# The Meaning of *ca* 'and': Coordination and compounding in the Indian grammatical tradition

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**Abstract**

The tradition of linguistic analysis in ancient India, *vyākaraṇa* 'grammar', developed a unique and complex approach to the topic of coordination and the question of the meaning of 'and'. This approach, moreover, was not static but evolved over the roughly 2,000-year history of the tradition. Although the basics of the ancient Indian theory of *cārtha* 'the meaning of *ca* 'and'' are well-known, the finer details of the grammarians' approach, and in particular the differences between the major grammarians, and the evolution of the theory over time, remain to be clearly described. In this paper we present a detailed account of the tradition's approach to coordination, considering not only the mainstream Pāṇinian tradition, but also the competing traditions of the *Cāndra* and *Kātantra* schools.

## 1 Introduction

What is the meaning of the apparently simple word *and*?[1] And how does that relate to the somewhat broader notion of 'coordination'? In modern Western linguistics, it is recognized that

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*and* has two rather different primary meanings – intersective (or Booelan) conjunction and collective (group-forming or non-Boolean) conjunction – and there is ongoing debate over which meaning is basic (Champollion 2016).[2] 'Coordination' is understood as a more general syntactic notion involving the apparently symmetric combination of two or more syntactic units of the same or similar type into a larger unit of the same syntactic type; coordination can involve not only conjunctions like *and*, but also e.g. the semantically very different *or*.[3]

The ancient Indian tradition of linguistic analysis, *vyākaraṇa* 'grammar', developed its own approaches to these questions. As a highly sophisticated tradition of linguistic analysis, which has influenced the development of modern linguistic theory in a number of crucial ways over the last two hundred years, the *vyākaraṇa* approach to coordination and 'and' is of interest not only in its own right, but potentially also as a valuable point of comparison for modern linguistic theory.[4]

However, translating linguistic concepts even between different modern theories is often fraught with difficulties; translating between modern and ancient linguistic traditions can be even more so. For example, the syntactic aspects of 'coordination' as a modern linguistic term would have been largely or entirely alien to the Indian tradition. There is, naturally, no term in the Indian tradition that precisely corresponds to 'coordination'; the most relevant concept is that of *cārtha* 'the meaning of *ca* 'and''; it is this we focus on here. Although the basics of the ancient Indian theory of *cārtha* 'the meaning of *ca* 'and'' are well-known, the finer details of the grammarians' approach, and in particular the differences between the major grammarians, and the evolution of the theory over time, remain to be clearly described. In this paper, we aim to do precisely that, considering not only the mainstream Pāṇinian tradition, but also the competing traditions of the *Cāndra* and *Kātantra* schools.

The Indian tradition does not understand coordination in Boolean vs. non-Boolean terms, a distinction which derives in Western linguistics from the influence of logic on the development of semantics. The Indian tradition approached coordination and the meaning of 'and' from a rather different angle, and with particular concerns. Pāṇini's *Aṣṭādhyāyī* defines the scope of *dvandva*

[2] Cf. also Lang (1984).

[3] Cf. Crysmann (2006), and further Haspelmath (2004), Wälchli (2005), Stassen (2000).

[4] Cf. Lowe (2024).

compound formation in *sūtra* 2.2.29 with the word *cārthe* 'in the meaning of *ca* 'and''.[5] It is in relation to this rule that the subsequent tradition treats the meaning of *ca* 'and', and therefore this treatment necessarily connects closely with issues of compound formation, in a way that would be alien to modern Western discussions of coordination.

Given the wording of *A.* 2.2.29, the focus of the *vyākaraṇa* discussions of coordination is, moreover, on the meaning of the Sanskrit word *ca* 'and' specifically. While there are other coordinating particles, such as *api* 'also, too', *vā* 'or', *atha* 'now, also', and *uta* 'also, and', *ca* is the most common and basic coordinating particle, such that it holds the same position as *and* in English.[6] It is well-known that the grammatical tradition, beginning with Patañjali, attributes four basic *arthas* 'meanings' to *ca* (see e.g. Panchal and Kulkarni 2019): *samuccaya* 'aggregation', *anvācaya* 'supplementary addition', *itaretarayoga* 'mutual connection', and *samāhāra* 'collection'.[7] Standardly only the latter two meanings are considered to involve *dvandva* compound formation, and so the question arises how or why compounding is not found with the first two meanings, since they should necessarily fall into the scope of the *cārthe* of *A.* 2.2.29. The later tradition therefore seeks a more general condition of mutual connection that restricts *dvandva*

[5] *A*. 2.2.29 *cārthe dvandvaḥ*. The word *artha* has a broad semantic range, within which not only 'meaning' but also 'function' might be an appropriate translation in this instance. We retain the single translation 'meaning' for consistency and simplicity.

[6] In the Pāṇinian tradition, the word *ca* and other coordinating words are classed as *nipātas* 'particles', one of the subtypes of *avyaya* 'indeclinable'. *Ca* is a *nipāta* by *A.*1.4.57 *cādayo 'sattve* 'items enumerated in the list beginning with *ca* 'and' (are labelled *nipāta*) when they do not denote *sattva* 'a thing'', and the designation *avyaya* applies by *A.*1.1.37 *svarādinipātam avyayam* 'items listed in the set beginning by *svar* 'sun, heaven' and items termed *nipāta* are labelled *avyaya*.' As a *nipāta*, the *śakti* 'expressive power' of *ca* should be *dyotaka* 'manifesting' rather than *vācaka* 'denotative'; that is, *ca* should not directly denote any meaning, but should function to manifest particular aspects of the meanings of other, *vācaka*, words. However, some grammarians admit that at least some uses of *ca* are *vācaka*; so, Nāgeśa (*Uddyota*, vol. 2, p. 469–470) allows for *ca* to be *vācaka* in its *itaretarayoga* and *samāhāra* (i.e. the compound-forming) functions. We do not consider this issue further here.

[7] Our glosses of these terms are, of course, approximate and will be discussed in more detail below.

formation, understood either as *yugapadadhikaraṇavacana* 'simultaneous reference' (from Kātyāyana), or (later) *sāhitya* 'mutual connection' or *sāmarthya* 'interconnectedness of meanings'.[8]

A number of studies have examined the terms and categories *nipāta* and *avyaya*, mainly based on Yāska and Pāṇini (e.g. Bandhyopadhyay 1981). Individual *nipātas* have also been subject to study, in particular the particle *eva* (Gillon and Hayes 1982, Gillon 1999, Ganeri 1999). The technical use of *ca* in the *Aṣṭādhyāyī*, for example in the context of *anuvṛtti,* has been examined, e.g. in Joshi and Bhate (1983). However, comprehensive treatments of the theory of coordination in the Indian tradition are lacking. Roodbergen (1974: 139–190) presents a somewhat detailed account of the question as part of his translation of Patañjali's *Mahābhāṣya* on *A.* 2.2.29, but this account is necessarily restricted by focus on the *Mahābhāṣya*. From the other side, Murti (1974: 308–327) discusses the grammarians' theory of *dvandva* compound formation, which necessarily includes the question of *cārtha*, but he presents a synthesis which does not adequately distinguish the variety of competing and even incompatible views advanced by different authors.[9]

The present study aims to present a more complete picture of the evolution of the grammatical tradition's theory (really, theories) of the meaning of *ca* 'and' (and thereby, its theory/theories of coordination). In §2 we present a detailed account of the evolution of the theory of the meaning of *ca* 'and' in the Pāṇinian tradition, from Pāṇini through Kātyāyana, Patañjali, Kaiyaṭa, Bhaṭṭoji Dīkṣita and Nāgeśabhaṭṭa. In §3, we compare the treatments found in two non-Pāṇinian traditions, the *Cāndra* and *Kātantra* schools. In §4, we fill a gap in our treatment of the Pāṇinian school by briefly considering Bhartṛhari. In §5, we draw conclusions, summarizing the histories of the four main meanings of *ca* 'and' treated in the tradition.

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[8] The notion of *sāmarthya* is crucial to the tradition's understanding of the conditioning of compounding, related as it is to the introductory rule governing the compounding section, *A.* 2.1.1 *samarthaḥ padavidhiḥ*. A full treatment of this concept goes well beyond the present scope; see Joshi (1968) for a detailed discussion of Patañjali's extensive treatment of the topic.

[9] More widely on modern Western approaches to *dvandvas* and coordinating compounds see e.g. Bauer (2008), Bauer (2017), Arcodia (2010).

## 2 The meaning of coordination in the Pāṇinian tradition

In this section we present a diachronic survey of how the most important figures in the Pāṇinian tradition of *vyākaraṇa* approached coordination and the meaning of *ca* 'and'. In contrast with the more composite presentations of Roodbergen (1974) and Murti (1974), we aim to understand each author on his own terms; or at least, to distinguish between what can necessarily be deduced from the writings of one author and what the later tradition understands that author to have been saying.

### 2.1 Pāṇini

As noted above, the crucial expression *cārtha* 'the meaning of ca 'and'' appears first in Pāṇini's *Aṣṭādhyāyī* (ca. 400 B.C.), in a rule specifying *dvandva* compounding:

(1) *cārthe dvandvaḥ.* (*A.* 2.2.29)

'(When two or more words ending in a case-affix are semantically related to each other (*samartha*)) in the meaning 'and', (they are optionally[10] made into a compound; and the compound so formed is labelled) *dvandva*.'

Since it is not the task of the grammar to explicate meaning, Pāṇini does not further specify what *cārtha* does or does not refer to. One could speculate, perhaps, that Pāṇini had in mind a definition

[10] According to the tradition, all compounds taught in *A.* 2.1.12 to 2.2.29 (with a few exceptions, such as 2.2.17–21) are in the scope of *A*. 2.1.11 *vibhāṣā* 'optionally'. Kiparsky (1979: 37–43) argues that for Pāṇini, the optionality (in fact depending on the *vā* of *A*. 2.1.17, which Kiparsky takes to cancel the *vibhāṣā* of *A.* 2.1.11) is cancelled by the *nityam* in *A.* 2.2.17; this means that compounding of *dvandvas* would have been obligatory, according to Kiparsky, granted the semantic condition specified by *cārthe* but in the absence of the word *ca* itself. For our purposes it is a moot point, and for consistency we follow the traditional understanding.

such as the one we find in Yāska's comment on *ca* in the *Nirukta* (perhaps ca. 550 B.C.):[11]

(2) *ceti samuccayārtha ubhābhyāṃ saṃprayujyate.* (*Nirukta* 1.4)

'The word *ca* is used in the sense of *samuccaya* 'aggregation', and is joined together with both (meanings)[12].'

Yāska does not further define the meaning of *samuccaya* (literally 'a piling up together'). The term does occur in the *Aṣṭādhyāyī*, where it is used to refer to one of the senses of *api* (*A.* 1.4.96), and to a context for the use of the imperative (*A.* 3.4.3–5), where it is understood by the tradition to refer to a multitude of actions; but even assuming a similar date for Yāska and Pāṇini, these occurrences do not help us derive any more precise sense for *samuccaya* beyond the literal sense.

The *Nirukta* gives only *samuccaya* as a meaning for *ca*; furthermore, the meaning *samuccaya* is not exclusive to *ca*, but is attributed also to the particles *ā* and *vā* 'or'.[13] Whether Pāṇini assumed any more complex understanding of the meaning of *ca* cannot be known, of course; it is not until Patañjali that a more detailed inventory of meanings for *ca* appears.

## 2.2 Kātyāyana

The earliest surviving commentary on the *Aṣṭādhyāyī* (and therefore the earliest surviving discussion of *A.* 2.2.29) is constituted by the *Vārttika*, a series of short *sūtra*-like statements (*vārttikas*) preserved in the *Mahābhāṣya* of Patañjali and attributed to Kātyāyana (perhaps ca. 250 BCE).

Kātyāyana raises an immediate problem with Pāṇini's formulation of *A.* 2.2.29, claiming that, as phrased, 2.2.29 would license *dvandva* compounding in contexts where no compound should be formed; that is, there are contexts where the meaning of *ca* 'and' is understood, but *dvandva*

[11] Sarup (1921: 8), Sarup (1927: 31). The date of Yāska is highly uncertain.

[12] The word 'meanings' (*arthābhyām*) is supplied in Durga's commentary.

[13] Further on Yāska's treatment of *nipātas* see Bronkhorst (1979).

compounding should not occur. Pāṇini's phrasing is, therefore, too loose.[14]

We do not know what sort of sentences Kātyāyana had in mind, but Patañjali exemplifies this criticism with the following example (we mark the crucial phrase in bold):[15]

(3) *ahar ahar nayamāno **gām aśvaṃ puruṣaṃ paśum** |*
*vaivasvato na tṛpyati surāyā iva durmadī* || (*Mahābhāṣya*, v. 1, p. 431, ll. 3–4)

'Vaivasvata is not satisfied (even by) daily carrying off (to death) a cow, a horse (and) a man, (or) a sacrificial animal, just like one who does not easily get drunk (is not satisfied) with (any amount of) liquor.'

Patañjali, at least, takes this as an example where we infer a sense of coordination between the accusative nouns, but where it would be wrong to form a *dvandva* compound. We may suppose that Kātyāyana had the same, or similar, examples in mind.[16] As a solution, Kātyāyana proposes an alternative phrasing of 2.2.29, which he claims should restrict the scope of *dvandva* formation to only those contexts where it should be licensed:

(4) *siddhaṃ tu yugapadadhikaraṇavacane dvandvavacanāt.* (Vt. 2 ad 2.2.29, *Mahābhāṣya*, v. 1, p. 431, l. 6)

'But (the rule) can be (correctly) effected by the phrasing 'a *dvandva* is formed in case of simultaneous reference (by two or more nominal stems)'.'

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[14] Vt.1 ad 2.2.29 (*Mahābhāṣya*, v. 1, p. 431, l. 1): *cārthe dvandvavacane 'samāse 'pi cārthasaṃpratyayād aniṣṭaprasaṅgaḥ.*

[15] The verse is an approximate quotation from *Taittirīya Āraṇyaka* 6.5.3, which runs: *ahar ahar nayamāno gām aśvaṃ puruṣaṃ jagat | vaivasvato na tṛpyati pañcabhir mānavair yamaḥ* || 'even if he daily carries off a cow, a horse, a man, (or) any living being, Yama Vaivasvata is not satisfied (even) in five *mānavas* (cosmic periods).' (Roodbergen 1974: 149, fn. 608)

[16] But note that the example Patañjali gives works perfectly granted his own interpretation of *A.* 2.2.29 (which differs significantly from that of Kātyāyana), and was presumably chosen by him for that reason. Patañjali also gives a second, structurally parallel example: *indras tvaṣṭā varuṇo vāyur āditya* 'Indra, Tvaṣṭṛ, Varuṇa, Vāyu (and) Āditya'.

