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Summary

Indian linguistic thought begins around the 8th-6th centuries BC with the composition of *Padapāṭha*s (word-for-word recitation of Vedic texts where phonological rules are not applied). It took various forms over these twenty-six centuries and involved different languages (Ancient, Middle and Modern Indo-Aryan as well as Dravidian languages).

The greater part of documented thought is related to Sanskrit (Ancient Indo-Aryan). Very early, the oral transmission of sacred texts—the *Veda*s, composed in Vedic Sanskrit—made it necessary to develop techniques based on a subtle analysis of language. The *Veda*s also—but presumably later—gave birth to bodies of knowledge dealing with language, which are traditionally called *Vedāṅga*s: phonetics (*śikṣā*), metrics (*chandas*), grammar (*vyākaraṇa*) and semantic explanation (*nirvacana, nirukta*). Later on, Vedic exegesis (*mīmāṃsā*), new dialectics (*navya-nyāya*), lexicography (*nighaṇṭu* and later, *kośa*) as well as poetics (*alaṃkāra*) also contributed to linguistic thought.

Though languages other than Sanskrit were described in premodern India, the grammatical description of Sanskrit—given in Sanskrit—dominated and influenced them more or less strongly. Sanskrit grammar (*vyākaraṇa*) has a long history marked by several major steps (*Padapāṭha* versions of Vedic texts, *Aṣṭādhyāyī* of Pāṇini, *Mahābhāṣya* of Patañjali, Bhartṛhari's works, *Siddhāntakaumudī* of Bhaṭṭoji Dīkṣita, Nāgeśa's works) and the main topics it addresses (minimal meaning-bearer units, classes of words, relation between word and meaning/referent, the primary meaning/referent of nouns) are still central issues for contemporary Linguistics.

Keywords

Ancient Indo-Aryan, Dravidian languages, Middle Indo-Aryan, Modern Indo-Aryan, *Padapāṭha*, premodern India, Sanskrit, *Vedāṅga*s, *vyākaraṇa*.

1. Overview of linguistic thought in premodern India[1]

1.1. Vedic literature and *Padapāṭha*s

The most ancient Indian texts which have come down to us are the *Veda*s ("Knowledge"), composed in Vedic Sanskrit (Old Indo-Aryan; for a general presentation of the stages of Indo-Aryan, see Cardona and Jain 2007: 6-18). They constitute the foundational corpus of the Vedic religion, the most ancient form of Brahmanism, which is the starting point for numerous doctrines of premodern India. These texts, the most ancient of which go back to the second half of the second millennium BC, are different in form as well as in content and share the feature that they are based on a "revelation" (*śruti*, literally "hearing"). The *Veda*s include the *saṃhitā*s, which are versified "collections" gathering together hymns, prayers, ritual incantations, as well as commentaries on these *saṃhitā*s. There are four kinds of *saṃhitā*s: 1) stanzas (*ṛc*) which make up the *Ṛksaṃhitā* or *Ṛgveda* (ṚV hereafter), 2) ritual incantations (*yajus*) gathered together (with or without commentary) in the *Yajuḥsaṃhitā* or *Yajurveda*, 3) songs (*sāman*) of the *Sāmasaṃhitā* or *Sāmaveda* and 4) spells (*atharvan*), which constitute

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[1] "Premodern India" means India before the arrival of European theories and practices (see Pollock 2007: 8-10).

the *Atharvasaṃhitā* or *Atharvaveda*. The Vedic—and also Brahmanical—tradition staunchly revolves around these four *Veda*s (cf. Renou 1947: 12).

This Vedic literature was composed and passed down orally.[2] This practice left a deep mark on Indian culture, its relation to texts and, above all, its beliefs regarding language. Very early, the oral transmission of holy texts made it necessary to develop techniques based on a subtle analysis of language. One of the most ancient techniques involved the accurate description of phonological rules that apply at word junctures (*sandhi*s) to move from continuous recitation (*saṃhitā-pāṭha*) of a *saṃhitā*—where rules are applied—, to word-for-word recitation (*pada-pāṭha*)—where rules are not applied. This implies, on the one hand, an advanced knowledge of phonetics and phonology as well as, on the other hand, sophisticated thinking about how to parse continuous speech.

Consequently (and because no more ancient documents have come down to us), one traditionally considers that linguistic thought in premodern India began with the composition of *Padapāṭha*s, around the 8th-6th centuries BC. The *Padapāṭha*'s ultimate goal was to preserve Vedic texts by drawing attention to those parts of the texts which were those most subjected to modifications, such as the word-final position (see Jha 1992: 14). They consist of versions of Vedic texts where some *sandhi*s are dissolved and replaced by pauses; as a consequence, some linguistic units—the *pada*s—are isolated. As such, the *Padapāṭha*s represent the earliest available grammatical commentaries of the Vedic *saṃhitā*s (Abhyankar & Devasthali 1978: XVIII, among others) and the *pada*-units they identify are the most ancient linguistic category (cf. §2.1.1 for more details).

