNDETON

UNIT + DECADE	DECADE + UNIT	TOTAL
6	3	9

8. NUMERALS' WORD-ORDER IN COMPOUNDS

UNIT + DECADE	DECADE + UNIT	TOTAL
47	-	47
9. NUMERALS' WORD-ORDER IN SYNTACTIC STRINGS		
UNIT + DECADE	DECADE + UNIT	TOTAL
19	1	20

Chart 4.

1. EXPRESSION OF NUMERALS COMPRISED BETWEEN 11-99 IN THE *AITAREYA BRĀHMAṆA*			
ASYNDETON	SYNCTACTIC STRING	COMPOUND	TOTAL
-	-	186	186
2. NUMERALS AND EXTERNAL REFERENT			
EXPRESSED	NOT EXPRESSED		TOTAL
153	33		186
3. POSITION OF NUMERALS IN ASYNDETON WITH RESPECT TO THE COUNTED ITEMS			
SET BEFORE	SET AFTER		TOTAL
-	-		-
4. POSITION OF NUMERAL SYNTACTIC STRINGS WITH RESPECT TO THE COUNTED ITEMS			
SET BEFORE	SET AFTER	REFERENT IN THE MIDDLE	NOT EXPRESSED REFEENT	TOTAL
-	-	-	-	-
5. POSITION OF NUMERAL COMPOUNDS WITH RESPECT TO THE COUNTED ITEMS			
SET BEFORE	SET AFTER	NOT EXPRESSED REFERENT	TOTAL

153	-	33	186
6. POSITION OF CONNETIVE PARTICLES IN SYNCTACTIC STRINGS' STRUCTURE			
X1 ca X2 ca	X1 X2 ca	X1 ca X2	TOTAL
-	-	-	-
7. WORD-ORDER OF NUMERALS IN ASYNDETON			
UNIT + DECADE		DECADE + UNIT	TOTAL
-		-	-
8. WORD-ORDER OF NUMERALS IN COMPOUNDS			
UNIT + DECADE		DECADE + UNIT	TOTAL
186		-	186
9. WORD-ORDER OF NUMERALS IN SYNTACTIC STRINGS			
UNIT + DECADE		DECADE + UNIT	TOTAL
-		-	-

Chart 5.

1. EXPRESSION OF NUMERALS COMPRISED BETWEEN 11-99 IN THE *BṚHADĀRAṆYAKA UPANIṢAD*			
ASYNDETON	SYNCTACTIC STRING	COMPOUND	TOTAL
-	-	13	13
2. NUMERALS AND EXTERNAL REFERENT			
EXPRESSED	NOT EXPRESSED		TOTAL
10	3		13
3. POSITION OF NUMERALS IN ASYNDETON WITH RESPECT TO THE COUNTED ITEMS			
SET BEFORE	SET AFTER		TOTAL

-	-	-

4. POSITION OF NUMERAL SYNTACTIC STRINGS WITH RESPECT TO THE COUNTED ITEMS				
SET BEFORE	SET AFTER	REFERENT IN THE MIDDLE	REFERENT NOT EXPRESSED	TOTAL
-	-	-	-	-

5. POSITION OF NUMERAL COMPOUNDS WITH RESPECT TO THE COUNTED ITEMS			
SET BEFORE	SET AFTER	REFERENT NOT EXPRESSED	TOTAL
10	-	3	13

6. POSITION OF CONNECTIVE PARTICLES IN SYNCTACTIC STRING STRUCTURES			
X1 ca X2 ca	X1 X2 ca	X1 ca X2	TOTAL
-	-	-	-

7. NUMERALS' WORD-ORDER IN ASYNDETON		
UNIT + DECADE	DECADE + UNIT	TOTAL
-	-	-

8. NUMERALS' WORD-ORDER IN COMPOUNDS		
UNIT + DECADE	DECADE + UNIT	TOTAL
13	-	-

9. NUMERALS' WORD-ORDER IN SYNTACTIC STRINGS		
UNIT + DECADE	DECADE + UNIT	TOTAL
-	-	-

Chart 6.

1. EXPRESSION OF NUMERALS COMPRISED BETWEEN 11-99 IN THE *ĀŚVALĀYANAGṚHYASŪTRA*			
ASYNDETON	SYNCTACTIC STRING	COMPOUND	TOTAL
-	-	8	8
2. NUMERALS AND EXTERNAL REFERENT			
EXPRESSED	NOT EXPRESSED		TOTAL
8	-		8
3. POSITION OF NUMERALS IN ASYNDETON WITH RESPECT TO THE COUNTED ITEMS			
SET BEFORE	SET AFTER		TOTAL
-	-		-
4. POSITION OF NUMERAL SYNTACTIC STRINGS WITH RESPECT TO THE COUNTED ITEMS			
SET BEFORE	SET AFTER	REFERENT IN THE MIDDLE	NOT EXPRESSED REFEENT	TOTAL
-	-	-	-	-
5. POSITION OF NUMERAL COMPOUNDS WITH RESPECT TO THE COUNTED ITEMS			
SET BEFORE	SET AFTER	NOT EXPRESSED REFERENT	TOTAL
8	-	-	8
6. POSITION OF CONNETIVE PARTICLES IN SYNCTACTIC STRINGS' STRUCTURE			
X1 ca X2 ca	X1 X2 ca	X1 ca X2	TOTAL
-	-	-	-
7. NUMERALS' WORD-ORDER IN ASYNDETON			
UNIT + DECADE	DECADE + UNIT		TOTAL

-	-	-
8. NUMERALS' WORD-ORDER IN COMPOUNDS		
UNIT + DECADE	DECADE + UNIT	TOTAL
8	-	-
9. NUMERALS' WORD-ORDER IN SYNTACTIC STRINGS		
UNIT + DECADE	DECADE + UNIT	TOTAL
-	-	-

- A series of considerations before drawing conclusions

1. Type of expression of the numeral and internal word-order

The collection of Vedic data analysed above clearly demonstrates an increase in the nominal composition as the favourite way to express cardinals comprised between 11 and 99: all the occurrences in later texts, such as the AB, the BĀU and the ĀśvGS, are expressed as nominal compounds (respectively, 186, 13 and 8). On the contrary, a situation of co-existence between asyndeton, the simple syntactic strings and the nominal compounding emerges from the most ancient texts, such as the ṚV and both the recensions of the AV. In fact, one can observe a sort of progressive evolution as far as the linguistic habits of the Indian speakers are concerned and clues for the chronologically subsequent scenario already underlined with respect to the more recent sources quoted above. In fact, although each of the three forms of expression of cardinal numerals comprised between 11 and 99 can be detected, there is a slight prevalence of nominal compounding in the *Saṃhitā*s: ṚV 17 vs 21, ŚS 21 vs 35; things change in the context of the PS, where the total number of compounds is far higher than that of syntactic strings (20 vs 47). The latter fact is not a superfluous datum: it bears witness to a linguistic phase where (judging from a pure statistic viewpoint) the authors felt more comfortable with such a complex formation than their 'colleagues' who composed the other two *Saṃhitā*s.