Under this reformulation of 2.2.29, *dvandva* compounding would not be directly tied to *cārtha* 'the meaning of *ca* 'and'', but would rather be dependent on the expression of simultaneous reference, *yugapadadhikaraṇavacana*. As applied to the example in (3), then, the impossibility of compounding here could be attributed to the lack of *yugapadadhikaraṇavacana*.

Kātyāyana does not explicitly define the notion of *yugapadadhikaraṇavacana*, but his intention is clear based on the discussion in the following *vārttikas*. We understand *yugapadadhikaraṇavacana* literally as 'expression of simultaneous reference'.[17] This translation requires some explication, however. The reference is not specifically to both (or all) members of a compound simultaneously expressing their meaning. Rather, as we will see, the idea is that each member of the compound simultaneously expresses both its own meaning and that of the other word(s) in the compound. We could alternatively think of *yugapadadhikaraṇavacana* as 'expression of conjoint reference': all members of the compound conjointly express the meaning of every member.

Kātyāyana's following *vārttikas* treat potential objections to the principle of *yugapadadhikaraṇavacana* which make clear the meaning of the term. So, Kātyāyana's third *vārttika* states that under the rephrased rule, it is necessary to introduce a prohibition of *puṃvadbhāva* 'treatment as a masculine form' in *dvandvas*. The reference here is to *A.* 6.3.34, which applies to a stem occurring before a feminine stem which is the final member of a compound (*uttarapade*, 6.3.1) when the members are *samānādhikaraṇa* 'coreferential', and prevents the use of a feminine stem form, as long as there is a corresponding semantically equivalent base (masculine) form.[18] Standard examples of the application of 6.3.34 are *bahuvrīhis*; for example,

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[17] In the term *yugapadadhikaraṇavacana* as used by Kātyāyana, the element *vacana* should be interpreted *bhāve*, i.e. as an action noun 'expression'. In discussing this notion, Patañjali consistently uses the term *yugapadadhikaraṇavacanatā* 'the state of being expressive of simultaneous reference', wherein *vacana* should rather be interpreted *kartari*, i.e. agentively ('expressive').

[18] *A.* 6.3.34 *striyāḥ puṃvad bhāṣitapuṃskādanūṅ samānādhikaraṇe striyām apūraṇīpriyādiṣu* 'In the place of a feminine word which is based on the same stem as a masculine equivalent, the corresponding masculine stem is substituted, when the feminine does not end in the suffix *-ūṄ*, if followed by another feminine word which is coreferential, but not when this word ends in a *pūraṇa* "ordinal" suffix or

given a *vigraha* such as *yasya darśanīyā bhāryā sa* 'he whose wife is beautiful', the corresponding *bahuvrīhi* will show a masculine, not feminine, first member: *darśanīya-bhārya-*, not *darśanīyā-bhārya-*, because in the formation of the compound the first member *darśanīyā* appears before a coreferential feminine stem *bhāryā* (and the other conditions are fulfilled). The point of Kātyāyana's *vārttika* 3, then, is that the same would by default apply to *dvandvas* under the principle of *yugapadadhikaraṇavacana*, and must be prevented from doing so. So, in forming a *dvandva* of *paṭvī* 'a harsh woman' and *mṛdvī* 'a gentle woman', we would be in danger of ending up with **paṭu-mṛdvyau* rather than the correct *paṭvī-mṛdvyau*.

The implication, therefore, is that if we assume *yugapadadhikaraṇavacana* for *dvandvas*, the individual members of the compound must be *samānādhikaraṇa* 'coreferential', just like *darśanīyā* and *bhāryā* in *darśanīyabhārya*. The idea is that all members of the compound simultaneously refer to the full set of referents of the compound. So in *paṭvī-mṛdvyau*, *paṭvī* refers both to 'a harsh woman' and 'a gentle woman', and likewise *mṛdvī* refers to both.[19]

This is further illustrated by the fourth *vārttika*, which raises the objection that *yugapadadhikaraṇa* could not apply in the case of antonyms.[20] *Dvandva* compounds made of antonyms can be formed, for example *sukha-duḥkha* 'happiness and sadness'. But if *yugapadadhikaraṇavacana* means that each member of the compound must refer to the meanings of all members, then it cannot work here, since we would have the impossible scenario of words referring to their opposites.

Kātyāyana does not answer these objections himself, but in subsequent *vārttikas* adds supporting arguments for the principle of *yugapadadhikaraṇavacana*. Patañjali does offer answers to both objections, before criticizing and finally rejecting the principle.

## 2.3 Patañjali

belongs to the list headed by *priyā*.'

[19] This understanding of *yugapadadhikaraṇavacana* is explicitly presented in the later tradition, e.g. by Kaiyaṭa in his *Pradīpa* (vol. 2, p. 464a, ll. 16–17).

[20] Vt. 4: *vipratiṣiddheṣu cānupapattiḥ*.

In many ways the most important and influential statement on the meaning of *ca* 'and' in the Indian tradition is that of Patañjali (ca. 150 BCE) in his commentary on *A.* 2.2.29 (and on Kātyāyana's *vārttikas* on the same) in his (*Vyākaraṇa)mahābhāṣya*.

As noted, Patañjali rejects Kātyāyāna's proposal to understand *dvandva* compounding as constrained by *yugapadadhikaraṇavacana* 'simultaneous reference'. However, Patañjali accepts the need to redefine, or further specify, Pāṇini's original rule *A.* 2.2.29 (*cārthe dvandvaḥ*) to deal with contexts where *cārtha* may be understood but *dvandva* compounding should not be permitted. As noted above, Patañjali offers explicit examples, in particular (3), where he understands this to be the case.

Patañjali's solution is to interpret the word *cārthe* to mean *cena kṛte 'rthe* 'when the meaning (of *ca*) is conveyed by (the word) *ca*':

(5) *yathānyāsam evāstu. nanu coktaṃ cārthe dvandvavacane 'samāse 'pi cārthasaṃpratyayād aniṣṭaprasaṅga iti. naiṣa doṣaḥ. iha ce dvandve itīyatā siddham. kathaṃ punaś ce nāma vṛttiḥ syāt. śabdo hy eṣaḥ. śabde 'sambhavād arthe kāryaṃ vijñāsyate. so 'yam evam siddhe sati yad arthagrahaṇaṃ karoti tasyaitat prayojanam, evaṃ yathā vijñāyeta cena kṛto 'rthaś cārtha iti.* (*Mahābhāṣya*, v. 1, p. 434, ll. 5–9)

'Let the rule remain as formulated (by Pāṇini). But surely it has already been said, if one prescribes *dvandva* compounding in the sense of *ca* 'and', (then) even when there is no compound (licensed), there would be the undesired possibility (of compound formation) due to the understanding of the meaning of *ca*. This is not a problem. The rule can be effected merely by (phrasing the rule) 'a *dvandva* compound is formed to express *ca* 'and'. But how could a compound formation express *ca*, since it (i.e. *ca*) is a word-form? (So,) due to the impossibility of (forming a compound) to express a word-form, it will be understood to apply to the meaning. Granted that the rule can be effected that way, that (Pāṇini) makes use of (the word) *artha* has the purpose that the rule should be understood as *cena kṛtaś cārthaḥ* '*cārtha* means the sense conveyed by (the use of) *ca*'.'

By interpreting *A.* 2.2.29 this way, Patañjali is able to restrict the scope of *dvandva* compound formation to a subset of cases referred to by the more general semantic constraint *cārtha*, namely to those in which the *cārtha* 'the meaning of *ca* "and"' is conveyed by the word *ca* itself. This step recognizes that it is possible for *cārtha* to be conveyed by something other than the word *ca* 'and'; this must be the case in Patañjali's understanding of (3).

But this focus on the meaning of *ca*, as denoted (or not) by the word *ca*, leads to the central question: what is the meaning of *ca*? Patañjali enumerates the now standard four meanings of *ca*: *samuccaya*, *anvācaya*, *itaretarayoga*, and *samāhāra*:

(6) *kaḥ punaś cena kṛto'rthaḥ. samuccayo 'nvācaya itaretarayogaḥ samāhāra iti.* ***samuccayaḥ****. plakṣaś ca ity ukte gamyata etan nyagrodhaś ca iti.* ***anvācayaḥ****. plakṣaś ca ity ukte gamyata etat sāpekṣo 'yaṃ prayujyata iti.* ***itaretarayogaḥ****. plakṣaś ca nyagrodhaś ca ity ukte gamyata etat plakṣo 'pi nyagrodhasahāyaḥ, nyagrodho 'pi plakṣasahāya iti. (plakṣaś ca nyagrodhaś ca ity ukte)*[21] ***samāhāre*** *'pi kriyate plakṣanyagrodham iti. tatrāyam apy artho dvandvaikavadbhāvo na paṭhitavyo bhavati. samāhārasyaikatvād eva siddham*. (*Mahābhāṣya*, v. 1, p. 434, ll. 9–14)

'But what is the meaning expressed by *ca* 'and'? (It is) *samuccaya*, *anvacāya*, *itaretarayoga*, (and) *samāhāra*. (As for) *samuccaya*, when one says *plakṣaś ca* 'and the white fig tree', this is understood: *nyagrodhaś ca* 'and the banyan tree also'. (As for) *anvācaya*, when one says *plakṣaś ca* 'and the white fig tree', this is understood: (that) this (the word *plakṣa*) is dependent. (As for) *itaretarayoga*, when one says *plakṣaś ca nyagrodhaś ca* 'both the white fig and the banyan tree', this is understood: both the white fig tree accompanied by the banyan tree, and the banyan tree accompanied by the white fig tree. (When one says *plakṣaś ca nyagrodhaś ca* 'both the white fig and the banyan tree') (a compound) is formed also in the case of *samāhāra*, (as in) *plakṣanyagrodham* 'a white fig tree and a banyan tree (as a unit)'. In that (understanding of the rule) there is also this gain, that (a rule for) *dvandvaikavadbhāva* 'treatment of a *dvandva* as (referring to) a single entity' (i.e. for the formation of *samāhāra*) does not need to be formulated. It is effected simply by the singularity of *samāhāra*s.'

Patañjali accepts the meaning *samuccaya*, given originally by Yāska, but adds three more. The discussion here is brief and elliptical and it is hard to be certain how much of the later interpretation of this passage was a part of Patañjali's understanding. The later tradition understands that the meanings *itaretarayoga* and *samāhāra* are involved in *dvandva* compound formation, whereas *samuccaya* and *anvācaya* are not. But Patañjali does not explicitly state this, and at least insofar as the four meanings are all given in answer to the question of what meanings are denoted by the

[21] These words are given as a variant by Kielhorn and are bracketed in the edition of Kudāla et al. (1935–1945).

word *ca*, it might be expected that all four could in principle fit Patañjali's context for *dvandva* formation (i.e. the meaning of *ca* denoted by the word *ca*).

The examples given by Patañjali may support the later understanding, but they are presented elliptically. Patañjali gives the same example for *samuccaya* and *anvācaya* (namely, *plakṣaś ca*), adding only the additional sense of dependency (*sāpekṣa*) for the latter. But there is clearly some part of an assumed discourse missing in the example used. If, when we say *plakṣaś ca* 'and the white fig tree', we understand *nyagrodhaś ca* 'the banyan tree also', then presumably *plakṣaś ca* 'and the white fig tree' follows something that includes the word *nyagrodha*. Kaiyaṭa's understanding is that we assume a complete sentence involving *nyagrodha*, such that with the addition of *plakṣaś ca* we effectively end up with two clauses:

(7) a. *nyagrodho dṛśyatām!*
'Look at the banyan tree!'

b. *plakṣaś ca.*
'And, the white fig tree.'

The resulting full meaning would be something like 'look at the banyan tree and also at the white fig tree'. Under this interpretation of Patañjali's examples, we could infer that compound formation is not permitted under *samuccaya* or *anvācaya* because the coordination effectively crosses a clause boundary, or functions to conjoin clauses rather than nominals. But it cannot be considered certain that this was Patañjali's understanding or intention.[22]

In addition, or alternatively, we might focus on the fact that the example for *samuccaya* and *anvācaya* involve only one explicit *ca*, while the example for *itaretarayoga* and *samāhāra* involves two explicit *cas*, one for each conjoined noun. Nāgeśa, whose interpretation of Patañjali differs rather significantly from that of Kaiyaṭa, takes this as key to the difference between contexts where compounding is and is not possible, as we will see below.[23]

[22] It will be seen below that some commentators explain that a single verb is understood as repeated in a *samuccaya* instance like this.

[23] Cf. in particular the discussion of Roodbergen (1974: 182–187); however, Nāgeśa's views on *cārtha* are complex, as discussed in section 2.6 below.

While Patañjali's discussion of *anvācaya* under 2.2.29 is brief, he presents a somewhat more detailed example of *anvācaya* in discussing *A.* 3.1.11:

(8) *salopasanniyogenāyaṃ kyaṅ vidhīyate. tena yatraiva salopas tatraiva syāt. payāyate. iha na syāt. api kākaḥ śyenāyate. naiṣa doṣaḥ. pradhānaśiṣṭaḥ kyaṅ. anvācayaśiṣṭaḥ salopaḥ. yatra ca sakāraṃ paśyasīti. tad yathā. kaś cid ukto grāme bhikṣāṃ cara devadattaṃ cānayeti. sa grāme bhikṣāṃ carati. yadi devadattaṃ paśyati tam apy ānayati*. (*Mahābhāṣya*, v. 2, p. 20, ll. 21–24)

'This suffix K*ya*Ṅ is prescribed together with the injunction of elision of (a final) *s*. So (the rule could be understood as saying that) only where there is elision of *s*, just there (K*ya*Ṅ) should be used. (An example is) *payāyate* 'is like milk' [from *payas* 'milk']. (But) here it would not apply: *api kākaḥ śyenāyate* 'even a crow acts like an eagle' [with *śyenāyate* from *śyena*]. This is not a problem. (The suffix) K*ya*Ṅ is taught as the primary thing; elision of *s* is taught as supplementary [*anvācaya*], and applies (only) where you see *s*. It's like this. Someone is told, 'go beg for alms in the village, and bring Devadatta'. He begs for alms in the village; if he sees Devadatta, he also brings him.'