1.2. *Vedāṅga*s

The *Veda*s also gave birth to bodies of knowledge dealing with language which are traditionally called *Vedāṅga*s ("Limbs [for preserving the body of] the *Veda*s"). They differ from the *Veda*s in that they are based on the "[tradition relying on] memorization" (*smṛti*). The four *Vedāṅga*s related to language are traditionally ordered as follows: phonetics (*śikṣā*), metrics (*chandas*), grammar (*vyākaraṇa*) and semantic explanation (*nirvacana, nirukta*). According to Scharfe (1977: 82), the delimitation of these disciplines occurred quite early: "Towards the end of the Vedic period there were thus three branches of linguistic study: phonetics (*śikṣā*), etymology (*nirukta*) and grammar (*vyākaraṇa*); but their oldest systematical works have not survived the hazards of oral tradition". And in fact one finds in *Vedāṅga*s' literature very old notions such as 'meter', 'metrical feet', 'word' and 'syllable' which demonstrate an exceptionally ancient thought regarding language and linguistic units (cf. Deshpande 2000: 137-138).

Phonetics (*śikṣā*) aimed at preserving the correct pronunciation and recitation of Vedic texts, as well as at recomposing the continuous version of *saṃhitā*s by applying phonological rules. Ancient Indian phoneticians accurately described the sounds (*varṇa*, i.e. vowels, *svara*, and consonants, *vyañjana*) according to 1) their accent (*svara*), 2) their duration (*kāla*), 3) their point of articulation (*sthāna*), from the glottis (*kaṇṭha*) up to the lips (*oṣṭha*), 4) their manner of articulation (*prayatna*), including different degrees of contact and different degrees of openness, 5) their phonation (*anupradāna*), that is to say the quality of air passing through the glottal aperture. Moreover, ancient Indian phoneticians carefully accounted for features of junction (*sandhi*), as well as features of syllable-structure (length, quantity, tone). For more details, see Allen (1953), Pinault (1989: 304-313), Deshpande (2000).

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[2] These texts were put in writing at a recent date (cf. Al Birûnî's record in the 11th century which mentions a *Veda* recently transcribed in Kashmir).

Metrics (*chandas*) gave instructions on the metrical structures of Vedic texts, that is to say set prosody's rules and described different types of metres (seven major metres and various complex structures).

Semantic explanation (*nirvacana, nirukta*) consisted of an elucidation of the meaning of difficult words, the goal being to attempt to find out how a word comes to mean what it does (cf. Kahrs 1998: xiv). Only one work belonging to the Nirvacana tradition (which presents itself as a complement to grammar) has come down to us, namely the *Nirukta* (N)—and its commentaries— which is attributed to Yāska and which was probably composed between the 5th and the 2nd century BC. Yāska's work is made up of, first of all, the commentary on vocabulary contained in lists of Vedic words known as *Nighaṇṭu*, lists which were very probably compiled from the *padapāṭha* versions of Vedic texts. This vocabulary constitutes the oldest Sanskrit lexicon (cf. §1.3). Yāska introduces his work by expounding some grammatical principles: he enumerates and briefly describes four classes of words (*pada*; nouns (*nāman*), verbs (*ākhyāta*), prepositions (*upasarga*) and particles (*nipāta*)), he explains that nouns have substance (*sattva*) as their principal meaning while verbs have becoming (*bhāva*) as theirs (several modifications of the "becoming" are listed) and he mentions the debate related to the verbal origin of nouns.

Grammar (*vyākaraṇa*, action noun coming from the preverbed root *vy-ā-kṛ-*, traditionally interpreted as denoting a separation or a discrimination process of constituents; but it can also be taken as referring to a creation process, which generates, in a diversified way, the linguistic units; see Thieme 1982-1983: 11, 23-34 and Cardona 1997: 565-571) imparted knowledge, by describing their formation, of (correct) speech forms (see Cardona 1997: 543-544). Several schools of Sanskrit grammar developed in India, some of them being known only from quotations (see Scharfe 1977: 124-126). Their exact number is still unknown today (it fluctuates between 3 and 20, see Raghavan 1974: 272, 276), not only because (Indian as well as Western) scholars did not and do not always share a common conception of what is a school of grammar, but also because, for several reasons, much information has been lost over time (see Bronkhorst 2014).