As far as the asyndeton is concerned, it is the least common way of expressing the series of cardinal numerals in all the texts analysed in the present research. The data regarding the placement of unit and decade in numerals comprised between 11 and 99 show that in the vast majority of cases the unit precedes the decade; the only exceptions are found within the

occurrences taken from the ṚV in the cases of asyndeton and syntactic strings (see Chart 1) and the PS mirrors the same situation even if the inverted order (decade + unit in both asyndeton and syntactic strings) is clearly less represented (see Chart 3) since the occurrences of both options are quite balanced in the ṚV.
Within the *Aṣṭādhyāyī* itself, which, as recalled above, treats numeral compounds as *dvandva*s, no rule teaches how to properly place unit and decade.

As already discussed in § I 1, Kātyāyana added series of *vārttika*s to these *sūtra*s to improve their teachings which, rather than being strictly technical, e.g., related to the wording of the given rule, seem to be finalized at providing better description of the language current in his age (or, at least, of the one targeted his grammar according to Kātyāyana). In particular, for the present topic, consider vt. 8 *ad* A 2.2.34 *saṅkhyāyālpīyasaḥ* '[The constituent] made up of the lowest number [is placed first].'
Indeed, within the analysed texts, there are no occurrences of numeral compounds in which the decade is placed in the first slot; such behaviour, as already pointed out, can only be observed in the case of asyndeton or syntactic strings, i.e., in less constrained linguistic conditions.
From a chronological point of view, and judging from the evidence, it seems tempting to infer that greater variation in the patterns used to express the numeral is indicative of an older source. However, let us not forget that in poetry, the role played by linguistic variations could be related to the need to display virtuosities and metrical words, i.e., words that are chosen by the poets to fit specific positions in the verses according to the metrics. In fact, the prosodic power and the stylistic efficiency that asyndeton, string and compound variously confer on the verse to which they belong: note that both recensions of the AV feature a series of syntactic strings that seems to play with the sound that their utterance produces. Indeed, the pure musicality of the hymn could have been emphasized by means of a game of repetitions, playing with the common etymology of unit and decade to fashion a hymn whose poetry is adorned with figure of speech that stress the magical aspects of their content. For the sake of exemplification, I quote below an entire passage from the AV (ŚS 5.15, matched, albeit with some textual differences, by PS 8.5)[280]:

ékā ca me dáśa ca me *'pavaktā́ra oṣadhe* / *ṛ́tajāta ṛ́tāvari mádhu me madhulā́ karaḥ* //1//

[280] Note that, since they lie beyond the scope of the present research (i.e., numerals comprised between 11 and 99) the last two verses were not considered during the collection of the occurrences.

dvé ca me viṃśatíś ca me *'pavaktā́ra oṣadhe / ṛ́tajāta … //2//*
tisráś ca me triṃśác ca me *'pavaktā́ra oṣadhe / ṛ́tajāta … //3//*
cátasraś ca me catvāriṃśác ca me *'pavaktā́ra oṣadhe / ṛ́tajāta … //4//*
páñca ca me pañcāśác ca me *'pavaktā́ra oṣadhe / ṛ́tajāta … //5//*
ṣáṭ ca me ṣaṣṭíś ca me *'pavaktā́ra oṣadhe / ṛ́tajāta … //6//*
saptá ca me saptatíś ca me *'pavaktā́ra oṣadhe / ṛ́tajāta … //7//*
aṣṭá ca me 'śītíś ca me *'pavaktā́ra oṣadhe / ṛ́tajāta … //8//*
náva ca me navatíś ca me *'pavaktā́ra oṣadhe / ṛ́tajāta … //9//*
dáśa ca me śatáṃ ca me *'pavaktā́ra oṣadhe / ṛ́tajāta … //10//*
śatáṃ ca me sahásraṃ cā*pavaktā́ra oṣadhe / ṛ́tajāta … //11//*[281]

In conclusion, whatever the cause of the observed trend, the eloquence of the collection of data provided above as regards the progressive predominance of compounds in Vedic literature is beyond discussion.

2. The referents

As one can immediately understand from the textual analysis above, there is a significant gap between the occurrences that feature an extra word denoting the referent of the numeral (i.e., the nature of the counted items) and the vast minority whose referent is merely understood (ṚV 40 vs 5, ŚS 57 vs 6, PS 47 vs 29 AB 153 vs 33, BĀU 10 vs 3, ĀśvGS 8 vs 0). In fact, one can state that even in those cases in which the referent is understood, there is nonetheless a specific hint at a given extra-textual object (see, e.g., the cases of the numeral *thirty-three*, which is connected to the referent 'gods' even if the word *deva-* is not overtly mentioned in the text). This special behaviour of numerals, i.e., their attributive role as 'quantifiers' was certainly clear to the author of the *Aṣṭādhyāyī*: indeed, given the relationship between the constituents enveloped in compounds mirrors that of the corresponding syntactic string, one may assume that is what led Pāṇini to formulated the set of rules devoted to the formation of the so-called *dvigu* compounds (according

[281] '1. Both one of me and ten of me [are] the exorcisers, O herb; thou born of right, thou rich in right, mayest thou, honeyed, make honey for me. / 2. Both two of me and twenty of me [are] etc. etc. / 3. Both three of me and thirty of me [are] etc. etc. / 4. Both four of me and forty of me [are] etc. etc. / 5. Both five of me and fifty of me [are] etc. etc. / 6. Both six of me and sixty of me [are] etc. etc. / 7. Both seven of me and seventy of me [are] etc. etc. / 8. Both eight of me and eighty of me [are] etc. etc. / 9. Both nine of me and ninety of me [are] etc. etc. / 10. Both ten of me and a hundred of me [are] etc. etc. / 11. Both a hundred of me and a thousand [are] the exorcisers, O herb; etc. etc.' (Tr. Whitney 1905).

to A 2.1.52 *saṃkhyāpūrvo dviguḥ* 'A compound (formed according to A 2.1.51) whose first member is a numeral is called *dvigu*'), which features a numeral word in the first slot that quantifies the number of objects mentioned in the next one. According to the analysis given above, one can detect a well-defined trend as regards the position of the numeral with respect to its referent; here follows a brief résumée that makes it easier to compare the resulting data (the occurrences featuring a central position of the referent or the absence of the mention of the referent itself are omitted from this chart):

Chart 7. **PLACEMENT OF NUMERALS WITH RESPECT TO THEIR REFERENTS**					
	BEFORE	AFTER		BEFORE	AFTER
1. ṚV			**2. ŚS**		
Asyndeton	3	4	Asyndeton	1	1
Syntactic String	9	1	Syntactic String	1	-
Compound	8	9	Compound	10	3
	20	14		12	4
3. PS			**4. AB**		
Asyndeton	3	1	Asyndeton	-	-
Syntactic String	-	1	Syntactic String	-	-
Compound	28	5	Compound	153	-
	31	7		153	0
6. BĀU			**6. ĀśvGS**		
Asyndeton	-	-	Asyndeton	-	-
Syntactic String	-	-	Syntactic String	-	-
Compound	10		Compound	8	-
	10	0		8	0

Note that (4), (5) and (6) features only numerals expressed in compounds: the results of the present analysis with respect to these texts is uniform. On the contrary, in the case of (1) and (2) the situation is very articulate and (3) presents the peculiarity of not having any string placed before the referent; it has to be underlined, again, that a range of occurrences more variously characterized is observable in the most ancient texts taken into account. In fact, both in ṚV and in ŚS is possible to found attestation of numerals placed after their referents: while in the ŚS this condition is represented in the minority of cases (3 vs 30), in the ṚV it is the slight majority (9 vs 8).