Patañjali's point here is that the word *ca* in *A.* 3.1.11 (*kartuḥ kyaṅ salopaś ca*) introduces the operation of *salopa* only as a subordinate operation conditional on the primary operation introduced by the rule, the addition of the suffix K*ya*Ṅ. His analogy, interestingly, involves what a modern linguistic perspective would consider clausal coordination, rather than coordination of two nominals.[24]

Patañjali does not offer much discussion of *itaretarayoga* and *samāhāra* themselves, but describes the former in terms of a sense of reflexive accompaniment, and the latter in terms of *ekatva* 'singularity (of reference)'. The former is similar to Kātyāyana's notion of *yugapadadhikaraṇavacana*, but the fact that it is specific to *itaretarayoga*, and not a defining feature of *cārtha* as a whole, means that no special rule needs to be formulated for *samāhāra dvandvas*. This is one of Patañjali's arguments against Kātyāyana's reformulation of *A.* 2.2.29: if we assumed *yugapadadhikaraṇavacaṇa,* with each member necessarily referring to at least two

[24] The coordination described by Patañjali here is essentially the same as the modern notion of 'appended coordination', where the second conjunct appears as 'an afterthought', e.g. *He got a bike for his birthday, and a book and a fountain pen.* (Quirk et al. 1985: 975–976).

entities, then every *dvandva* ought to be plural.

Overall, Patañjali clearly accepts the possibility of *cārtha* without the explicit use of the word *ca*. He does not explicitly claim that compounding is impossible where the meaning expressed by *ca* is *samuccaya* or *anvācaya*, nor indeed that *itaretarayoga* and *samāhara* always permit optional compounding.

## 2.4 Kaiyaṭa

The most important surviving complete commentary on the *Mahābhāṣya* is the *Pradīpa* of Kaiyaṭa, a Kashmiri grammarian who lived ca. 1000 CE. Although, as we have already seen, Kaiyaṭa's commentary can be very helpful in unpacking Patañjali's sometimes elliptical presentation, it is important to remember that Kaiyaṭa dates from more than a millennium after Patañjali, and so cannot be assumed to share, nor therefore to be directly elucidating, the precise perspective and understanding of his predecessor.[25]

Regarding *A.* 2.2.29, Kaiyaṭa accepts Patañjali's interpretation of *cārthe* as *cena kṛte 'rthe* and, of course, his four-member list of meanings of *ca*. However, as discussed by Roodbergen (1974: 182–183), Kaiyaṭa differs from Patañjali in giving as an example of *samuccaya* not the somewhat opaque example of *plakṣaś ca* implying *nyagrodhaś ca*, but the example *gām aśvaṃ puruṣam* etc., given in (3) above.

(9) *yadā parasparanirapekṣāḥ padārthāḥ kriyāyāṃ samuccīyante tadā samuccayaś cārthaḥ, yathā gām aśvaṃ puruṣam ityādau. vākye parasparānapekṣā gavādayo nayanakriyayā saṃbadhyante. tatra cena kṛto 'rthaḥ ity avadhāraṇam arthagrahaṇasāmarthyād āśrīyate. cenaiva yaḥ prakāśito 'rthas tatra dvandvaḥ.* (*Pradīpa*, vol. 2, p. 469a, ll. 25–28)

'When mutually unconnected word meanings are collected in relation to (one and the same) action, then the meaning of *ca* is *samuccaya* 'collection', as in *gām aśvaṃ puruṣam* etc. In this phrase the

[25]In the time intervening between Patañjali and Kaiyaṭa there were a number of important grammatical works, in particular Bhartṛhari's *Vākyapadīya*, and the *Kāśikavṛtti*. These will be brought into the discussion below.

mutually independent words *gām* etc. are connected with the action of leading. In this (case), due to the force of the use of (the word) *artha*, one assumes that *cena kṛto 'rthaḥ* functions as a restriction: a *dvandva* (is formed) to express the meaning (of conjunction) only (when) revealed specifically by (the word) *ca*.'

Roodbergen (1974: 182–183) suggests that Kaiyaṭa avoids Patañjali's example of *plakṣaś ca* for *samuccaya* on the grounds that that example necessarily involves two separate sentences (under Kaiyaṭa's interpretation, at least), and that therefore compounding would never be an option. In contrast, the *gām aśvaṃ puruṣam* example involves coordination (in a broad sense) of nouns within the same sentence, such that compounding is at least conceivable. Roodbergen emphasizes Kaiyaṭa's view as contrasting distinctly with Patañjali's, based on the assumption that the *gām aśvaṃ puruṣam* example is not, for Patañjali, an example of *samuccaya*. It is true that Patañjali does not state explicitly that this example represents *samuccaya*, but equally he does not say that it does not, and since Patañjali gives the example expressly as an example of *cārtha* being expressed without the presence of the word *ca*, it is only logical that the example should, for Patañjali, involve one of the meanings of *ca*; *samuccaya* would seem to be the obvious choice.

There is, therefore, very little difference between Patañjali's and Kaiyaṭa's views. Both accept that *dvandva* compounding is only licensed where the meaning of *ca* is expressed by the word *ca* itself. Both also agree that *dvandva* compounding is not possible in the example *gām aśvaṃ puruṣam* (3) precisely because the sense of coordination is not there expressed by the word *ca*. Patañjali does not explicitly give the label *samuccaya* to the example *gām aśvaṃ puruṣam* which lacks *ca*, while Kaiyaṭa does; on the other hand, Kaiyaṭa does not explicitly exemplify *samuccaya* involving a single *ca*, as Patañjali does, but he does imply that it is possible.

Kaiyaṭa's discussion of *anvācaya* focuses on the presence of a single *ca*, connected with the differing syntactic status of the second coordinated item; in contrasting this with the *gām aśvaṃ puruṣam* example of *samuccaya*, Kaiyaṭa appears to draw a distinction in terms of the minimum number of *cas* required for *samuccaya* (0) and *anvācaya* (1); at the same time, this may be read as fully consistent with Patañjali's view that ordinarily, at least, both *samuccaya* and *anvācaya* involve a single *ca*, with the difference between them based on a secondary understanding of subordination in the latter case.

(10) *yadā tv ekasya prādhānyaṃ tadā itarasya tadanurodhena kriyāsaṃbandhād bhinnakakṣyatayā nāsti paraspareṇa sāmarthyam ity anvācaye samāsābhāvaḥ. pradhānābhidhāyi padaṃ cārthe na vartate, api tv apradhānam evety anekasya padasya cārthavṛttitvābhāvād dvandvābhāvaḥ*. (*Pradīpa*, vol. 2, p. 469a, ll. 32–36)

'But when one (of the meanings) is predominant, then since the other item is connected with the (same) action through its subordination to that (predominant meaning), there is no mutual semantic connection due to their differing status. Therefore, in *anvācaya* there is no compounding. The word denoting the predominant (meaning) does not function in relation to the meaning of *ca*, but only the (word denoting the) subordinate (meaning) does, and so since it is not the case that more than one word functions in relation to the meaning of *ca*, there is no (formation of a) *dvandva*.'

Kaiyaṭa clearly adopts the view that compounding only takes place with the *itaretarayoga* and *samāhāra* meanings of *ca*. In distinguishing these meanings from *samuccaya* and *anvācaya*, Kaiyaṭa focuses on the existence of a mutual semantic connection, a mutual expectancy, between the coordinated items:

(11) *itaretarayogaḥ parasparāpekṣāṇām anekeṣām ekasminn arthe samanvaye sati bhavatīti parasparasahitatā caśabdenaiva dyotyata iti tatra samāso bhavati*. ***samāhāre 'pīti***. *tatrāpi parasparasahitatāvagamāt*. (*Pradīpa*, vol. 2, p. 469a, l. 36 – p. 469b, l. 2)

'*Itaretarayoga* occurs where there is syntactic connection of multiple mutually dependent/expectant (meanings), with one (and the same) meaning. Therefore, mutual connection is manifested by the word *ca* itself, and so here (i.e. in *itaretarayoga*) a compound is formed. 'In *samāhāra* also…': there also (a compound is formed) due to the understanding of mutual connection.'

Roodbergen (1974) adds a note on this passage that *ca* should be used after each constituent to indicate the mutual connection; while this draws out a clear contrast with *anvācaya*, it is not explicitly stated by Kaiyaṭa.

Like Patañjali, Kaiyaṭa does not discuss in any detail the difference between *itaretarayoga* and *samāhāra*. In fact, for both he assumes the sense of *parasparasahitatā* 'state of mutual accompaniment', which would seem to reflect the mutual accompaniment (in the double use of ◦*sahāya* 'accompanied by') of Patañjali's account of (specifically) *itaretarayoga*. In the ensuing discussion, Kaiyaṭa expands on Patañjali's point that the *ekatva* of *samāhāra dvandvas* does not

need special explanation on Patañjali's own interpretation of *A.* 2.2.29, which it would on Kātyāyana's interpretation.

To summarize Kaiyaṭa's view, then, we can say for certain that *samuccaya* can involve coordination without an explicit *ca*, *anvācaya* involves only one *ca* (or fewer *cas* than coordinated elements) and there is lack of equality in the relationship between the elements. In the case of *itaretarayoga* and *samāhāra*, these necessarily involve one *ca* for each coordinated element, and also there is equality in the relationship between the elements in both of these senses. The difference between *itaretarayoga* and *samāhāra* is semantic.

## 2.5 Bhaṭṭoji Dīkṣita

Bhaṭṭoji Dīkṣita (ca. 1600 CE), one of the most influential and prolific grammarians of the early modern period, and one who played an important role in revitalizing the orthodox Pāṇinian tradition at a time when non-Pāṇinian traditions dominated the scene, treated our topic in his *Śabdakaustubha*, the later (*Vaiyākaraṇa*)*siddhāntakaumudī*, a re-ordering of and commentary on the *Aṣṭādhyāyī*, and the *Prauḍhamanoramā*, an autocommentary on the *Siddhāntakaumudī*. The *Siddhāntakaumudī* on 2.2.29 is relatively short:[26]

(12) *anekaṃ subantaṃ cārthe vartamānaṃ vā samasyate, sa dvandvaḥ. samuccayānvācayetaretara-yogasamāhārāś cārthāḥ. parasparanirapekṣasyānekasyaikasminn anvayaḥ samuccayaḥ. anyatarasyānuṣaṅgikatve 'nvācayaḥ. militānām anvaya itaretarayogaḥ. samūhaḥ samāhāraḥ. tatreśvaraṃ guruṃ ca bhajasva iti samuccaye, bhikṣām aṭa gāṃ cānaya ity anvācaye ca na samāso 'sāmarthyāt. dhavakhadirau. saṃjñāparibhāṣam.* (*Siddhāntakaumudī*, vol. 2, p. 183–185)

'Multiple (*aneka*) forms ending in a case suffix, when used to express the meaning of '*ca'*, can optionally be compounded, and that is a *dvandva*. The meanings of '*ca'* are *samuccaya*, *anvācaya*, *itaretarayoga*, and *samāhāra*. (When there is) a connection of multiple forms, which lack mutual

[26] The following quote omits the final sentence, which is not relevant for our purposes. Most of the text in the *Siddhāntakaumudī* is identical to, or a minor rephrasing of, the equivalent portion of the *Śabdakaustubha*; the only significant difference is that in that earlier work, Bhaṭṭoji retains the *gām aśvam puruṣam* example for *samuccaya*.

expectancy, with a single (*ekasmin*) item (viz. a verb), there is *samuccaya*.[27] When one or the other (of these forms) is consequentially dependent there is an *anvācaya*. (When there is) a connection (with a verb) of forms that are joined together (*milita*), there is *itaretarayoga*. A collection (*samūha*) is a *samāhāra*. Among these, in a *samuccaya*, such as '*īśvaraṃ guruṃ ca bhajasva*' (be devoted to god and (your) teacher), and an *anvācaya*, such as, '*bhikṣām aṭa gāṃ cānaya*' (do the begging round and bring the cow), there is no compounding, because of the lack of *sāmarthya* (the state of having inter-connected meanings). Examples (of *dvandva* compounds) are '*dhavakhadirau*' (a *dhava* (tree) and a *khadira* (tree)), and '*saṃjñāparibhāṣam*' (a collection of technical names and rules of interpretation).'

The term *samuccaya* is defined with reference to a connection of two or more words, themselves lacking mutual expectancy, with the same item (viz. verb).[28] Bhaṭṭoji's example of *samuccaya* here differs from the *gām aśvaṃ puruṣam* example adopted for *samuccaya* by Kaiyaṭa (and by Bhaṭṭoji himself in his earlier *Śabdakaustubha*) in involving an explicit *ca*, and also differs from Patañjali's example for *samuccaya* (at least, Kaiyaṭa's explication of it) in very clearly involving coordination of two nouns within what we would call a single sentence:[29]

(13) *īśvaraṃ guruṃ ca bhajasva*.

'Revere god and (your) teacher.'

In accordance with Patañjali's example of *samuccaya*, there is only one *ca* functioning to coordinate two items. Bhaṭṭoji does not spell out why there is no compounding in an example such

[27] Following Nāgeśa and Vāsudeva Dīkṣita, author of the *Bālamanoramā* commentary on the *Siddhāntakaumudī*, here and below the words *yatra* and *tatra* need to be supplied: *samuccaya* itself is not an *avyaya*.

[28] In Bhaṭṭoji's examples, and much of the interpretation of *samuccaya*, the item in question is a verb. However, this is not explicit in the definition, as will be seen below in the discussion of Nāgeśa's views.

[29] According to Vāsudeva Dīkṣita there is an understanding of two sentences here (*evaṃ ca īśvaraṃ ca bhajasva guruṃ ca bhajasva iti vākyadvayam paryavasyati*), resulting from the use of a single *ca*.

as this, but it seems likely that the lack of mutual dependency implied by the use of only one *ca* is crucial; this is the understanding of Vāsudeva Dīkṣita in his *Bālamanoramā*.[30]

Bhaṭṭoji then defines *anvācaya* in a similar way to Patañjali: it shares the essential features of *samuccaya*, with the difference that one of the coordinated elements is consequentially dependent (*anuṣaṅgin*). Bhaṭṭoji's example for *anvācaya* derives from that given by Patañjali on the discussion of *A*. 3.1.11:

(14) *bho baṭo bhikṣām aṭa gāṃ ca ānaya*.

'O boy, go collect alms, and bring a cow.'

While Kaiyaṭa focused on explicating Patañjali's highly oblique example of *anvācaya* as given in the discussion of *A.* 2.2.29, the example in (14) replaces that example in the discussion of *A.* 2.2.29 already in Jinendrabuddhi's *Nyāsa* commentary (ca. 800 CE) on the *Kāśikāvṛtti*, and it is that tradition of exemplification which Bhaṭṭoji follows here.