Schools of Sanskrit grammar can be divided into two categories: the Pāṇinian school and the non-Pāṇinian schools. The fact is that Sanskrit grammatical thought was deeply influenced by the *Aṣṭādhyāyī* of Pāṇini, the earliest complete surviving Sanskrit grammar which dates from the 5th century BC. During the following centuries, some grammarians decided to follow on the Pāṇinian work, creating in this way the Pāṇinian school, while others more or less moved away from this work (or were considered, by the Pāṇinian grammarians, as having moved away from it) and the techniques it implies.

The Pāṇinian school is indisputably the most ancient and the longest school of grammar in India (as well as in the world): it begins with Pāṇini's *Aṣṭādhyāyī*, the founding treatise of the school (cf. §2.1.2), and is traditionally considered to end with Nāgeśa (died in 1755 in Benares), a prolific grammarian whose erudite works marked the last renewal of the Pāṇinian school (cf. §2.1.6). Several great scholars figured among this school (cf. §2.1.3 to 2.1.6) and a substantial amount of grammatical literature is linked to it (different kinds of commentaries and sub-commentaries but also independant treatises). The main reasons which explain why some grammarians moved away from Pāṇini's work is 1) the need for a more practical and pedagogical grammar and 2) a divergence of opinion regarding theoretical issues (such as the description of the formation of *vṛtti*s; on this point, see Cardona 2008).

The *Aṣṭādhyāyī* consists in a derivational model of a highly technical nature, made up of approximately 4,000 rules (*sūtra*) and which includes numerous metalinguistic rules (metarules (*paribhāṣā*), rules related to technical terms (*saṃjñā-sūtra*), headings (*adhikāra*)). That is how an arrangement of grammatical rules by topic (cf. §2.1.5) emerged, as well as a reduction (or even a suppression) of the metalinguistic tools and the removal of rules teaching

purely Vedic forms. As far as one knows, grammars arranged by topic firstly appeared in the Buddhist and Jaina spheres (that is to say outside the Pāṇinian school which is of Brahmanical or Hindu tradition), after Sanskrit versions of their canonical texts were adopted.

The earliest attempt to organize grammatical rules by topic is Śarvavarman's *Kātantra* ("Small manual"), which probably dates from the 4th century. This "practical" grammar, which is perhaps a recast of a more ancient one—the *Kaumāralāta*, see Scharfe 1977: 162—influenced several later grammars, among which Kaccāyana's Pāli (Middle Indo-Aryan) grammar and the *Siddhahaimacandra* of the Jaina Hemacandra, and gave rise to a rich secondary literature (commentaries, supplements, etc.). The Kātantra school, while having been largely present in as well as outside India during centuries, retained its popularity in Kashmir, Nepal and parts of Bengal (Scharfe 1977: 163) from the revival of the Pāṇinian school in the early 17th century onwards (cf. §2.1.5).

Another famous Sanskrit grammar arranged by topic, the *Cāndravyākaraṇa* ("Candra's grammar"), composed by a Buddhist scholar—Candragomin—who would have lived during the 5th century, is the basis of another grammatical school. The *Cāndravyākaraṇa* is the first great recasting of Pāṇini's grammar (it also includes some of the additions suggested by Patañjali and Kātyāyana, the two first known commentators of Pāṇini's work, cf. §2.1.3) as well as the great grammar of Buddhists. As such, it was widely circulated and was mainly preserved in places where Buddhism spread (Nepal, Tibet, Burma, Sri Lanka). For more details, see Belvalkar (1915: 57-62) and Scharfe (1977: 164-167).

Within the Jaina community, three grammars gave birth to three grammatical schools: the *Jainendravyākaraṇa* of Devanandin (5th-7th centuries?), which is the most Pāṇinian of the non-Pāṇinian grammars (it preserves, among other, Pāṇini's generative scheme; see Belvalkar 1915: 62-68, Scharfe 1977: 168-169), the *Śabdānuśāsana* (or *Śākaṭāyanavyākaraṇa*) of Śākaṭāyana, a grammar of the 9th century arranged by topic (see Belvalkar 1915: 68-73, Scharfe 1977: 169) and the *Siddhahemacandra* (or *Śabdānuśāsana*) of Hemacandra (11th-12th centuries), another grammar arranged by topic, but more practical, which covers Classical Sanskrit and Prakrits (Middle Indo-Aryan; see Balbir 2000: notice 4336). Non-Pāṇinian grammars were also composed outside the Buddhist and Jaina communities, some of them being sponsored by princes like the *Sarasvatīkaṇṭhābharaṇa* of Bhoja, a grammar arranged by topic written in the 11th century (see Scharfe 1977: 187-190).