Interestingly, the same behaviour is detected also with respect of the asyndeton (ṚV 4 vs 3, ŚS 1 vs 1); in the case of syntactic strings, there is a perfect balance in (2) and in (1) there are 9 occurrences of strings entirely placed before and only one after the referent: this datum is the only one in the ṚV which is in line with the latter trend (i.e., numerals placed before the word denoting the counted objects). As also hinted above, the poetry cannot always be a reliable source of information as far as speaker's habitudes is concerned, since its aim is not that of perfectly overlapping with the current language. Literary verses undergo to the poets' creative impulse and their final shape is often characterized by the influence of metrical reason. However, it seems plausible that the language itself became more and more codified through centuries (and due to the attempt of govern it and describe it by means of grammatical and technical literature).

3. Syntactic strings and the role of *ca*

A major point of interest, in the present research, is represented by the meaning that the particle *ca* bears within the numerals in which is involved - clearly, in the series of syntactic strings (attested in ṚV and ŚS – other than in PS). Without taking into account the referent of the numerals, it is possible to note that the placement of the connective particle inside the string, according to the collection of data analysed above, follow various patterns (where X stands for the numerals involved in the coordination, being it unit or decade):

(a) X1 *ca* X2 *ca*
(b) X1 X2 *ca*
(c) X1 *ca* X2

This behaviour is usual among the coordinative strings outside the domain of numerals; within the sphere of Vedic poetry, the choice of one pattern over the other could have been due to the purpose of being consistent with the metrics but also to the intention of reciting the numeral with a special emphasis by placing it in a particular section of the verse itself; the prosodic constraints may have also determined which numeral (i.e., unit or decade) should have been realized as X1 or X2: in fact, given that in the oldest text various order have been observed, perhaps it is possible to infer that, at least in that age, the order of the numerical word did not affect the final meaning at all and a strict rule in this sense was still to codify among the speakers and by the grammarians.
Going back to the set of attestations and the role played by the particle *ca*, an interesting datum emerges from the point (d) the series of numeral '*thirty-three'* in the ṚV:

(d) ṚV 8.28.1 *triṃśáti tráyas paró*

Whilst the author of the hymn from which this occurrence is taken from could have been influenced by metrical reasons, so that a disyllabic word would have better fit the considered prosodic pattern rather than a monosyllabic one, the idea conveyed by *paras* does not perfectly overlaps over the meaning of *ca*. I quote Whitney (1889: 417):

Purely of conjunctive value are च (*ca*) 'and', and वा (*vā*) 'or' (both toneless, and never having the first place in a sentence or clause). a. Of copulative value, along with *ca*, is in the older language especially *utá* (later it becomes a particle of more indefinite use); and *ápi*, *tátas*, *táthā*, *kíṁ ca*, with other particles and combinations of particles, are used often as connective of clauses. […] d. To *ca* (as well as to its compound *céd*) belongs occasionally the meaning *if*.

As far as *paras* is concerned, Whitney (1889: 415) classify it among those «directive words akin with the prefixes» and translate it as 'beyond'. Note, as such, the idea of addition that it conveys in a more overt manner than *ca*. Moreover, the use of *paras* testifies the logic relation between decade and unit, i.e., a condition by the part of the unit of being an extra with respect to the decade. This different shade of meaning also emerges from the translations of various scholars, such as Jamison-Brereton (2014): 'three beyond thirty'; Geldner (1951): 'die drei und noch dreifiig'.
Even if the involvement of *paras* occurs only once in the whole set of occurrences given above, it is necessary to reflect upon its role in the syntactic string in the place of *ca*. In fact, the nouns connected by that specific word in ṚV 8.28.1 are also found in compounds, in those compounds classified as *dvandva* s by Pāṇini. Does this mean that within Pāṇini's approach to the language, the *artha* of *ca* transcends the sole common meaning of the linguistic item mentioned in A 2.2.29 (i.e., *ca*)? Does it transcend the pure coordinative sense even while teaching the conditions for the formation of copulative compounds?

- Why numeral compounds seem improperly labelled as *dvandva* compounds

Despite the unquestionable placement of numeral compounds in the category of copulative compounds in the *Aṣṭādhyāyī*, some problems still arise while considering the characteristics and

the behaviour of this class of compounds in comparison to the traditional instances of *dvandva* compounds and especially Vedic *devatādvandva*.

1. As already noticed by Kātyāyana, there is an inconsistency with respect of gender and number of the compound itself when it features the combination of singular number and feminine gender.
2. The need for an extra referent in the phrase (be it expressed or understood).
3. The fact of being words qualifying the given referent (as quantifiers). The problem of the grammatical agreement between numeral and referent needs a further explanation:

- In asyndeton, it is possible to note that both unit and decade agree with their referent, namely they are inflected in the same case of the noun denoting the items that they quantify. As far as their gender and number are concerned, their behaviour can be described as follows: in the case of the decades their gender is the feminine one (since they are nouns ending in *-i*); sometimes the decades agree with the referent also with respect to number (it is possible to find instances of textual occurrences where a plural referent is quantified by a decade inflected in the singular, as it happens in ṚV 8.93.2, where the singular *navatím* (in association with *náva*) quantifies the plural *puraḥ*, 'fortifications'; but, within the same text, i.e.. ṚV 4.26.3, the plural *puraḥ* 'fortifications' is quantified by the asyndeton *náva* […] *navatī́ḥ*, where the decade is inflected in the plural, in accordance with the plural referent). Nouns from 1 to 4, when used as numerals, are inflected according to their denotatum and agree in gender with their referent (as for the specific feminine forms of *tri-* and *catur-*, see A 7.2.99 *tricaturoḥ striyām tisṛcatsṛ*); from 5 to 9 they are only inflected in the plural (i.e., according to their own specific declension). They are declined in the neuter gender.
- In syntactic strings, the conditions are analogous to the just mentioned ones.
- Numeral compounds are syntactically dealt with in the following ways:
  i) they agree with the referent only with respect to the case of the noun to which the given compound refers to (see e.g., ṚV 11.3.52, where the accusative singular *tráyastriṃśataṃ* quantify the accusative plural *lokā́n* 'worlds');
  ii) they agree in case and number with the noun (e.g., ṚV 10.114.8, which features the nominative plural neuter *pañcadaśā́ni* referred to the nominative plural neuter *ukthā́* 'praises'. Consider also ŚS 11.1.19, where the nominative singular masculine *paktā́* is

qualified by the nominative singular masculine *pañcadaśáḥ* - with the final sense of 'the fifteen-fold cooker'[282]).