As discussed above, this example contrasts with Patañjali's example of *anvācaya* under 2.2.29, and indeed with all other earlier examples of *cārtha*, in that here the coordination explicitly involves two different verbs. Although Bhaṭṭoji describes the difference between *samuccaya* and *anvācaya* in terms of the subordinate nature of one of the coordinated elements, the real difference here, at least as shown in this example, must be that in the case of *anvācaya* the two coordinated elements are connected with different verbs, whereas with *samuccaya* it was expressly stated that both elements are connected with the same verb (even if that verb is understood as repeated), forming two separate sentences.

However, it seems that Bhaṭṭoji still understands this example as coordination of nominals, or at least that the *ca* is following, and therefore directly modifying and expressing coordination in relation to, the noun *gām*.[31] That this noun has the property of *ānuṣaṅgikatva* 'consequential dependence' refers not to a direct relation between the two nouns, but to the fact that *gām* is connected with a different, semantically subordinate, verb. The coordination, however, may still

[30] Specifically, the use of *ca* following 'teacher' indicates that 'teacher' is dependent on 'god', but 'god' is not dependent on 'teacher'.

[31] It is important to remember that the whole discussion is framed in the context of compounding, which by default involves nominals.

be understood in terms of coordination of nominals. And since the subordination of *gām* in this example is based on its relation to a semantically subordinate verb, this does not conflict with the claim that there is subordination in *samuccaya*: there, it is a subordination of one noun to another.

Bhaṭṭoji defines *itaretarayoga* as involving a connection (*anvaya*) (with a verb) of a set of nouns which are *milita* 'united, joined together'.[32] The implication is that, as with *samuccaya*, there is a connection of multiple nouns with the same verb; in contrast with *samuccaya*, the *milita* nature of these nouns implies that they are mutually expectant/dependent, *parasparāpekṣita*. This is stated explicitly by Vāsudeva Dīkṣita, who on this basis defines the *itaretarayoga* meaning of *ca* as *parasparasāhacarya* 'the condition of being mutually accompanying', a term which recalls the *parasparasahitatā* of Kaiyaṭa.

As an example of *itaretarayoga*, Bhaṭṭoji gives only the compound *dhava-khadirau*, without further discussion. Vāsudeva Dīkṣita offers also the analytic equivalent, *dhavaś ca khadiraś ca*, and explicitly states that it is the use of two *ca*s which indicates the *parasparasāhitya*.

In the *Siddhāntakaumudī,* Bhaṭṭoji likewise says very little about *samāhāra*, defining it merely as *samūha* 'collection', and giving the example *saṃjñāparibhāṣam* 'a collection of technical names and principles of interpretation'. The *Bālamanoramā* attributes *parasparasāhitya* to both *itaretarayoga* and *samāhāra*, and specifies the difference between the two in terms of differing qualifier-qualificand relations: with *itaretarayoga* the *parasparasāhitya* is a qualifier of each of the items coordinated, whereas with *samāhāra* the items are qualifiers of the collection constituted by the items (the *samūha* ≈ *sāhitya*) and it is the collection itself that is connected with the verb by means of the collected items.[33] This understanding reflects Bhaṭṭoji's more extensive discussion in his *Prauḍhamanoramā* (vol. 2, p. 951).[34]

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[32] As in the case of *samuccaya*, mentioned above, Bhaṭṭoji's definition is less explicit, referring simply to a connection with multiple items joined together.

[33] *tatretaretarayogadvandve sāhityaṃ dravyaviśeṣaṇam, yathā dhavakhadirau chinddhīti, samuditāv iti gamyate. samāhāradvandve tu samūho viśeṣyam, yathā saṃjñāparibhāṣam iti. tayoḥ samūha iti gamyate. saṃjñāparibhāṣam adhīte ityādau samūhasya kriyānvayas tu samūhidvārā bodhya ity alam* (*Bālamanoramā*, vol. 2, p. 184).

[34] As noted below, the idea of *asāmarthya* 'lack of semantic connectedness' as the reason for lack of compounding with *samuccaya* and *anvācaya* appears earlier than Bhaṭṭoji, in the *Kāśikāvṛtti*.

Altogether, then, Bhaṭṭoji maintains the Pāṇinian line quite strictly but with perhaps greater clarity, particularly in the examples he offers. He also emphasizes the semantic connection between conjoined elements in the case of *itaretarayoga* and *samāhāra*, attempting to articulate this quite precisely.

## 2.6 Nāgeśabhaṭṭa

Besides Bhaṭṭoji Dīkṣita, the two other great grammarians of the early modern period were Kauṇḍabhaṭṭa, Bhaṭṭoji's nephew, and Nāgeśabhaṭṭa, often regarded as the final authority in the Pāṇinian tradition, who was the pupil of Bhaṭṭoji's grandson Hari Dīkṣita. Nāgeśa addresses our question in a number of works, including his *Uddyota* commentary on the *Mahābhāṣya* and *Pradīpa*, his *Bṛhacchabdenduśekhara* (BŚŚ) and *Laghuśabdenduśekhara* (LŚŚ) commentaries on the *Siddhāntakaumudī*, and in the *Vaiyākaraṇasiddhāntamañjūṣā* (VSM) and *Laghumañjūṣā* (LM).[35]

In the *Bṛhacchabdenduśekhara* Nāgeśa cites, with apparent approval, the claim by the older grammatical authorities (the '*vṛddhas*') that the meaning of *ca* is *sāhitya,* 'connection', and that it is common to all of the four types discussed by Patañjali.[36] He then proceeds to describe the difference between the two types of permitted *dvandvas*, the *itaretarayoga* and the *samāhāra*, in reference to the distinct ways we perceive the *samūha* (aggregate) in these two compounds. In an *itaretarayoga* compound, we perceive a *samūha*, but only one in which the division of members is clearly evident, and as a consequence, the referent for which the compound is used (i.e., its '*pravṛttinimitta*') is identified as just the pairs of characteristic features that occur in each member.[37] This is because the *samūha* appears, but not at all as something in addition (i.e.,

[35] Kauṇḍabhaṭṭa treats the question of *dvandva* compounding in the *samāsaśaktinirṇaya* section of his *Vaiyākaraṇabhūṣaṇa* (cf. Biswal 1995), where his focus is not on the meaning of *ca* per se, but on broader questions of how synthetic or analytic the meanings of compounds are (*ekārthībhāva* vs. *vyapekṣā*).

[36] *arthacatuṣṭayānusyūtaṃ sāhityaṃ caśabdārtha iti vṛddhāḥ* (BŚŚ, p. 1141).

[37] These pairs of features identify, for each member of the compound, the distinct individual item that the word denotes (1), and also the *samūha* (2).

different and distinct) to them.[38] In a *samāhāra*, on the other hand, the *samūha* appears, but just as something in addition, and consequently the referent is identified as just the condition of being a *samūha* that occurs there (in each member).[39]

Nāgeśa agrees with his predecessors that in the case of *samuccaya* and *anvācaya* there is no compounding because not all of the words operate in the range of the meaning of *ca* (cf. ex. 9), and so *ekārthībhāva* 'the condition of becoming a single meaning', and hence *sāmarthya* 'the condition of having a connected meaning', a requirement of compounding, is absent.[40] He then adds a second reason, namely, that in the case of those two types of conjunction the meaning of *ca* is (just) a qualifier, and so in the example for *samuccaya* given above (ex. 13) we understand *samuccitaṃ gurum* '(He reveres god and also) the 'added' teacher'. In contrast, he points out that just as in a *bahuvrihi* compound the meaning of another word is understood to be predominant

[38] The consequence of this analysis is that in determining the grammatical number for the compound the *samūha* itself need not be counted. Cf. Bhairava Miśra's *Candrakalā* commentary on the LŚŚ, p. 127: *ekaikapadārthe samūharūpatvārope 'pi dhavakhadirau ity atra na bahuvacanāpattiḥ. atiriktasya padārthasya tatra bhānābhāvād iti pratyekavṛttidharmadvayam pravṛttinimittam ity uktam* 'even when there is superimposition of the condition of being a *samūha* onto each of the word meanings, there is no unwanted occurrence of the plural in *dhavakhadirau*, because an additional (i.e., different and distinct) word meaning (item) does not appear there. And so, he says the *pravṛttinimitta* is the pair of features that occur in each (member)'.

[39] *tatretaretarayoge udbhūtāvayavabhedasyaiva samūhasya pratītyā, pratyekavṛttidharmadvayam eva pravṛttinimittam iti phalati. samūhasya tadanatireneṇaiva bhānāt. samāhāre tu atiriktatvenaiva samūhasya bhānāt tadvṛttisamāhāratvam eva pravṛttinimittam iti tadbhedo bodhya iti dik* (BŚŚ, p. 1141). Cf. LŚŚ, p. 127, where Nāgeśa glosses *militānām* in Bhaṭṭoji's definition (cited in 12 above) as *parasparāpekṣāṇām udbhūtāvayavabhedasamūharūpānām* 'words that have mutual expectancy for each other and that (each) have the form of a *samūha* in which the division of the members is evident.'

[40] Cf. the remarks by Kaiyaṭa above (ex. 10). On the basis of *A.* 2.1.1 *samarthaḥ padavidhiḥ*, compounds can be formed only when the condition of *sāmarthya* occurs, and *ekārthībhāva* is one of the accepted definitions of *sāmarthya*.

(i.e., the qualified item),[41] so too in a *dvandva* compound the meaning of *ca* is understood to be predominant.[42] Therefore, Bhaṭṭoji and Vāsudeva Dīkṣita are wrong to say that in an *itaretarayoga* compound *sāhitya* is a qualifier. It is because the meaning of *ca* is expressed by the *dvandva* itself that the word is not used.[43]

With regard to Bhaṭṭoji's definition of *samuccaya*, and his formulation that there occurs there a connection of multiple forms, which lack mutual expectancy, with a single item (ex. 12),[44] Nāgeśa includes in its range of application not just nouns (as exemplified by Bhaṭṭoji) but verbs as well. He says that the connection can be understood 'either through the condition of being the qualified item or through the condition of being the qualifying item'.[45] This brief formulation is perhaps not immediately clear, but he states that the first of these covers instances where verbs are conjoined (*kriyāsamuccaya*), exemplifying these with *devadattaḥ pacati hasati ca* 'Devadatta cooks and laughs'.[46] He says that the examples for the second are those he has already given for *samuccaya*.[47]

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[41] *A*. 2.2.24 *anekam anyapadārthe*.

[42] *A*. 2.2.29 *cārthe dvandvaḥ*.

[43] *atrādyayor na samāsaḥ. anekasubantānāṃ cārthe vṛttyabhāvena ekārthībhāvarūpasāmarthyābhāvāt. kiṃ ca tatra cārtho viśeṣaṇam. 'samuccitaṃ gurum' iti bodhaḥ. samāsas tv anyapadārthaprādhānye iva, cārthaprādhānya eva. ito 'pītaretarayoge sāhityaṃ viśeṣaṇam ity asaṃgatam eva. cārthasya dvandvenoktatvāc caśabdasyāprayogaḥ* (BŚŚ, p. 1141). Nāgeśa's disagreement here would also apply to similar remarks by Kauṇḍabhaṭṭa in the *Vaiyākaraṇasiddhāntabhūṣaṇa* (Part III, p. 171).

[44] *Parasparanirapekṣasyānekasyaikasminn anvayaḥ samuccayaḥ.*

[45] BŚŚ, p. 1139; LM, p. 1499; LŚŚ, p. 126: *anvayo viśeṣyatayā viśeṣaṇatayā vā*.

[46] BŚŚ, p. 1139. Bhairava Miśra offers some clarity to Nāgeśa's text in his *Candrakalā* commentary on the LŚŚ, p. 126. Commenting on Nāgeśa's identification of *pacati hasati ca* as a *kriyāsamuccaya*, he says: *atra caśabdena kriyāgataṃ samuccitatvaṃ dyotyate, kriyāyāś ca viśeṣyatayābhāvasyānubhavasiddhatvād iti bhāvaḥ* 'Here the word *ca* indicates (makes manifest) the condition of being added together (*samuccitatva*) that occurs in the actions, because we experience the absence of the action as being a qualified item. This is the sense.'

[47] LM, p. 1499; LŚŚ, p. 126. The examples for *samuccaya* that Nāgeśa refers to here include

Regarding *anvācaya*, Nāgeśa says that it generally occurs when there is a connection of the *ca* with verbs.[48] He points out though that when two *cas* are used, even when they are connected with verbs, as in *pacanti ca hasanti ca* 'they cook and laugh', there *parasparasāhitya* 'the state of mutual accompaniment' is understood, and consequently there is no perception that either is (merely) dependent (*ānuṣaṅgika*).[49]

With reference to the expression of number in a verb that occurs in a phrase with one or more *cas*, Nāgeśa gives *caitro maitraś ca pacati* 'Caitra and Maitra cook', to exemplify the invariable singular number when there is one *ca*, and *caitraś ca maitraś ca pacataḥ*, to exemplify the invariable dual when there are two.[50] The use of the dual here appears to confirm the equality in the way the two agents are connected with the action that is suggested by the two uses of *ca*. This in turn matches the assertion concerning the previous example, *pacanti ca hasanti ca,* that because there are two *cas* there is no subordination or dependence on either side.

More explicitly than earlier authors, Nāgeśa relates compound analysis to the number of *cas* that appear in the equivalent or preliminary form of a phrase. He points out that in a *samuccaya* conjunction, where a single *ca* is used, the meaning of the noun joined with the *ca* is understood as connected with the meaning of another word, but the relation is not symmetrical. By contrast, in an *itaretarayoga* the meanings of both (/all) words are connected with each other, resulting in a

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*īśvaraṃ guruṃ ca bhajasva* (exx. 12, 13). Bhairava Miśra (op. cit.) explains that in these instances the suffixes added to the conjoined nominal stems become qualifiers of the action expressed by the verb.

[48] *prāyeṇā 'nvācyaś casya kriyānvaye bhavati* (LM, p. 1500).

[49] *yatra tu kriyānvayy api cadvayaṃ yathā pacanti ca hasanti ce 'tyādau tatra parasparasāhityāvagamān nā 'nuṣaṅgikatvapratītiḥ* (ibid.).