1.3. Other Sanskrit "language sciences"

Thought about language occupied a central position in premodern India, in particular within the Brahmanical sphere where traditional scholars were firstly trained in grammar (Vyākaraṇa, cf. §2), Vedic exegesis (Mīmāṃsā) and dialectics (Nyāya). Up to the end of the first millennium, grammar and Vedic exegesis dominated the Brahmanical thinking about language. Around the beginning of the second millenium, along with the emergence of the Navya-Nyāya (new dialectics), the successor to the Vaiśeṣika (systematics) and Nyāya classical schools,[3] the dialecticians developed a theory of verbal cognition (*śābdabodha*) which competed with grammatical and exegetical theories and influenced them (Gerschheimer 1996 I: 3).

The ultimate aim of Vedic exegesis (Mīmāṃsā) is to guarantee the correctness of ritual practice. In concrete terms, this implies the explanation of the meaning of Vedic utterances (in

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[3] The foundation text of Nyāya was composed at the beginning of the first millenium. Up to the 11th century, it is the "classical period" of the discipline (opponents are Buddhist logicians). The work of Udayana constitutes the culmination point of this classical period; it effects, among others, the quasi-fusion with another philosophical system, the Vaiśeṣika, which aims at classifying real entities (*padārtha*). Navya-Nyāya emerges with the *Tattvacintāmaṇi* of Gaṅgeśa and, from then on, the opponents are exegetes. See Matilal 1977 for more details.

particular, injunctive sentences) and then the resolution of numerous interpretative problems in Vedic texts. This task led Sanskrit exegetes to deal with, among other issues, the words and sentences expressing injunctions, the nature of the word and the sentence in general, the nature of their respective meanings (see McCrea 2000 and David (to be published) for details. Recent general surveys of the discipline: Jha 1942, Verpoorten 1987). It is interesting to note, with McCrea (2000: 429), that: "While the primary focus of attention in Mīmāṃsā is on Vedic texts, the hermeneutical principles developed in the course of analyzing these texts are formulated so as to be applicable to language in general, and are recognised as such by scholars in other fields. For this reason, Mīmāṃsā is frequently designated as *vākya-śāstra* ("the science of sentences")."

The new dialectics (Navya-Nyāya) is firstly a theory of the means of acquiring valid knowledge (*pramāṇa*) among which speech (*śabda*) plays a prominent role (cf. Gerschheimer 1996 I: ix). Within this frame, Sanskrit dialecticians addressed such topics as: the notions of speech and word, the production of verbal knowledge, the meaning of a word, the nature of the relation between a word and its meaning as well as the problems caused by tropes and corrupted forms, the acquisition of the relation between a word and its meaning, the sentence and the syntactic link. For a general presentation of this discipline (Vaiśeṣika, early Nyāya school and Navya-Nyāya school), see Matilal 1977; for an overview of the naiyāyika theory of speech, see Gerschheimer 1996 I: 43-99.

Lexicography (Nighaṇṭu and later, Kośa) as well as poetics (Alaṃkāra) may also be considered part of the Sanskrit "language sciences".

Classical Sanskrit lexicography (Kośa)[4] played an important role in Indian scholarship, especially poetry: the aim of classical lexica, which were learnt by heart, was to help poets in composition, where synonyms of varying syllable structure are required to satisfy metrical constraints. Two main kinds of lexicon (*kośa*) were composed: synonymic (*ekārtha*, *samānārtha*), where words are classified according to subject (e.g. words relative to heaven, sky, time, thought, sound, etc.), and homonymic (*anekārtha*, *nānārtha*), which list words having more than one meaning (for more details regarding lexicography, see Vogel 1979 and Patkar 1981; for more details regarding the opposition between synonyms and homonyms or polysemous words, see Aussant 2014a). Note that from the 11th century onwards, bilingual and multilingual dictionaries were composed (Sanskrit-Kannada, Sanskrit-Kawi, Sanskrit-Marathi-Telugu-Persian, among others). Lexica in Prākrit as well as in Pāli (Middle Indo-Aryan languages) were also composed.

Sanskrit poetics (Alaṃkāra) is an erudite discipline that accompanied Sanskrit literary production (mainly *kāvya*, the refined poetry) for nearly two millennia. It addressed, among other questions, the following issues: analysis of the formal, logical, semantic and pragmatic aspects of simile and other tropes; word classes; word meanings (denotation, metaphor, suggestion); sentences, passages and whole literary works' meanings, language registers. For a general study of poetics, see De 1960, Gerow 1971, Bronner 2012.