Note that numeral compounds comprised between 11 and 19 also behave according to (i) (i.e., a vast portion of the occurrences listed above testify that it is possible for this group of numerals (11-19) to agree with the referent only with respect to the case, as it happens, e.g., in ŚS 10.8.4, where the compound *dvā́daśa* (a nominative singular) is referred to the nominative plural *pradháyaś* 'fellies' (of the wheel). Note that in accented text such as ṚV and AV it is possible to observe what follows: as it happens in the example provided for (1), the accent of the numeral compound is placed on the first constituent (***tráyas***t*riṃśataṃ*), as in fact Pāṇini teaches according to rule A 6.2.35 *saṃkhyā* '[In a *dvandva* compound 34 the first member 1] constituting a numeral word [retains its original accent 1]'. If the situation explained in (ii) occurs, i.e., a condition of complete grammatical agreement, the compound bears the accent on the last *pada* (*pañca**daśā́ni***, *pañca**daśáḥ***). Should this condition (i.e., the different placement of the accent on the word) imply that the compound *pañcadaśā́ni* must be collocated within the frame of a different class of compounds?

The relationship between first and second constituent of the compound (i.e., unit and decade) is not purely coordinative, i.e., it does not simply convey the sense of *ca*, intended as coordinative conjunction.

(1) Note that, on the contrary, the nature of *dvandva* compounds employed by Pāṇini himself in the formulation of his *sūtra*s consists of the enumeration of linguistic items such as nominal and verbal roots, *nipātana*, nominal and verbal terminations. Indeed, the logical interpretation of numeral compounds is 'X unit to add/beyond to Y decade' and non-merely 'X unit *and* Y decade'. In fact, this specific meaning emerged from the analysis of ṚV 8.28.1 (see above), where *paras* 'beyond' was employed by the poet instead of the usual *ca*.
(2) A non-symmetrical interpretation was given by Kātyāyana who, for the sake of grammatical linearity, preferred to place numeral compounds under the domain of *tatpuruṣa* by postulating a *vigraha* involving a further constituent within the compound, immediately after the unit, that undergoes a zero-replacement (i.e., *madhyamapadalopa*).
(3) The nature of the relationship between first and second constituent of this class of nominal compounds may be considered in the light of an interesting analysis carried out by Kiparsky

[282] See Withney 1905.

(2010: 4). The scholar, while talking about *devatādvandvas* and the final *-ā* of the first constituent, states that this vowel is endowed with morphologic functions since it corresponds to an associative dual morpheme. Indeed, from a diachronic perspective, it is connected to the dual case ending (note that this morpheme corresponds to «the Indo-European instrumental ending *-h1* in its comitative/sociative function»). Here follows a main doubt about the point: it is possible to connect the *-ā* which commonly characterized the last vowel of *devatādvandvas* with the one that appears in the compounds *ekādaśa-* and *dvādaśa-*? If this is the case, the just mentioned compounds should be interpreted as formed by a first constituent bearing a nominal ending that conveys a sense closer to the scheme 'X with Y'.

- An attempt of conclusion

Within the light of the collected data and of the literary and linguistic context related to the analysed occurrences, by considering the ancient commentarial literature on A 2.2.29 about the problem of numeral compounds and the modern secondary literature dealing with the topic of numerals, it seems reasonable to state that:

1. During the evolution of the language observed in the surveyed texts, numeral compounds prevailed over the corresponding forms of asyndeton and syntactic strings featuring the involvement of a connective particle such as the copulative *ca*. In the most ancient texts, in fact, it is possible to found instances of all the just listed options. Indeed, within the *Saṃhitā*s, apart from compounds, that always are constructed by placing the unit before the decade, the internal word-order of the phrase conveying the sense of the numeral is quite various and not subjected to reasons that lay outside metrics and prosody.
2. Since the corpus of the most recent sources considered in the present research only provides instances of numerals comprised between 11 and 99 in the state of nominal compounds, and since the language of these occurrences are considered closer to Pāṇinian age, it is possible to assume that this linguistic type was becoming more productive than the relevant expressions outside compound.

Now, it is worthy to reflect upon the reason why Pāṇini resorted to the coordinative analysis as far as numeral compounds are concerned. Moreover, this happens notwithstanding the series of inconsistencies and problems that emerge in considering them as *dvandva*s.

Was this choice only due to the presence of that *ca* in the series of syntactic strings occurring in the Vedic texts? Was it only a key to solve the challenge of placing in the grammar a tricky class of compounds? Or, perhaps, the *cārthe* of Pāṇini was more inclusive than expected?

What is for sure, is Pāṇini's clear intention of carefully representing the whole declension of cardinal numeral compounds: in fact, the *Aṣṭādhyāyī* deals with the specific phonetic substitution that word-forms conveying the sense of units, such as *dvi-* and *tri-*, undergo in well-specified conditions. Moreover, by mentioning the decades of eighty and forty as a constraint, Pāṇini makes us aware that, in his age, the compound-option for expressing numerals was very productive. On this account, consider that the *Aṣṭādhyāyī* contains a great number of rules that deal with numbers and measures, probably even for daily trade usages as well as for common ritual needs. One may assume that the common user of this grammar needed to be taught about the correct formations of numerals in order to better govern some sort of business. For instance, we can figure out the undesirable misunderstanding arising in employing the form *tridaśa-* with the intention of denoting the numeral 'thirteen', i.e., without substituting *tri-* with *trayas-* as taught by rule A 6.3.48: a competent speaker would have not help but understanding that the compound was referring to a quantity of 'thirty' items – since, in that case, *tri-* works as a multiplier in the language targeted by Pāṇini.

As discussed above, the constraint of A 6.3.47 (i.e., *abahuvrīhyaśītyoḥ*) makes manifest the fact that Pāṇini did not considerate the series of cardinal numerals beginning with *ekādaśa-* as *bahuvrīhi*; on the contrary, there is no room for doubts when reading A 6.2.35, since the context is that of *dvandva* compounds (the constraint *dvandve* of A 6.3.34 still operates in A 6.2.35 by *anuvṛtti*). In fact, the point of the accent is crucial in interpreting the nature of these formations: the class of *karmadhāraya*s which, for intrinsic reasons, could have been taken into account for the classification of numeral compounds, results unfit due to its distinctive trait of placing the accent on the last constituent.