[50] LM, pp. 1499, 1500; cf. Haridīkṣita's *Bṛhacchabdaratna* commentary on the *Prauḍhamanoramā*, p. 950. In the LM, p. 1499, Nāgeśa says that when there is one *ca* the verb suffix is regularly only singular, because only the item without the *ca* is connected (with the verb), and the item with *ca* brings about the perception of just a *samūha* in which the division of items is not evident (*caitro maitraś ca pacatī 'tyādau nityam ekavacanāntākhyātaprayoga eva, carahitasya kevalasyai 'vā 'nvayāt. casahitenā 'py anudbhūtāvayavabhedasamūhasyai 'va pratīteḥ*).

mutual, symmetrical, connection. Accordingly, they are each attended by their own *cas*:

(15) *atredaṃ bodhyam: samuccaye caśabdena svasamabhivyāhṛtapadārtha itarasāhityaṃ budhyate, itarasmiṃs tu na. ata evetaretarayogād bhedaḥ. ata eva tatra cadvayaprayogaḥ, atraikasyaiva* [...] *samuccaye casamabhivyāhṛtasya kiṃcid aprādhānyaṃ pratīyate.* (*Bṛhacchabdenduśekhara*, vol. 2, pp. 1139–1140)

'Here this is to be understood: in a *samuccaya* there is understood through the word *ca*, in the meaning of the word spoken alongside it (the word *ca*), a connection with the other (word), but in (the meaning of) the other word (itself) no (such connection is understood). For this reason (*samuccaya* is) different from *itaretarayoga*. (And) for this reason there (i.e. in *itaretarayoga*) two *cas* are used, here (i.e. in *samuccaya*) just one (*ca* is used) [...] In *samuccaya* a certain non-predominance is understood in the word spoken alongside (the single *ca*).'

Nāgeśa's observations on the use and number of *cas* in instances of certain types of conjunction are certainly significant, but he himself cautions us that they do not always provide a reliable diagnostic for understanding meanings. He points out that sometimes, when the speaker's intention is recognized, *parasparasāhitya* 'state of mutual accompaniment' (cf. ex. 11) can be understood even when just one *ca* is used, as in '*sāṅkāśyakānām pāṭaliputrakāṇām ca pāṭaliputrakā abhirūpatamāḥ*' (the residents of Pāṭaliputra are the most handsome of the residents of Sāṅkāśya and the residents of Pāṭaliputra).[51] This particular example, discussed in the *Bhāṣya* on A. 5.3.57,[52] illustrates a case where the expression of *samudāya* by even a singular use of *ca* allows for the use of the genitive case (on the nouns) and the superlative suffix *tama* (on the adjective) to denote specification, the sense here being, 'the most handsome of'.[53] Likewise,

[51] LM, p. 1500–1501; VSM, p. 200.

[52] *dvivacanavibhajyopapade tarabīyasunau.*

[53] *A*. 5.3.55 and 2.3.41. Without the understanding of *samudāya*, the likely expression here would be *sāṅkāśyakebhyaḥ pāṭaliputrakā abhirūpatarāḥ* 'the residents of Pāṭaliputra are more handsome than the residents of Sāṅkāśya', where the ablative case and the comparative suffix *tara* would be

Nāgeśa says that *parasparasāhitya* can also be understood when no *ca* is used, as in *ahar ahar nayamāno gām* etc. (ex. 3), where *sāhitya* is expressed by the *āmreḍita* formation *ahar ahar*.[54] Further, sometimes it is not understood even when two *cas* are used, when these are used merely for the sake of sentence embellishment (*vākyālaṃkāra*), as in *yad agnaye ca prajāpatye ca* '(In that he offers) to Agni and to Prajāpati (in the morning)'. There, through the wording of the *mantra*, the condition of being the deity for the rite is understood to exist in each of the two figures, Agni and Prajāpati, separately.[55] By way of contrast (at least for understanding expressions in ritual texts), Nāgeśa cites the *dvandva agnīṣomābhyām* '(He offers to) Agni and Soma', where the deity is understood to exist in the *samudāya* of Agni and Soma.[56]

Like Bhaṭṭoji, Nāgeśa emphasizes the importance of semantic connection in understanding the meaning of *ca*, but rather differently from Bhaṭṭoji, he focuses on *sāhitya* as a common property underlying all four meanings of *ca*, both those that license compounding and those that do not. He also shows how these meanings occur outside the range of possible compounding, i.e., in the range of multiple verbs. His analysis there confirms that multiple *cas* indicate parity of meanings. This

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used, based on *A*. 5.3.57 and 2.3.42.

[54] LM and *Kalā*, p. 1501; BŚŚ, p. 1139. In rules starting with *A*. 8.1.1 *sarvasya dve*, Pāṇini teaches the repetition of entire *padas*. In 8.1.2 he gives the second of these the name *āmreḍita*. When an action occurs 'every day' to a group of objects, it makes clear their *samuccaya*. In the BŚŚ, Nāgeśa says that the *sāhitya* is recognized as mutual, since there is no criterion for deciding otherwise (*vinigamanāvirahāt parasparam eva budhyate*).

[55] *kva cit tu cadvayasattve 'pi na tatpratītiḥ, vākyālaṅkāramātrārthatvāt tayoḥ, yathā yad agnaye ca prajāpataye ce 'tyādau. mantraliṅgena tatra prayekaṃ devatātvasyai 'va pratīteḥ* (LM, p. 1501). The quotation appears to refer to the two offerings in the evening performance of *agnihotra* sacrifice, the first of these to Agni and the second to Prajāpati. A fuller form, as often quoted in Mīmāṃsā literature, is *yad agnaye ca prajāpataye ca sāyaṃ juhoti.* Cf. VSM, p. 200, and LŚŚ, p. 124. Neither the VSM nor the LŚŚ refers to this sentence as involving a sentence embellishment.

[56] LŚŚ, p. 124. This reference of this particular quotation is not clear, but it may concern the third of the principal offerings that take place at the full-moon half of the *darśapūrṇamāsa* (New- and Full-moon) sacrifice. The status of Agni and Soma as a joint deity is confirmed in Mīmāṃsā literature.

is a required criterion for successful *dvandva* compounding, as is exemplified in the case of *itaretarayoga* and *samāhāra* compounds, where the grammarians analyze meanings using multiple *cas*. It is also seen to be absent when *samuccaya* and *anvācaya* meanings are expressed, where only a single *ca* is given in formal analysis, and therefore an imparity prevents compound formation. However, Nāgeśa cautions us that in real usage the occurrences of *ca* are not always a clear indication of meaning.[57]

## 2.7 Summary

We see in the Pāṇinian tradition an increasing precision in the grammarians' attempts to define

[57] It may be interesting to quote a passage from Śivarāmendra Sarasvatī's *Ratnaprakāśa* commentary on the *Pradīpa*. The precise chronology is uncertain, but it is clear that Nāgeśa knew this work. In this particular passage the author recognizes a pattern in Patañjali's use of *cas*, but limits the conclusions that can be drawn. Like Nāgeśa, he refers to correct use of number in verbs, supplying a brief explanation, which Nāgeśa omits. On Kaiyaṭa's comments directed to Patañjali's '*plakṣaś ca nyagrodhaś ca*' (ex. 6) he says: *yady api bhāṣyeṇā 'nene 'daṃ sūcitam – itaretarayogasamāhārodāharaṇavākye pratipadaṃ cakāra uccaraṇīyaḥ, anyatra tv ekatrai 'vo 'ccāraṇīya iti, tathā 'pi nā 'yaṃ niyamaḥ, sarvatrai 'kacakāreṇā 'pi nirvāhāt. ayaṃ tu niyamo vartate vigrahavākye 'ghaṭaś ca paṭaś ca tiṣṭhata' ity eva vaktavyam, na tu 'tiṣṭhatī' 'ti, tiṅantenai 'kavacanānteno 'bhayor ghaṭapaṭayor yugapad anvāyābhāvāt. samuccayānvācayayos tu ghaṭaḥ paṭaś ca tiṣṭhatī 'ty eva vaktavyam. na tu tiṣṭhataḥ iti. dvivacanāntenai 'kaikasya ghaṭāder anvayāsaṃbhavāt* 'Even though this passage of the *Bhāṣya* has indicated the following, 'In phrases given to exemplify *itaretara* and *samāhāra*, a *ca* should be uttered at (i.e., after) each word, but elsewhere it should be uttered at just one place', nevertheless that is not a fixed restriction, because it is achieved in all instances by just a single *ca*. But this restriction does operate, (i.e.,) in the analytic phrase (used to state that a pot and a cloth are present) one must state, 'both the pot and the cloth are present (*ghaṭaś ca paṭaś ca tiṣṭhataḥ*)', and not 'is present' (*tiṣṭhati*), because a finite verb in the singular is not connected at the same time with both the pot and the cloth. But in the case of a *samuccaya* and an *anvācaya*, one must only state 'the pot, and also the cloth, is present' (*ghaṭaḥ paṭaś ca tiṣṭhati*), and not 'are present' (*tiṣṭhataḥ*), because a verb ending in the dual suffix cannot be connected with the pot etc. one by one.'

the meanings of *ca* specified by Patañjali, but also interesting variation in the details. As for Patañjali himself, his brief treatment permits few conclusions to be drawn. It is clear that Patañjali understands *cārtha* to be possible in the absence of the word *ca* itself, and that compounding is dependent on the presence, at some level of analysis, of the word *ca*. Kaiyaṭa draws out the distinctions between the four meanings of *ca* in more detail, based on both syntactic (the number of *cas*) and semantic factors. Bhaṭṭoji and Nāgeśa drill down further into the semantic features of and differences between the meanings of *ca.*

## 3 The meaning of coordination in the non-Pāṇinian traditions

In comparison with the Pāṇinian school, the treatment of the meaning of *ca* in the non-Pāṇinian traditions of *vyākaraṇa* is almost entirely unstudied. Here we present a brief discussion of the treatment of this question in two of the earliest and most important non-Pāṇinian traditions, the *Cāndra* and *Kātantra* schools.

### 3.1 The *Cāndra* school on *ca*

There is, in fact, very little to say on the treatment of *cārtha* in the printed texts of the *Cāndra* tradition,[58] but what little there is shares concerns with the issues discussed by the authors treated above.

The foundational texts of the *Cāndra* school are the *Cāndrasūtra*, composed by Candragomin perhaps ca. 450 CE, and its commentary the *Cāndravṛtti*, by Dharmadāsa (ca. 500 CE).[59] The *Cāndrasūtra* teaches *dvandva* compounding by its rule 2.2.48 *cārthe*; adopting the crucial definitional part of *A.* 2.2.29 but, in line with Candragomin's programme, eschewing the use of the technical term *dvandva* itself.[60] The *Cāndravṛtti* offers the following commentary:

[58] Hence our treating it before treating the chronologically prior *Kātantra* tradition.

[59] On the dating of the *Cāndravṛtti* see Oberlies (1996), and on the question of its authorship see Vergiani (2011: 163–165).

[60] The *Cāndrasūtra* is famously a 'technical term-less grammar', as first acknowledged by Dharmadāsa: *candropajñam asaṃjñakaṃ vyākaraṇam* (*Cāndravṛtti* 2.2.68).

(16) *cārthe.* (*Cāndrasūtra* 2.2.48)

*anekaṃ subantaṃ cārtha ekārthaṃ vā bhavati. cārthā bahavaḥ. samuccayo 'nvācaya itaretarayogaḥ samāhāraś ceti. tatretaretarayoge samāhāre caikārthībhāvaḥ saṃbhavati, na samuccaye, nāpy anvācaye.* (*Cāndravṛtti*, p. 128, ll. 5–9)

'When the meaning of *ca* is to be expressed (a compound is formed). When the meaning of *ca* is to be expressed, multiple items ending in case suffixes (*sUP*) optionally compound. The meanings of *ca* (are) many: *samuccaya*, *anvācaya*, *itaretarayoga*, and *samāhāra*. Among these, compounding is possible under *itaretarayoga* and *samāhāra*, (but) not under *samuccaya* or *anvācaya*.'

The obvious and, in the Pāṇinian tradition, widely-discussed problem with defining four meanings of *ca* but limiting compounding to only two of those meanings – namely, that the phrasing of *A.* 2.2.29 then appears insufficiently precise – is glossed over by the *Cāndravṛtti*, which recognizes the need to specify the restriction, but simply stipulates it without discussion or justification.[61]

The *Kāśikāvṛtti* (ca. 7th century CE), the earliest extant and most important complete commentary on the *Aṣṭādhyāyī*, is known to share many similarities with the *Cāndravṛtti*, suggesting either that the former was influenced by the latter, or that both drew on a third, now lost, common source.[62] In the case of *A.* 2.2.29, the wording of the *Kāśikā* echoes that of the *Cāndravṛtti* given in (16), but with one meaningful addition: the lack of compounding in *samuccaya* and *anvācaya* is justified with reference to *asāmarthya* 'lack of semantic connection', a principle which, as we have seen, continues through into the later Pāṇinian tradition.

(17) *anekaṃ subantaṃ cārthe vartamānaṃ samasyate, dvandvasaṃjñaś ca samāso bhavati.*

[61] This is, most likely, the earliest statement we have that there can be no compounding with *samuccaya* and *anvācaya*; recall that Patañjali never explicitly ruled out the possibility. It may be possible that the *Cāndra* school's choice of the terms *ekārtha* and *ekārthībhāva* to designate a compound and the operation of compounding in itself shows that *dvandvas*, which require *sāmarthya*, can only occur with *itaretara* and *samāhāra* meanings.

[62] For discussion and earlier references see Aussant (2009).

*samuccayānvācayetaretarayogasamāhārāś cārthāḥ. tatra samuccayānvācayayor asāmarthyān nāsti samāsaḥ. itaretarayoge samāhāre ca samāso vidhīyate.* (*Kāśikā*, vol. 2, pp. 138, 140)

'Multiple items ending in case suffixes and expressing the meaning of *ca* compound, and the compound has the technical term *dvandva.* The meanings of *ca* (are) *samuccaya*, *anvācaya*, *itaretarayoga*, and *samāhāra*. Among these, there is no compounding in the sense of *samuccaya* and *anvācaya* due to the absence of semantic connection (between the compound members), whereas compounding is taught in the sense of *itaretarayoga* and *samāhāra*.'

## 3.2 Kātantra

The *Kātantra* school of grammar is the oldest surviving school of *vyākaraṇa* besides the Pāṇinian school, and one of the most popular and influential (see Shen 2018). The root text of the tradition is the *Kātantrasūtra*, a.k.a. *Kalāpasūtra*, authored by Śarvavarman and possibly datable to the first century CE. The *Kātantrasūtra* was intended as a more practical and accessible alternative to the *Aṣṭādhyāyī*; so, it contains only around 1,400 *sūtras* compared with the *Aṣṭādhyāyī*'s roughly 4,000. The *Kātantrasūtra* is the subject of more than fifty commentaries or subcommentaries, most of which have never been edited. The most important is the *Durgasiṃhavṛtti* of Durgasiṃha (ca. 6th–8th century CE),[63] which is itself the subject of more than twenty commentaries and subcommentaries. Two of these are the *Durgasiṃhaṭīkā* (possibly an autocommentary) and the *Kātantravṛttivivaraṇapañjikā* of Trilocanadāsa; this latter text is itself the subject of around ten commentaries, including the *Kalāpacandra* of Kavirāja Suṣeṇaśarman.[64]

The *Kātantrasūtra* itself phrases the rule governing *dvandva* compound formation in the following way:[65]

[63] On the date of Durgasiṃha see e.g. Shen (2014: 30–31; 2018: fn. 21).