1.4. "Extended" Sanskrit Grammar

A noteworthy fact is that Sanskrit grammar, like Greek, Latin and Arabic grammars, has been transferred or "extended" (see Auroux 1992: 11-64 and Auroux 1994) to languages other than the one it was originally designed to describe (i.e. Sanskrit). Indeed, some grammatical descriptions elaborated for Sanskrit were used (to varying degrees and in different ways) for the description of various languages mainly in India (Middle and Modern Indo-Aryan

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[4] The most ancient lexicon which has come down to us, the *Nāmaliṅgānuśāsana* of Amarasiṃha, would have been composed around the 6th century.

languages as well as Dravidian languages and Persian) but also in Tibet, South-East (Burmese, Old-Javanese) and Central Asia (Buriat), as well as in the West (Algonquian languages). If grammatical descriptions elaborated for Sanskrit played a major role in the history of the grammaticization of different languages, it is undoubtedly because they associated, on the one hand, an incredibly powerful and sophisticated grammatical model (or analyses, cf. §2.1.2) to a highly prestigious language (first, the language of holy texts, the *Veda*s, then the language of a technical literature and then, in the first millennium, the cosmopolitan (literary as well as political) language of an ever-increasing area, see on that point Pollock 2007). Indeed, it seems that the transfer of Sanskrit grammatical descriptions to languages other than Sanskrit is always linked, in one way or in another, to the power of Sanskrit grammatical descriptions or to the prestige of the language or, even, to both. That being said, the "extension phenomenon" of Sanskrit grammatical descriptions has been achieved in a wide variety of ways.

One of its manifestations is that Sanskrit grammar serves as a "source grammar" for "indirect grammars" (or "transfer grammars" according to Harris 1954, p.260). For instance, the grammars of Prakrits (Middle Indo-Aryan languages, cf. §1.5) have been conceived as appendices to Sanskrit grammar: 1) the general structure of their rules is "instead of *x* (Sanskrit form), one has *y* (Prakrit form)"; 2) for any linguistic fact which has not been described in the grammar, the user is taken back to the Sanskrit norm (e.g. the last aphorism of the *Prākṛtaprakāśa* states *śeṣāḥ saṃskṛtāt* "the rest [is to be inferred] from Sanskrit"; for more details, see Nitti-Dolci 1938 and Balbir 2000: notice 4331, notice 4335, notice 4340). Such a description of Prakrits, which is clearly contrastive, assumes that these languages were considered as *vikṛti*s, "modifications" (probably, at some time, as distortions), of Sanskrit. In the case of Prakrits, it really corresponds to a historical development, but it is not the case of other language descriptions. The *Pārasīprakāśa* of Kṛṣṇadāsa, for instance, which was written at the request of Emperor Akbar (ruled 1556-1605), describes Persian forms from the Sanskrit norm, though neither language is derived from the other (see Scharfe 1977: 196). Another example is the *Līlātilakam*, a 14th century poetical manual which devotes two chapters to the grammatical description of Maṇipravāḷam, the mediaeval literary language of Kerala, which is defined as a mixture of the Kēraḷabhāṣā (the mediaeval form of Malayāḷam, a Dravidian language) and Sanskrit (cf. §1.6). Though the general organisation of the *Līlātilakam* is deeply different from Prakrit grammars, one finds occasional mention of counterexamples which would be generated if some Pāṇinian rules were applied (i.e. "if one would apply such [Pāṇinian] rule, one would obtain such form which is not considered as correct in the Kēraḷabhāṣā"; see Aussant 2012). Sanskrit grammatical rules are thus never far away, even in some descriptions of Dravidian languages.

Another manifestation of the "extension phenomenon" of Sanskrit grammatical descriptions is the use of technical devices, terminology and/or of concepts initially created for the description of Sanskrit. An example of the extension of a Sanskrit technical device is provided by two basic treatises of the Tibetan grammatical tradition, the SCP (*Sum-cu-pa*) and the TKJ (*Rtags-kyi-'jug-pa*), two short versified texts, the dating (7th-9th centuries?) and authorship of which are problematic (Miller 2000, Verhagen 2000a). Verhagen (2000b: 211, 2001: 229-230, 233-235) notes that these texts resort—far less extensively—to ellipsis (Sanskrit *anuvṛtti*), that is to say to the tacit recurrence of one or more elements of one grammatical rule in subsequent rules. Regarding grammatical technical terms, one may give the example of Tamil grammatical terminology which, according to Chevillard (2000d: notice 4351), was often modelled on or adapted from Sanskrit terminology though some terms or expressions seem to indicate the existence of a former indigenous metagrammatical terminology (cf. §1.6). Sanskrit influence has been more or less significant depending on the period. It is particularly noticeable in the *Vīracōḻiyam*, a Tamil grammar of the 11th century