By logics, a compound such as *ekādaśa-* cannot be governed by the same internal relationship of a compound such as, e.g., *yudhiṣṭhirārjunau* (a common *itaretarayoga*) or, e.g., *pāṇipādam* (a common *samahāra*). However, a given numeral can be represented also by means of a syntactic string involving the coordinative particle *ca,* as it is possible to see above in the collection of data. Moreover, according to the texts analysed in the present research, it has to be stated that such a string involving *ca* can be found in the *Saṃhitā*s, i.e., in the sacred hymns that constitute the Vedic revelation. Within this frame, the aloud recitation of such a corpus implicates (both in the reciter and in the listener) a vivid mental image, which influences the perception of the language itself; Pāṇini may had perceived the numeral strings overtly

involving *ca* as the natural *vigraha* of the productive type that he describes in his grammar, i.e., of compounds consisting of nouns standing (a) as the unit and (b) as the decade of numerals above ten. Unfortunately, it is not possible to determine the actual behaviour of the idiom spoken at Pāṇinian age, i.e., to investigate upon the spread of the syntactic string to express the class of numerals in the ordinary language.

Traditional Grammatical Examples and Textual Occurrences – A preliminary overview

The traditional examples provided by the KV to explain the application of Pāṇini's rules have been checked (in pondered samples) by means of textual research involving ancient literature sources available in the form of e-texts. Even though the list of word-forms was clearly not included in the A itself, it may to some extent represent the kind of material that formed the basis for the composition of the teachings of the *sūtra*s. The chart above illustrates, on the one hand, a series of texts whose occurrences are consistent with the linguistic model taught in the A; while the last column features a series of texts that show inconsistencies with the A. Note that a particularly useful source of information is represented by the series of rules dealing with the formation of *dvandva samāhāra*s, which are quite rich in number and varied as far as the expressed constraints are concerned. In some cases, consistencies and inconsistencies can be observed within the same text: this condition merits future and deeper research that would allow a closer analysis of the context of the word itself and the history of the textual layers of the given text. According to this preliminary (and non-extensive) overview, the adherence to the Pāṇinian model is mostly represented by the *Maitrāyaṇī Saṃhitā* 6x), the *Caraka Saṃhitā* (4x), the *Śaunakīya Saṃhitā* (4x) and the *Ṛgveda* (4x). The only partial overlapping of these initial results with the conclusions drawn by the secondary literature on the topic of the language targeted by Pāṇini opens the floor to further, analogous research starting from the strict domain of *dvandva* compounds.

Chart 1

SŪTRA	TRADITIONAL EXAMPLE	CONSISTENT LITERATURE[283]	INCONSISTENT LITERATURE[284]
A 1.1.31	*pūrvāparāṇām*	+	+
A 1.1.31	*katarakatamānām*		
A 2.2.29	*plakṣanyagrodhau*	+	+
A 2.2.29	*dhavakhadirapalāśāḥ*		
A 2.2.29	*vāktvacam*		
A 2.2.29	*vāgdṛṣadam*		
A 2.2.33	*paṭuguptau*		
A 2.2.33	*mṛduguptau*		
A 2.2.34	*uṣṭrakharam*[285]	GautDhS	ArthaŚ
			R
			MBh
A 2.2.34	*uṣtraśaśakam*		
A 2.2.35	*dhavakhadirapalāśāḥ*		
A 2.4.2	*pāṇipādam*[286]	ĀpDhS	VaikhGṛS
		Ca	BaudhGS
		MBh	MBh
A 2.4.2	*śirogrīvam*[287]	AB	
		KS	
		MS	
		Ca	
A 2.4.2	*mārdaṅgikapāṇavikam*		
A 2.4.2	*vīṇāvadakaparivādakam*		

[283] I.e., the occurrences are in accordance with the teaching of the given rule.

[284] I.e., the occurrences are not in accordance with the teaching of the given rule.

[285] See, e.g., GautDhS 2.3.21.1 '*uṣṭrakhare*' and GautDhS 3.5.4.1 '*śvāpadoṣṭrakharāṇāṃ*'. Cf., e.g., ArthaŚ 2.6.7.1 '*kharoṣṭram*', Rām, Ay, 85.60.1 '*kharoṣṭraḥ*', MBh 2.47. 11.1 and MBh 9.34.16.2 '*kharoṣṭraṃ*'.

[286] See, e.g., ĀpDhS, 2.19.1 '*pāṇipādaṃ*', Ca, Sū., 15.14.1 '*suprakṣālitapāṇipādāsyaṃ*', MBh, 7.37.5.1 '*pāṇipādaṃ*', MBh 12, 232, 6.1 and MBh 12.261.23.2 and MBh 12.267.19.1 '*pāṇipādaṃ*', R, Yu, 38, 13.1 '*pāṇipādaṃ*'.
Cf., e.g., VaikhGṛS 1 2.4 and VaikhŚS 10.15.1 '*pāṇipādāu*', BaudhGS 2.11.15.1 '*suprakṣālitapāṇipādān*' MBh, 8.8.12.2 '*pāṇipādaiś*'.

[287] See, e.g., AB 1.25.1 '*śirogrīvam*', KS 14.6.3 = MS 1.11.6.2 '*śirogrīvam*', Ca, Śār. 7.5 '*śirogrīvam*'.

A 2.4.2	*rathikāśvāroham*		
A 2.4.2	*rathikapādātam*		
A 2.4.3	*kaṭhakālāpam*		
A 2.4.3	*kaṭhakauthumam*[288]		KhādGS
A 2.4.4	*arkāśvamedham*[289]		SŚ
			BĀU
			TS
A 2.4.4	*sāyāhnātirātram*		
A 2.4.5	*padakakramakam*		
A 2.4.5	*kramakavārtikam*		
A 2.4.6	*ārāśastri*		
A 2.4.6	*dhānāśaṣkuli*		
A 2.4.7	*gaṅgāśoṇam*		
A 2.4.7	*kurukurujāṅgalam*		
A 2.4.8	*daṃśamaśakam*[290]	MBh	BaudhDhS
A 2.4.8	*yūkālikṣam*		
A 2.4.9	*mārjāramūṣakaṃ*[291]		MBh
A 2.4.9	*ahinakulam*		
A 2.4.12	*plakṣanyagrodham, plakṣanyagrodhāḥ*		
A 2.4.12	*rurupṛṣatam, rurupṛṣatāḥ*		
A 2.4.12	*kuśakāśam, kuśakāśāḥ*[292]	Ca	
		R	
A 2.4.12	*vrīhiyavam, vrīhiyavāḥ*[293]	ŚS	KauśS
		BĀU	MBh

[288] Cf. KhādGS 3.2.31.0 '*kaṭhakauthumāḥ*'.

[289] Cf. SŚ 11.7.7.2, '*arkāśvamedhāu*', BĀU 1.2.7.13 '*arkāśvamedhau*', TS 2.2.7.5.6 '*arkāśvamedhau*'.