[64] We consider only these texts here, which are published together in the edition of Dwivedī (1999: our passages are pp. 351–354). The *Kātantrasūtra* and Durgasiṃha's *Vṛtti* are also available in the edition of Eggeling (1874).

[65] The wording of the rule is slightly awkward; our translation follows the paraphrase in the *Durgasiṃhavṛtti*: *dvayor nāmnor bahūnāṃ vāpi nāmnāṃ yaḥ samuccayaḥ, sa dvandvo bhavet*.

(18) *dvandvaḥ samuccayo nāmnor bahūnāṃ vāpi yo bhavet*. (*Kātantrasūtra* 2.5.11)

'*A dvandva* occurs where there is *samuccaya* of two or more nouns.'

The *Kātantrasūtra* avoids direct mention of *cārtha*, and the use of the term *samuccaya* here is rather different from its use in the Pāṇinian tradition; it must be understood in a more general sense, including what is in that tradition *itaretarayoga* and *samāhāra*. It may best be understood as a direct or indirect reflex of Yāska's glossing of the meaning of *ca* as *samuccaya* (2).

The *Durgasiṃhavṛtti* is quite explicit that this use of *samuccaya* includes *itaretarayoga* and *samāhāra*, following its paraphrase of the rule with a number of examples of *dvandva* compounds, and its statement:

(19) *itaretarayogaḥ samāhāraś ca samuccayasyaiva bhedaḥ*. (*Durgasiṃhavṛtti*, p. 351)

'*Itaretarayoga* and *samāhāra* are just subtypes of *samuccaya*.'

The same statement is made also in the *Durgasiṃhaṭīkā*, alongside an expanded definition of the notion of *samuccaya*:

(20) *samuccitih samuccayaḥ, rāśībhāva ity arthaḥ; asyaiva bhedaḥ itaretarayogaḥ samāhāraś ceti.* (*Durgasiṃhaṭīkā*, p. 351, ll. 13–14)

'(The word) *samuccaya* is (formed in the sense of) *samucciti* 'an aggregating'; the meaning is *rāśībhāva* 'becoming a heap'. Its subtypes are *itaretarayoga* and *samāhāra*.'

The *Ṭīkā* also, however, refers to a '*mukhya samuccaya*', which closely resembles the description of *samuccaya* in the Pāṇinian tradition:

(21) *mukhye tu samuccaye parasparāsaṃbaddhānāṃ pradhānānāṃ kri[ya]yābhisaṃbadhyamānānāṃ nāsti samāsaḥ*. (*Durgasiṃhaṭīkā*, p. 351, ll. 20–21)

'In the case of *mukhya samuccaya*, the principal elements are not mutually connected, but (each) connected with the (same) action (independently), hence there is no compounding.'

The term *mukhya samuccaya* here clearly has a more circumscribed reference than *samuccaya*

in the general sense, since it excludes compounding. The *Ṭīkā* gives no example which is explicitly connected with the label *mukhya samuccaya*, but clearly refers to the same notion in the following passage (which directly follows ex. 20):

(22) *tatra yaḥ samuccayaḥ prādhānyena kva cit kriyāviśeṣe 'nekeṣāṃ samuccīyamānatā. Tathā dhavāṃś ca khadirāṃś ca palāśāṃś ca cchinddhīti.* (*Durgasiṃhaṭīkā*, p. 351, ll. 14–15)

'Among those, that which is (*mukhya*) *samuccaya* (is where) multiple (nouns) are being aggregated independently in relation to some particular action. So: 'Cut down the *dhava,* and the *khadira,* and the *palāśa* trees'.' [66]

Note that this is very different from the approach taken explicitly by Nāgeśa, and perhaps implicitly by earlier authors including Patañjali, according to which structures which license compounding tend to, or must, involve as many *cas* as conjoined elements, while structures which do not permit compounding show at least one fewer conjunctions as conjuncts. The *Vivaraṇapañjikā* cites the same example, and explains that no compound is possible here because the coordinated items are not mutually connected, using the same phrasing as the *Ṭīkā* uses for *mukhya samuccaya*:

(23) *yathā dhavāṃś ca khadirāṃś ca palāśāṃś ca cchinddhīti. tatra samāso na bhavati, prādhānyena kriyāsaṃbaddhānāṃ dhavādīnāṃ parasparāsaṃbaddhatvān nāsti yuktārthatā.* (*Vivaraṇapañjikā*, p. 352)

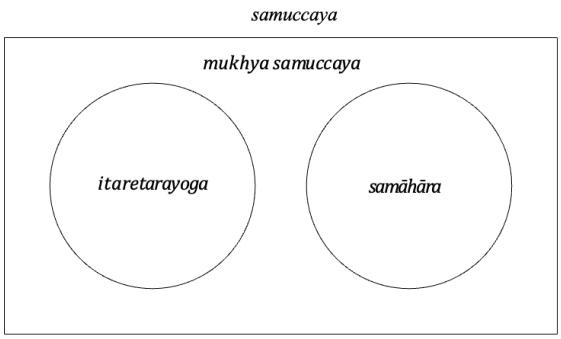
'As in 'cut the *dhava*, and the *khadira,* and the *palāśa* (trees)'. Here the compound does not occur, due to the lack of mutual connection of *dhava,* etc. which are connected with the action as predominant/independent/primary, (so) their meanings are not connected.'

At least in the understanding of the *Vivaraṇapañjikā*, then, it seems that the *mukhya samuccaya* is a type of the general *samuccaya*, as it were the 'pure' *samuccaya*, which does not permit

[66] The *Kalāpacandra* glosses *prādhānyena* here (which we translate 'independently') as follows: *prādhānyaṃ tu itarapadārthanairapekṣyeṇa pratyekam ekakriyānvayitvam* 'But *prādhānya* is the state of being connected with a single verbal action individually through lack of expectation for the meaning of another word' (p. 353, ll. 19–20).

compounding and which is not also *itaretarayoga* or *samāhāra*. That is, thinking in terms of sets, the set *samuccaya* contains two proper subsets, *itaretarayoga* and *samāhāra*; *mukhya samuccaya* refers to the members of *samuccaya* which are not also members of *itaretarayoga* or *samāhāra*:[67]

(24)




As we have seen to this point, this system differs from the Patañjalian system terminologically: the general term for Patañjali, *cārtha*, is here *samuccaya*, while Patañjali's subcategory *samuccaya* must be given a defining epithet in this system, *mukhya*. But this system also differs from the Patañjalian system in excluding *anvācaya*. The *Vṛtti* does not mention *anvācaya*; but the *Ṭīkā* comments:

(25) *anvācayas tu samuccayāt pṛthag eva.* (*Durgasiṃhaṭīkā*, p. 351)

'But *anvācaya* is distinct from *samuccaya*.'

The *Ṭīkā* goes on to state that there is no compounding with *anvācaya* due to the lack of mutual dependency between the coordinated items. Both points are echoed by the *Vivaraṇapañjikā*; the *Kalāpacandra* then draws a direct connection between these statements and the Pāṇinian problem that *anvācaya* should technically license compounding due to its inclusion under the heading of *cārtha*:

[67] Formally, *mukhya samuccaya* is the difference of *samuccaya* and the union of *itaretarayoga* and *samāhāra*. ($M = Su - (I \cup Sa)$)

(26) *cārthe dvandvaḥ iti pāṇinisūtre 'nvācayasyāpi cārthatvāt tanmate tatrāpi samāsaḥ syād iti cārthagrahaṇasya saṃkocadarśanād dūṣayati – anvācayas tv ityādi.* (*Kalāpacandra*, p. 353)

'In Pāṇini's *sūtra cārthe dvandvaḥ* (*A.* 2.2.29), since *anvācaya* is also a meaning of *ca*, in his (= Pāṇini's) view there would be compounding also in the sense of that (= *anvācaya*); thus, since (he) [the author of the *Vivaraṇapañjikā*] sees a (forced) narrowing of the word *cārtha*, he criticizes (that rule) with the passage beginning with *anvācayas tu*.'

The *Kātantra* tradition therefore recognizes the same problem in the Pāṇinian account of *cārtha* that the Pāṇinians themselves saw. In the case of *anvācaya*, the *Kātantra* tradition deals with this by excluding it from the scope of the compounding rule: *anvācaya* does not fall under *samuccaya* and is therefore not one of the possible contexts for *dvandva* compounding.

The situation with the *mukhya samuccaya* is somewhat different, however. This does fall under the general rule, since it is a type of *samuccaya*, but, just as in the Pāṇinian tradition, another factor is brought in to explain the lack of compounding. As we have seen above, this factor is usually described as mutual dependency. In *mukhya samuccaya* there is no mutuality to the dependency – each coordinated element is independently connected with the verb, but not connected with the other coordinated elements – so there is no compounding. The *Kalāpacandra* uses rather the term *sāhitya* associated with the general *samuccaya*:

(27) *samuccayo hi sāhityam, tac ca yugapadekakriyānvayitvam iti mīmāṃsakāḥ*. (*Kalāpacandra*, p. 353, ll.5–6)

'Indeed *samuccaya* is *sāhitya,* and the *Mīmāṃsakās* say that that (= *sāhitya*) is *yugapadekakriyānvayitva* or the state of having a connection with a single action simultaneously.'

The *Kātantra* tradition appears also to have been aware of a notion akin to Kātyāyana's *yugapadadhikaraṇavacana*. The *Durgasiṃhaṭīkā* understands *itaretarayoga* compounding in precisely these terms: *itaretarayoga* is *itaretarārthayoga*, a combining of each other's meaning, brought about through each compound member's taking up the meanings of the other compound members:

(28) *itaretarayogo 'nyonyārthopādānāt. yathā devadattayajñadattāv ityādi. devadattaśabdo yajñadattārtho bhavati, yajñadattaś ca devadattārtho 'pītītaretarārthayogaḥ.* (*Durgasiṃhaṭīkā,*

p. 351, ll. 15–17)

'[This is called] *itaretarayoga* because [the individual elements] take up each other's meaning. For example, *devadattayajñadattau* 'Devadatta and Yajñadatta', etc. The word *devadatta* has the meaning 'Yajñadatta', and the word *yajñadatta* also has the meaning 'Devadatta'—thus (there is) a mutual connection of meanings.'

The *Kātantra* tradition, then, shows a rather different approach to the meaning of *ca* than we find in the Pāṇinian tradition, one which shows perhaps an attempt to accommodate the terminology and concepts of Kātyāyana and Patañjali within a more traditional system aligned with the view of the *Nirukta* that *ca* fundamentally means just *samuccaya*.

## 4 Bhartṛhari

In our survey of the Pāṇinian tradition above we did not mention one of the most important figures in that tradition: Bhartṛhari, the great philosopher-grammarian of ca. 5th century CE. In fact, Bhartṛhari does not say much which speaks directly to the concerns of this paper. While he does discuss *dvandva* compounding and the meaning of *ca*, his focus is primarily on the type of meaning that *ca* has, whether *vācaka* 'denotative' or *dyotaka* 'implicative', and on the determination of gender and number in *dvandva* compounds.

In discussing the nature of the meaning of *ca* in *VP* 3.14.190–209 (Iyer's numbering), Bhartṛhari appears to show awareness of an approach to *dvandva* compounding similar to that found in the *Kātantra* system (and perhaps echoing Yāska), which emphasizes *samuccaya* as the basic condition, rather than *cārtha*, and he rejects the former in favour of the latter:

(29) *samuccayo nimittaṃ cet syān nimittānuvartanam* |
*anvayavyatirekābhyāṃ cārtho dvandvanibandhanaḥ* || (*Vākyapadīya* 3.14.201)

'If the idea of collection were the basis (*nimitta*) (for the formation of a *dvandva*) it would be right to follow it. But by the method of agreement and difference, the meaning of *ca* is the basis of the formation of a *dvandva*.' (Iyer 1974: 215)

This is not a general statement but is embedded at the end of a longer discussion on the gender

and number of *dvandva* compounds, and the reference to *samuccaya* being the basis for the formation of a *dvandva* is made specifically with regard to a particular, disapproved, view of how the gender and number of *dvandva*s are derived. Still, the clear contrast drawn between *samuccaya* and *cārtha* as the basis of *dvandva* formation suggests that Bhartṛhari may be referring to a more general division in theories of *dvandva* compounding (i.e. beyond merely questions of gender and number), a division which would clearly correlate with the difference between the *Kātantra* and the Pāṇinian approaches.

Beyond this, however, Bhartṛhari does not discuss the inventory of meanings attributed to *ca* by Patañjali, nor the problems arising from this. In fact, while the word *samuccaya* occurs a number of times in relation to the meaning of *ca* in the *Vākyapadīya*, the term *itaretarayoga* occurs only once, and *samāhāra* is not used to refer to a type of *cārtha* or a subtype of *dvandva*; the word *anvācaya* does not occur at all.

In relation to our topic, however, Bhartṛhari does appear sympathetic to Kātyāyana's theory of *yugapadadhikaraṇavacana*:

(30) *arthāntarābhidhāyitvaṃ tathārthāntaravartināṃ* |
*yābhyāṃ caikam anekārthaṃ tābhyām evāparaṃ padam* ||
*samudāyāntaratvāc ca tādṛśo 'rtho na laukikaḥ* |
*anvayavyatirekābhyāṃ śāstrārtho 'pi na dṛśyate* ||
*duḥkhā durupapādā ca tasmād bhāṣye 'py udāhṛtā* |
*yugapadvācitā sā tu vyavahārārtham āśritā* || (*Vākyapadīya* 3.14.31–33)

'In the same way, (in *dvandvas*) words which denote one thing express other things also. The two objects by means of which one constituent (of a *dvandva*) becomes polysemic are the very ones by which the other constituent also becomes polysemic. Therefore, the group (expressed by the compound as a whole) being quite different, such a meaning (of each constituent) is not known in the world nor is it seen in the *śāstra* by the method of agreement and difference. Therefore, this simultaneous expression of both by each (*yugapadvācitā*) has been declared to be difficult to understand and difficult to prove in the *Bhāṣya* but it has been adopted for practical purposes.' (Iyer 1974: 138–140)

Bhartṛhari here first describes the idea behind *yugapadadhikaraṇavacana*; he then, in the second verse, raises one difficulty with the idea, namely that if we assume that a word in a compound can also denote the meaning(s) of the other word(s) in that compound, then we have to

admit that such meanings are not independently identifiable for that word outside the compound. In the third verse, Bhartṛhari notes that Patañjali rejected *yugapadadhikaraṇavacana* for that reason, but Bhartṛhari asserts that the principle remains in use for practical purposes: that is, it is a useful way to think about how the meanings of *dvandvas* work.