written by a Buddhist Tamil grammarian. Chevillard (2000c: 201 and 2000d: notice 4353) notes, among other things, that the grammar borrows massively from the Sanskrit metalinguistic vocabulary: "[...] *canti*, *upakārakam*, *tattitam*, *tātu*, *kiriyā patam* and *ālaṅkāram* are in effect the adaptations to the phonology of Tamil of the terms *sandhi* ["junction"], *upakāraka* ["auxiliary"], *taddhita* ["secondary suffix"], *dhātu* ["root"], *kriyā pada* ["verb"] and *alaṃkāra* ["[rhetoric] ornament"]." If one looks at the use of the term *tattitam* for instance, one observes (thanks to Jean-Luc Chevillard 2009: 211-212) that it denotes a linguistic fact close to the one described by the *taddhita* of Sanskrit grammarians. An example of conceptual extension is provided by the adoption of a semantic classification of the grammatical object, initially formulated by Bhartṛhari, a Sanskrit grammarian of the Pāṇinian school of the 5th century (cf. §2.1.4), by Cēnāvaraiyar, a 13th-14th Tamil commentator of the *Collatikāram* ("The Book of Words") of the *Tolkāppiyam* (cf. §1.6). The Sanskrit description (such as found in the *Aṣṭādhyāyī* of Pāṇini) distinguishes semantic-syntactic categories (*kāraka*) from the linguistic forms which express them. Bhartṛhari expounds a sevenfold classification of the *karman* ("object"), from which Cēnāvaraiyar keeps only three categories which end up having a purely semantic value (for one type cannot be distinguished from another on the basis of Tamil morpho-syntactic features; on this conceptual borrowing, see Vergiani 2013). For more details on "extended" Sanskrit grammar, see Aussant (2017).

This transfer of Sanskrit grammatical descriptions occurred outside Asia as well. Mention should be made of Leonard Bloomfield, who was deeply inspired by the Pāṇinian descriptive model (see notably his 1933 book *Language*) and used some of Sanskrit grammatical concepts in his description of Algonquian languages (cf. Rogers 1987, Emeneau 1988).

1.5. The grammatical descriptions of Middle and Modern Indo-Aryan languages

There are a diverse range of records of Middle Indo-Aryan languages (see Cardona and Jain 2007: 12-18): early Middle Indo-Aryan is attested by Aśoka's inscriptions (mid 3rd century BC) and by Theravāda Buddhist texts in Pāli; later stages are attested by various literary or grammatical works composed in (or describing the) different Prākrits. According to Cardona and Jain (2007: 8), there is evidence of the modern stage of Indo-Aryan as early as the 12th century.

The most ancient grammar of a Middle Indo-Aryan language known to us is the *Prākṛtaprakāśa* of Vararuci, which was probably written between the 3rd and the 5th centuries. This work deeply influenced later Prakrit Grammarians, those of the Eastern school, that is to say Puruṣottama, Rāmaśarman and Mārkaṇḍeya, who are his direct successors, but also those of the Western (or South, see Nitti-Dolci 1938: 179) school, the master of which would have been Hemacandra. Prakrit grammars mainly differentiate themselves 1) by the dialect(s) they describe (Vararuci's *Prākṛtaprakāśa* primarily describes the Mahārāṣṭrī, the Prakrit "par excellence", and devotes a very few *sūtra*s to Paiśācī, Māgadhī and Śaurasenī; Hemancandra's *Śabdānuśāsana*—11th-12th centuries—describes Sanskrit, Mahārāṣṭrī, Śaurasenī, Māgadhī, Paiśācī, Cūlikāpaiśācī and Apabhraṃśa) and 2) by the way they classify them. The Eastern school of Prakrit grammarians is characterised by the following features: 1) the study of the same languages, which are classified as *bhāṣā* (dialects mainly used in stage-plays by high-ranking characters), *vibhāṣā* (dialects used in stage-plays by low-ranking characters, see Grierson 1918: 516), *apabhraṃśa* (dialects spoken by cultured persons and/or used by poets) and *paiśācika* (dialects used in tales according to Nitti-Dolci 1938: 126); 2) a large part of these grammars is devoted to Mahārāṣṭrī, the description of which is the basis for the description of the other Prakrits; 3) Vararuci's description of Mahārāṣṭrī is strictly followed. The unity of the Western/South school is less easy to grasp (see Nitti-Dolci 1938:

179-194). The vast majority of Prakrit grammars are written in Sanskrit and are conceived as appendices to Sanskrit grammars, allowing for Prakrit units—which are considered to be modified forms (*vikṛti*) of Sanskrit—to be formed from Sanskrit (cf. §1.4). Pāli grammars, though subject to the influence of Sanskrit grammars—Pāṇini's *Aṣṭādhyāyī*, Śarvavarman's *Kātantra*, Candragomin's *Cāndravyākaraṇa*—do not teach Pāli units as modifications of Sanskrit forms, probably because Sanskrit is less important than Pāli for the Buddhist communities of the Theravāda tradition (cf. Scharfe 1977: 195).