[290] See, e.g., MBh 12.134.9.1 '*daṃśamaśakam*'.
Cf. BaudhDhS 3.3.19.1, '*daṃśamaśakān*'.

[291] Cf. MBh 12.136.114.1 '*mārjāramūṣakau*'.

[292] See, e.g., Ca Sū. 3.27.2 '*kuśakāśayoḥ*' and Ca Cik., 4, 103.1'*kuśakāśayoḥ*', R Ay 25.13.1 '*kuśakāśāḥ*'.

[293] See, e.g., ŚS 8.7.20.2, ŚS 11.4.13.1, ŚS 12.1.42.1 '*vrīhiyavāu*' and ŚS 10.6.24.2 '*vrīhiyavābhyāṃ*', BĀU 6.3.13.4 '*vrīhiyavāḥ*'.
Cf., e.g., KauśS, 5.7.6 '*vrīhiyavam*', MBh 1.80.9.6 etc. '*vrīhiyavam*'.

A 2.4.12	*dadighḥtam, dadighḥte*		
A 2.4.12	*gomahiṣam, gomahiṣāḥ*[294]		ArthaŚ
A 2.4.12	*tittirikapiñjalam, tittirikapiñjalāḥ*		
A 2.4.12	*aśvavaḍavam, aśvavaḍavau*		
A 2.4.12	*pūrvāparam, pūrvāpare*[295]	BhārGS	ŚS
		GautDhS	
		KātyŚS	
		KāṭhGS	ṚV
		TS	ManuS
		ĀpDhS	
A 2.4.12	*adharottaram, adharottare*[296]		KS
			PB
A 2.4.13	*śītoṣṇam, śītoṣṇe*[297]	BhārGS	Ca
		GobhGS	
		KhādGS	
		GB	
		JaimGS	
		VaikhGṛS	
		ĀśvGS	
		ŚāṅkhGS	
A 2.4.13	*sukhaduḥkham, sukhaduḥkhe*[298]	KU	Ca
		Ca	

[294] Cf., e.g., ArthaŚ 2.6.7.1 '*gomahiṣam*'.

[295] See, e.g., BhārGS 1.7.1 = BhārGS 1.13.5.1 '*pūrvāparān*' and BhārGS 1.15.2.1 = BhārGS 1.15.1.1 '*pūrvāparāu*', GautDhS 1.9.74.1 '*pūrvāparāṃś*', KātyŚS 15.4.26 '*pūrvāparā*', KāṭhGS 4.23 '*pūrvāparān*' and KāṭhGS 65.3 '*pūrvāparāḥ*', TS 2.2.2.5.1 '*pūrvāparā*', ĀpDhS 2.5.18.2 '*pūrvāparān*'.
Cf., e.g., ManuS, 8.56.2 '*pūrvāparaṃ*', ŚS 7.81.1.1 = SŚ 13.2.11.1 = ŚS 14.1.23.1 = ṚV 10.85.18.1 '*pūrvāparaṃ*'.

[296] Cf., e.g., KS 12.4.5 '*adharottaraṃ*', PB 2.3.7 '*adharottaram*'.

[297] See, e.g., BhārGS 1.28.5.1 '*śītoṣṇā*', GobhGS 3.4.11 = KhādGS 3.1.8 '*śītoṣṇābhir*', GB 1.2.8.1 '*śītoṣṇāu*', JaimGS 1. 19.10 '*śītoṣṇābhir*', VaikhGṛS 2.13.5 '*śītoṣṇābhir*', ĀśvGS 1.17.6.1 '*śītoṣṇā*' and ĀśvGS 3.8.9 '*śītoṣṇābhir*', ŚāṅkhGS 1.28.9 '*śītoṣṇābhir*'. A 5.2.72 *śītoṣṇābhyāṃ kāriṇi*.
Cf., e.g., Ca Cik. 3.256.2 '*śītoṣṇaṃ*'.

[298] See, e.g., KU 1.7.21 '*sukhaduḥkhe*', Ca Sū. 25.9.2 '*sukhaduḥkhayoḥ*' and Ca Sū. 25.23.2 '*sukhaduḥkhayoḥ*' etc.
Cf., e.g., Ca Sū. 30.27.2 '*sukhaduḥkhaṃ*' and Ca Śār. 1.130.1 '*sukhaduḥkhasya*' etc.

A 2.4.13	*jīvitamaraṇam, jīvitamaraṇe*[299]		MBh
A 2.4.15	*daśa dantoṣṭhāḥ*		
A 2.4.15	*daśa mārdaṅgikapāṇavikāḥ*		
A 2.4.16	*upadaśaṃ dantoṣṭham, upadaśāḥ dantoṣṭhāḥ*		
A 2.4.16	*upadaśaṃ mārdaṅgikapāṇavikam, upadaśā mārdaṅgikapāṇavikāḥ*		
A 2.4.28	*hemantaśiśirāvṛtūnāṃ prīṇāmi*		
A 2.4.28	*ahorātre idaṃ vrūmaḥ*		
A 4.2.6	*rādhānurādhīyā rātriḥ*		
A 4.2.6	*tiṣyapunarvasavīyamaha*		
A 4.3.125	*bābhravyaśālaṅkāyanikā*		
A 4.3.125	*kākolūkikā*		
A 4.3.125	*atribharadvājikā*		
A 4.3.125	*kutsakuśikikā*		
A 4.3.125	*vivahanamaithunikā*		
A 5.1.133	*gaupālapaśupālikā*		
A 5.1.133	*kautsakuśikikā*		
A 5.2.128	*kaṭakavalayinī*		
A 5.2.128	*śaṅkhanūpuriṇī*		
A 5.4.106	*vāktvacam*		
A 5.4.106	*sraktvacam*		
A 5.4.106	*śrīsrajam*		
A 5.4.106	*iḍūrjam*		
A 5.4.106	*vāgūrjam*		
A 5.4.106	*samiddṛṣadam*		
A 5.4.106	*sampadvipadam*		
A 5.4.106	*vāgvipruṣam*		
A 5.4.106	*chatropānaham*		
A 5.4.106	*dhenugoduham*		

[299] Cf., e.g., MBh 5.105.7.2, '*jīvitānmaraṇaṃ*'.