As a slightly broader notion, Bhartṛhari uses the term *sahavivakṣā* 'intention to convey together', covering both *dvandva* compounding and *ekaśeṣa* formations:

(31) *anusyūteva bhedābhyām ekā prakhyopajāyate* |
*yadā sahavivakṣāṃ tām āhur dvandvaikaśeṣayoḥ* || (*Vākyapadīya* 3.14.28)

'When there takes place a single cognition (as if) permeated by the parts, it is called 'intention to convey together' (*sahavivakṣā*) and it exists in the *dvandva* and *ekaśeṣa*.' (Cf. Iyer 1974: 136)

Precisely how this should be understood is unclear, but it appears to have a role similar to the later notion of *sāmarthya*, existing alongside the notion of *cārtha* as an additional constraint on compounding. The difference would be that *sahavivakṣā* is explicitly speaker-oriented, while *sāmarthya* refers to existing semantic relations between words (dependent, therefore, on a prior *sahavivakṣā*).[68]

The only explicit mention of *itaretarayoga* in the *Vākyapadīya* is at *VP* 3.14.29:

(32) *itaretarayogas tu bhinnasaṃghābhidhāyinām* |
*pratyekaṃ ca samūho 'sau samūhiṣu samāpyate* || (*Vākyapadīya* 3.14.29)

'A *dvandva* of mutual connection (*itaretarayoga*) takes place of words which convey the group ([*saṃgha* ≈] *samūha*) in which the parts figure. And this group is contained in each member of the group.' (Iyer 1974: 137)

[68] Earlier than Bhartṛhari, on *A.* 1.2.64 (the rule that defines *ekaśeṣa*), *vārttika* 19 (*sahavivakṣāyām ekaśeṣaḥ*; note that Kielhorn did not recognize this statement as a separate *vārttika*) teaches that *ekaśeṣa* occurs where there is *sahavivakṣā*. The commentators explain that because each word expresses the senses of the other words, the dual or plural case in the resulting form need not be taught, answering a criticism laid against the formulation of the rule.

This idea of the whole manifested by each part is further illustrated in the verse in (33). Here, there is a reference to the action of 'cooking' and the fact that this action is composed by a series of little acts. That is, if we refer to actions such as lighting the fire or putting the pan on the fire, we say that is 'cooking'.

(33) *vyāpārasamudāyasya yathādhiśrayaṇādiṣu* |
*pratyekaṃ jātivad vṛttis tathā dvandvapadeṣv api* || (*Vākyapadīya* 3.14.30)

'Just as the whole set of activities (*vyāpāra-samudāya*) exists like the universal (*jāti)* in each part like the placing of the vessel on the fire (*adhiśrayaṇam*), so is the case with the constituents of a *dvandva* compound.' (Iyer 1974: 137)

This tells us about *itaretarayoga*, but nothing is said about *samāhāra*.

Overall, therefore, Bhartṛhari does not directly discuss the meanings of *ca*, but what he does say, particularly about *yugapadadhikaraṇavacana*, makes an interesting and important contribution to understanding the history of the development of thought on this topic.

## 5 Conclusion

In this paper, we have set out in some detail the theories of the meaning of *ca* 'and' in the *vyākaraṇa* tradition, focusing primarily on the major names of the Pāṇinian tradition, but also considering the *Cāndra* and *Kātantra* traditions. Our presentation is necessarily incomplete: there are many other grammarians, many other texts, which could have been considered, but the range considered here is sufficient to demonstrate both the main strands of thought in the tradition, and also how diverse it is in the details.

The fundamental problem the tradition faced, given Pāṇini's rule *cārthe dvandvaḥ*, was to constrain either the notion of *cārtha* or principles of compounding to account for contexts where the meaning, or even presence, of *ca* cannot be denied, but no compounding occurs. Kātyāyana avoided the problem by proposing to redefine the rule and eliminate reference to *cārtha*. Patañjali defined four specific meanings for *ca*, and required that the word *ca* itself must be implicated in the formation of *dvandvas*, not merely a meaning associated with *ca*. Patañjali did not, however, explicitly constrain *dvandva* formation to only two of his four meanings of *ca*, nor explain how

such a constraint would be implemented. By a few centuries later, however, the restriction of compounding to *itaretarayoga* and *samāhāra* was explicit, in the *Cāndravṛtti*, the *Durgasiṃhavṛtti* and the *Kāśikāvṛtti*.

In the latter, the notion of *sāmarthya* as a more general constraint on compounding was brought in to account for the lack of compounding in *samuccaya* and *anvācaya*. Bhaṭṭoji relies on this notion absolutely to account for the restrictions on *dvandva* compounding, but Nāgeśa taps into another idea implicit throughout the tradition, that syntactic differences – specifically the number of conjunctions relative to the number of conjuncts – reflects the difference between *samuccaya* and *anvācaya* on the one hand and *itaretarayoga* and *samāhāra* on the other.

In the following subsections, we summarize the views seen above on each of the four meanings of *ca* 'and'.

## 5.1 Samuccaya

*Samuccaya* is the oldest recorded meaning given for *ca* 'and' in the Indian tradition, and may have been a/the meaning known to Pāṇini. In the *Kātantra* tradition, that general sense of *samuccaya* survives, such that it can encompass all or most uses of *ca*, including the uses underlying compound formation.

Patañjali, on the other hand, treats *samuccaya* as one of four meanings of *ca*; this becomes the official doctrine within the Pāṇinian tradition, and is found also in the Cāndra tradition and in the *mukhya samuccaya* of the *Kātantra* tradition. *Samuccaya* is, necessarily, a grouping or collecting together of words/meanings, usually of nouns in relation to a single verb, but without any mutual dependency between the collected items. Some descriptions take the second conjunct as dependent on the first; others emphasize rather that each noun is independently (and equally) related to the verb.

Patañjali does not explicitly claim that compounding is not possible under *samuccaya*, but from at least the time of the Cāndra school, and in the Pāṇinian tradition from the *Kāśikāvṛtti*, this restriction is clear.[69]

[69] The 17th-century *Ratnaprakāśa* commentary on the *Mahābhāṣya* states that 'up to today no right-thinking grammarian has taught compounding for *samuccaya* or *anvācaya*' (*adyāvadhi*

The discussion of *samuccaya* by Kaiyaṭa differs somewhat from that of Patañjali, most obviously in that he uses the term to refer to coordination where no explicit *ca* appears. Like Patañjali, however, later authors such as Bhaṭṭoji Dīkṣita and Nāgeśa assume that *samuccaya*, at least insofar as it falls within their concerns, generally involves one, and only one, *ca*. For these authors, drawing on a tradition which goes back at least to the *Kāśikāvṛtti*, compounding is not possible with *samuccaya* due to a lack of semantic connection, *sāmarthya*, which is reflected in the use of only one *ca*.

## 5.2 Anvācaya

*Anvācaya* is perhaps the most problematic and interesting of the four meanings assigned to *ca* by Patañjali. In discussing *A.* 2.2.29 itself, Patañjali offers little real insight into his understanding of the term, using the same example for it as for *samuccaya*, and noting only an additional notion of dependence (*sāpekṣa*) in *anvācaya*. Patañjali's understanding of *anvācaya* as a meaning of *ca* is, though, evidently related to his understanding of the function of *ca* in the *Aṣṭādhyāyī*. Patañjali interprets many uses of *ca* by Pāṇini as introducing dependent operations, the application or non-application of which do not compromise the applicability of the superordinate operations.[70]

For Bhaṭṭoji Dīkṣita, *anvācaya*, like *samuccaya*, does not allow compounding because of the lack of *sāmarthya*. He, like most of the Pāṇinian tradition, follows the Patañjalian model whereby *anvācaya* is one of four meanings of *ca* on a level with *samuccaya*, *itaretarayoga* and *samāhāra*. The *Kātantra* tradition, in contrast, completely separates *anvācaya* from the other three meanings of *ca* (which it groups under its general *samuccaya* heading). Even within the Pāṇinian tradition,

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*kenāpi dhīmatā vaiyākaraṇena samuccayānvācayayoḥ samāsānidarśanāt*; vol. 5, p. 189).

[70] As seen above, Patañjali discusses and provides a real-world example of this under *A.* 3.1.11, but he assumes the principle in many other cases. Some instances are slightly more complicated, for example *A.* 7.3.118–119, where the issue of *yogavibhāga* complicates the discussion. If *A.* 7.3.118–119 is treated as a single rule, as it appears to have been in the text as received by Patañjali, then one must interpret the conjoined part of the rule in terms of *anvācaya*; Patañjali prefers to split the rule in two, avoiding the need for *anvācaya*, but acknowledges that one could retain the rule as one and rely on *anvācaya* as the function of *ca* to resolve the problem.

the *Ratnaprakāśa*, a commentary on the *Mahābhāṣya* dating to a similar period as Bhaṭṭoji, considers *anvācaya* to be a subtype of *samuccaya*.[71]

Roodbergen (1974: 187) argues that the use of the example in (14) (*bho baṭo bhikṣām aṭa gāṃ ca ānaya* 'O boy, go collect alms, and bring a cow') implies a shift in the understanding of the function of *ca*; specifically, while Patañjali considered *ca* solely in its function as a conjoiner of nouns, i.e. of words that refer to entities, for authors like Jinendrabuddhi, Bhaṭṭoji and Nāgeśa *ca* is considered also as a sentence connective. However, the fact that Patañjali only provides examples of noun coordination under his discussion of *A.* 2.2.29 does not mean that his understanding of *ca* was restricted to its function as a conjoiner of nominals; rather, Patañjali restricts his scope to what is relevant to the question of *dvandva* compounding. As we have seen, on *A.* 3.1.11 Patañjali gives an example of *anvācaya* which we would understand as clausal coordination.[72] And while the tradition never explicitly describes that example (or its successors, like ex. 14) in terms of clausal coordination, this is again because their focus is on the possibility of *dvandva* formation. If *ca* follows a noun, then it must be expressing (by *dyotana*) some property of that noun, either its relation (subordinate or parallel, in *samuccaya* and *itaretarayoga*/*samāhāra* respectively) with another noun, or its dependence on a different, itself subordinate, verb. When Nāgeśa does explicitly acknowledge coordination of verbs, in the example *devadattaḥ pacati hasati ca*, it is as something of an aside; crucially, in this example the *ca* is connected with the verb itself, and so the possibility of *dvandva* compounding simply does not arise.

## 5.3 Itaretarayoga

Compared with *samuccaya* and *anvācaya*, the meanings of *ca* associated with *dvandva* formation appear less problematic, and their treatment over the history of the tradition appears much more uniform.

From Patañjali on, examples of *itaretarayoga* involve *vigrahas* with as many *cas* as items coordinated, thereby contrasting with *samuccaya* and *anvācaya* and indicating an equality of the

[71] *samuccayaviśeṣa evānvācayaḥ* (*Ratnaprakāśa*, vol. 5, pp. 188–189).

[72] Note also that Joshi and Bhate (1983: 49), discussing the difference between the use of *dvandvas* and the use of *ca* in the *Aṣṭādhyāyī*, say that *ca* links statements, while *dvandvas* link items.

coordinated items at the syntactic level. This accompanies an equality at the semantic level, where the meanings of all coordinated items include a sense of accompaniment by the meanings of the other coordinated items. This notion of mutual connection or dependence, however understood, plays an important part in the later tradition as a general constraint on *dvandva* formation, whether phrased as e.g. *parasparasahitatā* or *sāmarthya*.

The main point of contention when it comes to the *dvandva*-licensing meanings of *ca* concerns Kātyāyana's notion of *yugapadadhikaraṇavacana* 'simultaneous reference', the idea that in a *dvandva* compound each member denotes both its own meaning and also the meanings of the other compound members. While rejected by Patañjali, the idea remained popular for many centuries, and was accepted by Bhartṛhari at least "for practical purposes". Chaturvedi (1976: 92) points out that not only Bhartṛhari but also some early post-Bhartṛhari writers such as Bhoja, Sīradeva, and Haradatta accepted the notion, not necessarily as an alternative to the Pāṇinian rule *cārthe dvandvaḥ*, but at least as an additional constraint or principle. Chaturvedi suggests that the later wholesale rejection of *yugapadadhikaraṇavacana* may reflect the increasing importance given to Patañjali in the Pāṇinian tradition and the principle of *yathottaraṃ munīnāṃ prāmāṇyam*, that the authority of the three primary figures in the tradition follows their relative recency, such that Patañjali's authority trumps that of Kātyāyana, whose authority trumps that of Pāṇini.[73]

## 5.4 Samāhāra

Of the four meanings of *ca* proposed by Patañjali, *samāhāra* is the least discussed. Sometimes, as in Patañjali, it is merely mentioned as a second type of *dvandva* compound alongside *itaretarayoga*, and in almost all respects it appears to be taken to share the same features as *itaretarayoga*. Where it is distinctly discussed, it is in relation to how one accounts for the singular number; on a semantic level, the singular collection is predominant in *samāhāra*, and it is this alone that differentiates it from *itaretarayoga*.

That a special rule would be required to account for the use of the singular in

[73] On the evolution of this notion of authority in the tradition, see e.g. Deshpande (1993, 1998) and Vergiani (2005).

*samāhāradvandvas* under Kātyāyana's definition of *dvandva* in terms of *yugapadadhikaraṇavacana* is one argument given against the latter proposal.

## 5.5 Summary

Let us, finally, return to the comparative angle with which we started. In modern Western linguistics, intersective or Booelan conjunction is the core meaning attributed to coordinating conjunctions like *and*. In the Indian tradition, of the four meanings assigned to *ca* by Patañjali, the one with broadest scope is *samuccaya* 'aggregation', sometimes even treated as encompassing all other meanings. *Samuccaya* superficially appears quite far from Boolean conjunction; given its literal sense, and given that it is most commonly applied to the context of nominal coordination, it might appear closer to collective (group-forming) conjunction. However, in understanding sentences like *īśvaraṃ guruṃ ca bhajasva* (ex. 13) to have the semantics of two propositions ('revere god and revere your teacher'), the grammarians come to treat *samuccaya* as equivalent to intersective conjunction. Collective conjunction is better associated with *dvandva* compounding, where the concept of group-forming is analysed in detail, particularly with reference to *itaretarayoga*. The prominence given to *anvācaya* in the Indian tradition is unparalleled in modern linguistics, where notions like appended coordination are relatively marginal. Overall, one might observe that where the Western tradition emphasizes equality between coordinands, most likely deriving from the logical origins of semantics, the Indian tradition is particularly sensitive to inequalities and to the relative predominance of the first coordinand, recognizing this not only in the case of *anvācaya* but also, more subtley, in the case of *samuccaya*.