Modern Indo-Aryan languages were given grammatical descriptions in a much later period and mostly on the initiative of foreigners. However, some works deserve to be mentioned, such as 1) the *Uktivyaktiprakaraṇa*, a bilingual Sanskrit-Old Kosali manual (which gives, for the first time, an overview of the Old Kosali grammar), written in the 12th century by Dāmodara (see Salomon 1982); 2) the *Varṇaratnākara* by Tyotirīsvara Kavisekharācārya, the first grammar of Maithilī composed in 1507 (see Bhatia 1987: 21); 3) the grammar of Braj Bhāṣā written (in Persian) before 1676 by Mirzā Khān-ibn-Fakkru-u-Dīn (see Bhatia 1987: 17-21). A noteworthy point is that some grammars of Modern Indo-Aryan languages written by Indian scholars—whether or not preceded by grammars composed by foreigners—have followed the model of Sanskrit grammars (e.g. the *Mahārāṣṭraprayogacandrikā* (grammar of Marathi) of Veṅkaṭa Mādhava (1827), the *Kaśmīraśabdāmṛta* (grammar of Kaśmiri) of Īśvara Kaula (1875), the *Mithilābhāṣāvidyotana* (grammar of Maithili) of Dinabandhu Jha (1946)). This is another manifestation of the "Extended Sanskrit Grammar" phenomenon (cf. §1.4).

Note that several studies on the history of the grammaticisation of Modern Indo-Aryan languages have been carried out, such as Arjunwadkar 1992, Bandyopadhyay 2011, Bhatia 1987, Mone 1927, Shapiro 2000.

1.6. The grammatical descriptions of Dravidian languages

Dravidian languages (Tamil, Telugu, Kannaḍa and Malayāḷam) were equally the subject of native grammatical descriptions,[5] more or less ancient and more or less autonomous.

Among these Dravidian grammatical descriptions, the Tamil tradition is the most ancient: it emerged at the beginning of the Common Era in South India. The language of description was classical Tamil and the object of description was mainly poetry (see Chevillard 2000a). The most ancient Tamil grammatical text which has come down to us is the *Tolkāppiyam* (5th century?). It consists in three books: 1) the "Book of Letters" (*Eḻuttatikāram*), which is devoted to phonetic, phonological and morphophonological observations and which contains notes regarding writing; 2) the "Book of Words" (*Collatikāram*), which provides the description of some morphosyntaxic facts, such as cases; 3) the "Book of [poetic] topics" (*Poruḷatikāram*), which describes the various items of Tamil poetics (see Chevillard 2000b). The grammatical texts composed after the *Tolkāppiyam* are either commentaries of the *Tolkāppiyam* or independent texts, among which some were more innovative than others (such as the *Vīracōḻiyam*, 11th century) and some had a more important influence than others (such as the *Naṉṉūl*, 13th century). For more details, see Scharfe (1977: 182-183), Subrahmanya Sastri (1997) and the numerous works carried out by Chevillard (such as Chevillard 2000c). One should notice that Tamil grammatical thought has been influenced by Sanskrit grammar (cf. §1.4), particularly in terms of the classification of items (see Scharfe 1977: 181), terminology (see Chevillard 2000c: 201) and concepts (see Vergiani 2013). For more details concerning the influence of non-Tamil models on Tamil grammar, see Meenakshisundaram (1974).

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[5] As they were the subject of grammatical descriptions by foreigners and, among them, missionaries (see Zwartjes 2011 and Zwartjes & Pytlowany forthcoming).

It is often claimed that the Telugu grammatical tradition started in the 11th century, with the composition, by the poet Nannaya, of a Sanskrit grammar of Telugu titled *Āndhraśabdacintāmaṇi*. However, scholars now generally believe that this text was written in the 16th century. Therefore, the very first Telugu grammar written in Telugu would be the *Āndhrabhāṣābhūṣaṇamu*, composed by Ketana in the 12th century. In both works, great significance is attached to the different kinds of words (*tajjā* "derived either from Sanskrit or Prakrit", *samā* "similar either to Sanskrit or Prakrit", *deśyā* (lit. "regional") "pure Telugu", *grāmyā* (lit. "related to villages") "rustic language which is not bound by the grammatical rules" according to Nannaya; see Sarveswara Sharma 1973: 385-386). Such a classification of Telugu words implies that the language was conceived as a modified form of Sanskrit, like a Prakrit (see Hock 2016: 717). Mention should also be made of the composition, in the 19th century, of Paravastu Cinnayasūri's *Bālavyākaraṇamu*, an influential grammatical treatise in Telugu where *sūtra*s are organized by topic (cf. §1.2). For more details on the Telugu grammatical tradition, see Purushottam (1996).