A 6.2.34	*śvāphalkacaitrakāḥ*		
A 6.2.34	*caitrakarodhakāḥ*		
A 6.2.34	*śinivāsudevāḥ*		
A 6.2.36	*āpiśalapāṇinīyāḥ*		
A 6.2.36	*pāṇinīyarauḍhīyāḥ*		
A 6.2.36	*rauḍhīyakāśakṛtsnāḥ*		
A 6.3.25	*hotāpotārau*		
A 6.3.25	*neṣṭodgātārau*		
A 6.3.25	*praśāstāpratihartārau*		
A 6.3.27	*agnīṣomau*[300]	AB	
		ŚS	
		BaudhŚS	
		DrāhŚS	
		GB	
		JaimGS	
		TS	
		MS	
		KS	
		VSM	
		ṚV	
A 6.3.27	*agnīvaruṇau*[301]	KātyŚS	
A 6.3.29	*dyāvākṣāmā*[302]	ṚV	
		MS	
		VSM	
A 6.3.29	*dyāvābhūmī*[303]	SŚ	
		ṚV	
		MS	

[300] See, e.g., AB 1.8.12.0 '*agnīṣomau*' etc., ŚS 3.13.5.1 '*agnīṣomāu*' etc., BaudhŚS 1.5.16.0 '*agnīṣomābhyām*' etc., DrāhŚS 15.1.1 '*agnīṣomau*' etc., GB 1.4.7.6 '*agnīṣomābhyām*' etc., JaimGS 1.3.8 '*agnīṣomābhyām*', TS 1.1.4.2.3 '*agnīṣomābhyām*' etc., MS 2.1.3.35 '*agnīṣomābhyāṃ*' etc., KS 7.5.2 '*agnīṣomayor*' etc., VSM 1.10.3 '*agnīṣomābhyāṃ*' etc., ṚV 1.93.1.1 '*agnīṣomāu*' etc.

[301] See, e.g., KātyŚS 10.8.27 '*agnīvaruṇābhyāṃ*'.

[302] See, e.g., ṚV 1.96.5.2 = MS 2.7.8.2.2 = VSM 12.2.2 '*dyāvākṣāmā*' etc.

[303] See, e.g., SŚ 18.1.31.1, '*dyāvābhūmī*', ṚV 10.81.3.2 = MS 2.10.2.4.4 '*dyāvābhūmī*'etc.

A 6.3.30	*divasapṛthivyau*		
A 6.3.30	*dyāvāpṛthivyau*		
A 6.3.31	*uṣāsāsūryam*		
A 6.3.31	*uṣāsānaktā*[304]	AB	
		SŚ	
		MS	
		ṚV	
A 6.3.33	*ā mā gantāṃ pitarāmātarā ca*		
A 7.3.21	*āgnimārutīṃ pṛśnimālabheta*	MS	

Conclusions

The aim of the present research was that of deepening the understanding of the evolution of the nominal coordination in its historical phases, from the *Vyākaraṇa*/*Veda* perspective. In the light of the some fifty *sūtra*s Pāṇini devoted to the coordinative construction, and more precisely to the topic of *dvandva* compounds, samples of a selection of Vedic texts considered as being familiar to the great grammarian were attentively examined in order to observe the relation between norm and praxis. As expected, the operation showed a progressive increase in the use of *dvandva* compounds to convey the sense of nominal coordination. The main intention of the A appears to be that of governing, with its rules on *dvandva* compounds, the correct use of grammatical gender and number, the internal word-order of the constituents, the accent and specific affixes which can be applied to the compound itself. The A also covers the formation of the so-called *devatādvandva*s with the relevant diatopic and diamesic variations (in terms of lexicon).

By starting from the assumption that the behaviour of *dvandva* compounds mirrors the behaviour of the corresponding analytic syntactic strings, I have analysed a sample of instances taken from the ṚV and sorted by the two main categories 'Natural pairings' and 'Non-natural pairings'. The aim of this analysis was an attempt to detect the stages that led to the

[304] See, e.g., AB 2.4.10 '*uṣāsānaktā*', SŚ 6.3.3.1 '*uṣāsānakta*-', MS 1.10.9.5 and MS 2.12.6.7.1 and MS 3.11.1.6.1 '*uṣāsānaktā*', ṚV 1.122.2.1 '*uṣāsānaktā*' etc.

development of the classic model of *dvandva* compound, by studying the Vedic coordinative syntactic constructions represented by nouns connected with coordinating conjuctions or in asyndeton (consider, for instance, the Ṛgvedic string involving the two coordinate words *go-* and *aśva-*, and the later compound *gavaśva-* see § II 1).[305] In particular, the categories of coordination were selected in relation to the cultural suggestions of the Vedic imagery: as such, I analysed nouns belonging to various aspects of rituals and to specific fields connected to the strictly human experience. As a result, it has been noticed that the general trend of these '*dvandva*s in power' is quite consistent with the A as regards its sole investigable dominion, i.e., the teaching of the word-order of the compound.

By following a chronological criterion in the investigation of the subsequent Vedic literature (AB, BĀU, ĀśvGS), the present research focuses on a stage of the language where one can vividly observe the rise in productivity of *dvandva* compounds (selected from textual samples), compounds which are often consistent with the teachings of the A on constituent-order, at least when only two constituents are combined.

Along with the increasing presence of this type of complex formation in Vedic literature, one can note a progressive trend that sees the combination of constituents denoting a wider range of referents, while the ṚV almost exclusively combined names of deities. The compounding strategy is often resorted when lists of elements belonging to the ritual environment must be provided; as such, a technical, and perhaps practical reason, may have determined the use of more than two constituents in the given compound.[306] Indeed, the grammatical commentarial tradition reflects on the problem of *dvandva* s formed out of more than two constituents as far as the application of rules governing the word-order of the constituents is concerned (see, e.g., vt 1 *ad* 2.2.34). In other words, the process of formation of the desired compound, even when it involves three constituents, always appears as having been conceived as a binary combination realized in different steps, an exegetic approach justified by A 2.1.4 [*sup*] *saha supā*. In any case, on the basis of the Vedic linguistic material analysed in the present research, one may hypothesize that the Pāṇinian conception was possibly grounded on a compounding process that *really* was made up of two constituents (a pattern which seems to be the most represented in the earliest texts). An analogous conclusion can also be reached on the basis of the rules that

[305] A further research perspective is that of deeply fousing on the instances of coordinated strings involving more than two nouns: out of this linguistic circumnstance the formation of a corresponding *dvandva* compound could be less frequent. Furthermore, another interesting point is represented by the role of *tmesis* in influencing both the word-order and the formation of *dvandva* compounds: such a topic deserves to be analysed in future research.

[306] As Renou also remarked (1955: 57).

govern the internal word-order of these compounds. In this sense, and notwithstanding the clever escamotage operated by Kātyāyana, the search for a compliance with the A's teachings on the constituent order in the *dvandva*s formed out of more than two constituents become opaque.

So, it is in the light of the linguistic material of the earliest sources that the reflection on the designation chosen by Pāṇini for this type of compound becomes crucial (*dvandva* 'pair') and, once again, one becomes aware of the need to keep the level of the A separate from the many levels of the commentarial tradition. Even the technical terms traditionally used to classify *dvandva* compounds, such as *samāhāra* and *itaretarayoga*, derive from the latter. Analogously, the whole series of linguistic examples provided by the KV somehow consists of a further interpretative level rather than a mere list appended to the handed down grammatical rules. The synthetic process that usually characterizes the traditional approach cannot help users to single out the older stage of the Sanskrit language: even without mentioning the medieval Candragomin, significant integrations had been added to the original teachings of the A already in Kātyāyana's age also in the domain of *dvandva* compounds. Integrations that Patañjali himself also had to accept in assessing the inevitable changes in a living language, whose slipperiness sometimes emerges also from the rules of the A itself.