While the grammatical tradition following Patañjali consistently recognizes the same four meanings of *ca* 'and', the diversity of detailed analyses of the meaning of *ca* in relation to these four, even just within the Pāṇinian tradition, is remarkable. It is interesting to note that beyond the grammatical tradition, in the lexicographical tradition, a wider range of meanings for *ca* is found; for example, Hemacandra lists as many as ten meanings for *ca* in his *Anekārthasaṃgraha* (c. 1100 CE).[74] The grammatical tradition, then, shows itself as both highly conservative, yet also innovative: only those meanings approved by Patañjali may (and indeed must) be admitted, yet

[74] See Benson et al. (forthcoming) on the meanings attributed to *ca* in the lexicographical tradition.

how their interplay and the finer details of the system work out remains a live question within the tradition.

## Text editions


*Aṣṭādhyāyī*: Böhtlingk, Otto (1887). *Pāṇini's Grammatik*. Leipzig: H. Haessel.

*Uddyota*: Kudāla, Śivadatta D., Raghunāth Kāśīnāth Śāstrī, and Bhārgavaśāstrī Jośi (eds.) (1935–1945). *Patañjali's Vyākaraṇa Mahābhāṣya with Kaiyaṭa's Pradīpa and Nāgeśa's Uddyota*. Bombay: Nirṇaya Sāgara Press. Five volumes. Vol. 2: 2nd edition, edited by Śivadatta D. Kudāla and Raghunāthśāstrī; vol. 3: 1st edition, edited by Raghunāth Kāśīnāth Śāstrī and Śivadatta D. Kudāla; vol. 4: 1st edition, edited by Bhārgavaśāstrī Jośi; vol. 5: 1st edition, edited by Bhārgavaśāstrī Jośi.

*Kātantra* texts: Dwivedī, Jānakīprasāda (1999). *Kātantravyākaraṇa of Ācārya Śarvavarmā. Part II, Volume 2 with four commentaries: 'Vṛtti' and 'Ṭīkā' by Śrī Durga Singh, 'Kātantravṛttipañjikā' by Śrī Trilocanadāsa, 'Kalāpacandra' by Kavirāja Suṣeṇaśarmā, 'Samīkṣā'*. Varanasi: Sampurnanand Sanskrit University.

*Kāśikāvṛtti*: Misra, Srīnārāyaṇa (ed.) (1985). *Kāśikāvṛtti of Jayāditya-Vāmana (along with commentaries* Vivaraṇapañcikā–Nyāsa *of Jinendrabuddhi and* Padamañjarī *of Haradatta Miśra*. Vārāṇasī: Ratna Publications. Six volumes.

*Cāndrasūtra* and *Cāndravṛtti*: Liebich, Bruno (1918). *Candra-vṛtti: Der Original-Kommentar Candragomin's zu seinem grammatischen Sūtra*. Leipzig: F.A. Brockhaus, Abhandlungen für die Kunde des Morgenlandes.

*Nirukta*: Sarup, Lakshman (ed.) (1927). *The Nighaṇṭu and the Nirukta. The oldest Indian treatise on etymology, philology and semantics*. Lahore: University of the Panjab. Reprint 1967, Motilal Banarsidass.

*Prakīrṇaprakāśa*: Iyer, K. A. Subramania (ed.) (1973). *Vākyapadīya of Bhartṛhari, with the Prakīrṇakaprakāśa of Helārāja. Kāṇḍa III, part ii*. Poona: Dr. H. D. Sankalia.

*Pradīpa*: see *Uddyota.*

*Bālamanoramā*: see *Siddhāntakaumudī*.

*Bṛhacchabdenduśekhara*: Sītārāmaśāstrin (ed.) (1960). *Brhat-Śabdenduśekhara*. Varanasi: Varanaseya Sanskrit Vishvavidyalaya. Three volumes.

*Mahābhāṣya*: Kielhorn, Franz (1880–1885). *The Vyâkaraṇa-Mahâbhâshya of Patanjali*. Bombay: Government Central Book Depôt. Three volumes.

*Ratnaprakāśa*: Narasimhacharya, M. S. (ed.) (1973–1983). *Commentaires sur le Mahābhāṣya de Patañjali et le Pradīpa de Kaiyaṭa: Mahābhāṣya Pradīpa Vyākhyānāni*. Pondichéry: Institut Français d'Indologie.

*Laghumañjūṣā*: Bhandari, Madhava Shastri and Narahari Shastri Pendsey (1989). *Vaiyakaranasiddhanta Laghumanjusha by M.M. Sri Nagesha Bhatta with two commentaries called 'KUNJIKA' of Shri Durbalacharya and 'KALA' of Balam Bhatta* (2 vols.). Varanasi: Chowkhamba Sanskrit Series Office. Second edition.

*Laghuśabdenduśekhara*: Pendse, Narahari Sastri (ed.) (1927). *Laghuśabdenduśekhara by Nāgojibhaṭṭa with a commentary Chandrakalā by Bhairva Miśra* (2 vols.). Benares: Chowkhambha Sanskrit Series Office.

*Vaiyākaraṇasiddhāntabhūṣaṇa*: Ramakrishnamacharyulu, K. V. (ed.) (2021). *The Vaiyākaraṇasiddhāntabhūṣaṇa of Kauṇḍabhaṭṭa*, *with the Nirañjanī commentary by Ramyatna Shukla and Prakāśa explanatory notes by K.V. Ramakrishnamacharyulu, Part III*. Pondicherry: Institut Français de Pondichéry / Shree Somnath Sanskrit University / École Française d'Extrême-Orient.

*Vaiyākaraṇasiddhāntamañjūṣā*: Shastri, Kapil Dev (ed.) (1985). *Nāgeśa Bhaṭṭa's Vaiyākaraṇasiddhāntamañjūṣā*. Kurukṣetra: Vishal Publications.

*Siddhāntakaumudī*: Chaturveda, Giridharaśarman and Parameśvarānandaśarman Vidyābhāskara (eds.) (1961). *Vaiyākaraṇa Siddhāntakaumudī Bālamanoramātattvabodhinīsahitā*. Delhi: Motilal Banarsidass. Four volumes. (Vol. 4 title: *Vaiyākaraṇa Siddhāntakaumudī Bālamano-ramātattvabodhinī-śekhara-subodhinī-candrakalā-samalaṅkṛtā*.)

*Prauḍhamanoramā*: Shastri, Sitaram (1992). *Prauḍhamanoramā of Mahāmahopādhyāya Śrī Bhaṭṭojī Dīkṣita. Together with Bṛhachchhabdaratna an unpublished commentary of Mahāmahopādhyāya Śrī Hari Dīkṣita and Laghuśabdaratna of Mahāmahopādhyāya Śrī Nāgeśaa Bhaṭṭa* (Vol. 2). Banaras: Banaras Hindu University.

## References

Arcodia, Giorgio Francesco (2010). 'Coordinating compounds'. *Language and Linguistics Compass 4*(9), pp. 863–873.

Aussant, Émilie (2009). '*Kāśikāvṛtti* and *Cāndravyākaraṇa*: A comparison of the *Pratyāhārasūtra* section'. In Pascale Haag and Vincenzo Vergiani (eds.), *Studies in the Kāśikāvṛtti. The section on pratyāhāras: Critical edition, translation and other contributions*, Firenze: Società editrice fiorentina, pp. 191–214.

Bandhyopadhyay, Pratap (1981). 'Sanskrit indeclinables (*upasargas* and *nipātas*) and their meanings'. In Bhakti P. Mallik (ed.), *S.K. Chatterji commemoration volume*, Burdwan: The University of Burdwan, pp. 45–74.

Bauer, Laurie (2008). 'Dvandva'. *Word Structure 1*, pp. 1–20.

Bauer, Laurie (2017). *Compounds and compounding*. Cambridge: Cambridge University Press.

Benson, James W., John J. Lowe, Adriana Molina-Muñoz and Yiming Shen (forthcoming). 'Meanings of *ca* 'and' in the lexicographical tradition: beyond Patañjali.' To appear in *Indo-Iranian Journal.*

Biswal, Banamali (1995). *The Samāsaśaktinirṇaya of Kauṇḍa Bhaṭṭa: Chapter V of the Vaiyākaraṇabhūṣaṇa. Critically edited with introduction and exhaustive explanatory notes*. Allahabad: Padmaja Prakashan.

Bronkhorst, Johannes (1979). 'Yāska's classification of nipātas'. *Annals of the Bhandarkar Oriental Research Institute 60*(1), pp. 137–149.

Champollion, Lucas (2016). 'Ten men and women got married today: Noun coordination and the interactive theory of conjunction'. *Journal of Semantics 33*, pp. 561–622.

Chaturvedi, Mithilesh (1976). '*Yugapadadhikaraṇavacanatā* in *dvandva* — A critical appraisal by Bhartṛhari'. *Vishveshvaranand Indological Journal 14*, pp. 82–92.

Crysmann, Berthold (2006). 'Coordination'. In Keith Brown (ed.), *Encyclopedia of Language and Linguistics* (vol. 3), Amsterdam: Elsevier, pp. 183–196.

Deshpande, Madhav M. (1993). 'The changing notion of *śiṣṭa* from Patañjali to Bhartṛhari'. *Asiatische Studien 47*(1), pp. 95–115.

Deshpande, Madhav M. (1998). 'Evolution of the notion of authority in the Pāṇinian tradition'. *Histoire Epistémologie Langage 20*(1), pp. 5–28.

Eggeling, Julius (ed.) (1874). *The Kātantra with the commentary of Durgasiṃha*. Calcutta: The Asiatic Society of Bengal.

Ganeri, Jonardon (1999). 'Dharmakīrti's semantics for the particle *eva*'. In Shoryu Katsura (ed.), *Dharmakīrti's thought and its impact on Indian and Tibetan philosophy. Proceedings of the third international Dharmakīrti conference, Hiroshima, November 4–6, 1997*, Wien: Verlag Der

Österreichischen Akademie Der Wissenschaften, pp. 101–115.

Gillon, Brendan S. (1999). ‘Another look at the Sanskrit particle *eva*’. In Shoryu Katsura (ed.), *Dharmakīrti’s thought and its impact on Indian and Tibetan philosophy. Proceedings of the third international Dharmakīrti conference, Hiroshima, November 4–6, 1997*, Wien: Verlag Der Österreichischen Akademie Der Wissenschaften, pp. 117–130.

Gillon, Brendan S. and Richard Hayes (1982). ‘The Role of the particle *eva* in (logical) quantification in Sanskrit’. *Wiener Zeitschrift für die Kunde Südasiens 26*, pp. 195–203.

Haspelmath, Martin (ed.) (2004). *Coordinating constructions*. Amsterdam: Benjamins.

Iyer, K. A. Subramania (ed.) (1974). *The Vākyapadīya of Bhartṛhari, Chapter III, pt. ii. English translation with exegetical notes*. Delhi: Motilal Banarsidass.

Joshi, S. D. (1968). *Patañjali’s Vyākaraṇa-mahābhāṣya: Samarthāhnika (P. 2.1.1)*. Poona: University of Poona.

Joshi, S. D. and Saroja Bhate (1983). *The role of the particle* ca *in the interpretation of the Aṣṭādhyāyī*. Pune: University of Poona.

Lang, Ewald (1984). *Semantics of coordination*. Amsterdam: Benjamins.

Lowe, John J. (2024). *Modern linguistics in ancient India*. Cambridge: Cambridge University Press.

Murti, M. S. Narayana (1972). ‘Bhartṛhari on ‘*viśeṣaṇāṇāṃ cājāteḥ*’ of Pāṇini’. *Sri Venkateswara University Oriental Journal 15*(1), pp. 49–62.

Murti, M. S. Narayana (1974). *Sanskrit compounds: A philosophical study*. Varanasi: Chowkhamba Sanskrit Series Office.

Oberlies, Thomas (1996). ‘Das zeitliche und ideengeschichtliche Verhältnis der Cāndra-Vr̥tti zu anderen V(ai)yākaraṇas (Studien zum Cāndravyākaraṇa III)’. *Studien zur Indologie und Iranistik* 20, pp. 265–317.

Panchal, Sanjeev and Amba Kulkarni (2019). ‘Co-ordination in Sanskrit’. *Indian Linguistics 80*(1–2), pp. 59–76.

Quirk, Randolf, Sidney Greenbaum, Geoffrey Leech, and Jan Svartvik (1985). *A Comprehensive Grammar of the English Language*. Harlow: Longman.

Roodbergen, J. A. F. (1974). *Patañjali’s Vyākaraṇa-Mahābhāṣya: Bahuvrīhidvandvāhnika (P. 2.2.23–2.2.38)*. Poona: University of Poona. Text, translation and notes by J. A. F. Roodbergen. Edited by S. D. Joshi.

Sarup, Lakshman (1921). *The Nighaṇṭu and the Nirukta. Introduction, English translation and notes*. Oxford: Oxford University Press. Reprint 1967, Motilal Banarsidass.

Shen, Yiming (2014). 'A study of the nominal declension in the Kātantra system'. MPhil thesis, University of Cambridge.

Shen, Yiming (2018). 'Fundamentals for the study of the *Kātantra*'. *Nagoya Studies in Indian Culture and Buddhism: Saṃbhāṣā 34*, pp. 57–86.

Stassen, Leon (2000). AND-languages and WITH-languages. *Linguistic Typology* 4, pp. 1–54.

Vergiani, Vincenzo (2005). 'Dealing with conflicting views within the Pāṇinian tradition: on the derivation of *tyādṛś* etc.' In Federico Squarcini (ed.), *Boundaries, dynamics and constructions of traditions in South Asia*, Firenze: Firenze University Press, pp. 411–433.

Vergiani, Vincenzo (2011). 'A quotation from the *Mahābhāṣyadīpikā* of Bhartṛhari in the *Pratyāhāra* section of the *Kāśikāvṛtti*.' In Pascale Haag and Vincenzo Vergiani (eds.), *Studies in the Kāśikāvṛtti: the section on Pratyāhāras. Critical edition, translation and other contributions*. London, Anthem Press, pp. 161–189.

Wälchli, Bernhard (2005). *Co-compounds and natural coordination*. Oxford: Oxford University Press.