The numeral compounds, indisputably classified as *dvandva*s, constitute a domain here investigated in order to observe a weak point in the linguistic architecture created by Pāṇini. Kātyāyana already noticed the difficulty in combining the feminine gender with the singular number, a condition evident in the series of Sanskrit ordinal numerals and never admitted by Pāṇini. The core point of this class, however, seems to lie in the internal relationship of the two constituents and then in the relationship that the final compound has with the linguistic context that surrounds it, which the present research also considers with respect to both recensions of the AV (*Saunakīya* and *Paippalāda*). By classifying the numeral compounds under the domain of *dvandva*s, it follows that the *Aṣṭādhyāyī* treats the *artha* of *ca* as endowed with the sense of 'addition', in terms of conveying the meaning of 'with' ('X plus Y/X with Y' vs 'X and Y'), and this is mirrored by other Indo-European systems of signification of numerals. As such, there is not only a chronological distance between the *ca* of numeral syntactic strings and the *ca* of A 2.2.29, but the nature of this supposed gap must also be investigated in the meaning of the particle itself. Whilst there is a clever and practical reason, in governing numeral compounds by means of A 2.2.29, a deeper look at their characteristics, supported by textual evidence, suggests that none of the compound types described by the *Aṣṭādhyāyī* is suitable for encompassing this series of complex formations. Consider, e.g., ṚV 1.3.8 *ekaviṃśatyā*

darbhapiñjūlaiḥ, 'with twenty-one handfuls of Darbha' where the numeral compound is inflected in the singular instrumental case in accordance with the plural instrumental of the noun it qualifies: the behaviour of *ekaviṃsati* (classified as a *dvandva* by Pāṇini) does not belong to that of *dvandva* compounds described by the A (labelled as *itaretarayoga* and *samāhāra* by the commentarial tradition).

One of the apparently main interests of the A (with respect to the domain of *dvandva* compounds) is that of allowing or prohibiting the formation of *samāhāra*, a fact which bears witness to the productivity of this type of compound in the Pāṇinian age and the subsequent attempt to restrict its usage to the desired field of application. What emerges is that the trait of individuality of the single parts is perceived as less important than their belonging to the same, wider unitary group. This conception results in the exclusion of both the use of the dual and the plural grammatical number, and of the expression of a specific gender, i.e., neither feminine nor masculine. Indeed, the terminology also seems to hint at such a perspective since the technical term for the neuter gender is, literally, non-masculine (*napuṃsaka*)[307]. Several questions have arisen due to the presence of some apparently blurry constraints in the relevant teachings of the A; among others, in particular, it is possible to form a neuter and singular *dvandva* (the so-called *samāhāra*) provided that:

(1) there is everlasting enmity between the items denoted by the constituents of the given compound in rule A 2.4.9, e.g., *mārjāramūṣakaṃ*, 'cats and mice (as a group of enemies)'.

(2) there is a gender difference in the constituents involved in the given compound in rule A 2.4.7, e.g., *gaṅgāśoṇam*, 'the *gaṅgā* (f.) and the *śoṇa* (m.) rivers (as a singular)'.

(3) there is an antonymic relationship between the constituents involved in a given *dvandva* provided that they do not denote an *adhikaraṇa* in rule A 2.4.13, e.g., *śītoṣṇam,* 'the hot and the cold (as a singular)'.

(4) there is the denotation of an approximate quantity of an *adhikaraṇa* conveyed by the constituents involved in the given compound- in rule A 2.4.16, a rule where, as in the previous case, a marginal degree of optionality is implied for the taught operation, e.g., *upadaśaṃ dantoṣṭham,* 'a set of approximately ten teeth and mouths (as a singular)'.

[307] "a pre-Pāṇinian term borrowed from *prātiśākhya* literature" (Roodbergen 2008: 236). Note that as recalled by Chatterji (1964: 141) the first occurrence of the three terms *puṃs*, *strī* and *napuṃsaka* is ŚBM 10.5.1.2.3. Consider the first translation of this term given by Renou (1942: 170) "*non male* [*ni femelle*]". Consider M 2 196 ll. 4-5 *ad* A 4.1.3: *stanakeśavatī strī syāl lomaśaḥ puruṣaḥ smṛtaḥ. ubhayor antaram yac ca tadabhāve napuṃsakam* 'a woman should have breasts and (long) hair, a man is recognised as being hairy. The neuter is proximate to both when these two are absent' ("*proche du masculine et du feminine sans être l'un ni l'autre*" - Renou 1942: 170).

In the case of (1), the reason for the formation itself of the *samāhāra* compound appears to be strictly dependent on the subsisting enmity between the *denotata* of the compound, *denotata* which undergo a loss of individuality due to their being paired only in force of them being enemies. The constraint of case (2) is puzzling: this rule teaches to combine words denoting items belonging to the same group (conveying the idea of a natural coordination since they belong to the same phenomenal sphere) provided that the constituents have a different grammatical gender. The final output as a *samāhāra* can be explained as the prevailing of the gender of the inanimate items where there is more than one gender in competition. While the explanation given for case (1) also seems also valid in the case of (3), the explicit mention of the non-*adhikaraṇa* may be an attempt to set a boundary between the category of *dvandva* and *karmadhāraya* compounds, and to avoid ambiguities. In case (4), the use of the combination of singular and neuter is justified by the non-precise consciousness of the amount of the given *adhikaraṇa*, i.e., of the quantity of the items denoted by the constituent of the compound (cf. A 2.4.15).

However, the abundance of rules devoted to the *samāhāra dvandva*s is not mirrored by the Vedic textual occurrences analysed in the present research. Analogously, the section governing the so-called *devatādvandvas* shows some thought-provoking inconsistency with the Vedic linguistic material, a point which forces us to deeply reflect on the nature of the language described by the A.

The research on the linguistic stage of the language witnessed by Pāṇini could be extended to other texts, even to those which are still not included in the available Vedic Index or in the catalogues easily searchable with the help of technology; however, it is possible that the Vedic corpus has not survived in its whole and even that many teachings of the A were grounded on the structures of a language that was not-entirely written. After trying without success to find real, literary examples of a certain lexicon described by some rules of the A (or at least to detect in the earliest literature the right, essential archaeological layer which presupposes it), I started to collect a list of traditional compounds provided by the KV; I then searched for textual occurrences in a sample of literature preceding or contemporary to the age of Pāṇini. Even though there are KV compounds which remain unattested, many others can be found in texts which perhaps deserve to be investigated in further research, in order to deepen the identification of the historical layers of the language and add new elements for the studies about the connection between Pāṇini and Vedic and Sanskrit literature.

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