The Kannaḍa grammatical tradition begins in the 12th century with two treatises written by Nāgavarma (who mentions earlier grammatical works which have not survived): the *Śabdasmṛti*, which is in Old Kannaḍa and which constitutes a part of the *Kāvyāvalokana*, a poetical work, and the *Karṇāṭakabhāṣābhūṣaṇa*, which is an independant work in Sanskrit *sūtra*s (see Scharfe 1977: 186). Other works would follow, some composed in (Old) Kannaḍa, such as Keśirāja's *Śabdamaṇidarpaṇa* (13th century) and Kṛṣṇamācārya's *Hosagannaḍa nuḍigannaḍi* (19th century), which studies the links between Kannaḍa, Sanskrit and Tamil; another work, the *Karṇāṭakaśabdānuśāsana* of Bhaṭṭākaḷanka Deva (17th century), was composed in Sanskrit and influenced by Jainendra's grammar (see Scharfe 1977: 186). For more details on the Kannaḍa grammatical tradition, see Kulli (1991) and (1997).

The oldest known grammatical observations related to Malayāḷam are found in a poetical treatise of the 14th century, the *Līlātilakam*. This text, composed of Sanskrit *sūtra*s, describes—among other things—morphological and phonological characteristics of *Maṇipravāḷam*, the mediaeval literary language of Kerala (a mixture of the Keraḷabhāṣā and Sanskrit). The defining characteristic of this treatise is that it mainly establishes a relationship of combination between both languages, not a relationship of contrast or modification (see Scharfe 1977: 184, Aussant 2012): the sentences combine Sanskrit and Keraḷabhāṣā words, which keep their respective endings according to their respective syntax. Like the combination of the languages which are described, the *Līlātilakam* blends descriptive models: one observes features coming from Sanskrit as well as Tamil grammars (see Scharfe 1977: 185, Aussant 2012: 92-99). Some other grammatical works related to Malayāḷam were written after the *Līlātilakam*, such as the *Keraḷa Kaumudi* (1878) by T.M. Kovunni Nedungadi, which was conceived as an aid for writing literary works and which equally associates Sanskrit and Tamil grammars, and the *Keraḷa Pāṇinīyam* (1896), a successful work by A.R. Rajaraja Varma which, after having presented the history of Malayāḷam (as a Dravidian language influenced by Sanskrit), describes it—in modern Malayāḷam—drawing his inspiration from the Pāṇinian system. For more details on the Malayāḷam grammatical tradition, see Ezhuthachan 1975.

2. Sanskrit Grammar (*vyākaraṇa*)

2.1. Major steps

2.1.1. *Padapāṭha*s
As mentioned in §1.1, one traditionally considers that linguistic thought in premodern India began with the composition of *Padapāṭha*s, around the 8th-6th centuries BC. *Padapāṭha*s

represent the earliest available grammatical commentaries of the Vedic *saṃhitā*s (see, for instance, Abhyankar & Devasthali 1978: XVIII) and the *pada*-units they identify are the most ancient linguistic category. No grammatical text composed by the authors of *Padapāṭha*s is available to us. Thus, it is from the criteria they adopt for the isolation of *pada*-units that we can reconstruct the linguistic principles they follow and therefore their conception of *pada*.

The analysis performed by *Padapāṭha*s is based on "phonological criteria that involve syntactic units" (Cardona 2012: 53): they identify *sandhi*s occuring in specific places within continuous speech and replace them by pauses of two kinds: 1) one pause graphically marked by "|", which corresponds to a silence two morae in length (e.g. *agním | ī̄ḷe | puráḥ-hitam |* from *agním ī̄ḷe puróhitam* (ṚV 1.1.1) "I praise Agni set at the fore"), 2) one pause graphically marked by "-", which corresponds to a silence one mora in length (e.g. *agním | ī̄ḷe | puráḥ-hitam |*). The two-pause distinction reveals a subdivision of the *pada*-category: the category of external *pada*s, marked by "|", and the category of internal *pada*s, marked by "-". This subdivision of the *pada* class is explained by the distinction between two kinds of junction: a word-junction in the first case and a constituent- or a morpheme-junction in the second case. Both kinds of pause are generally made where the phonetic alterations Western scholars call "external sandhi" apply (cf. Macdonell 1995: 20). The places within continuous speech where these phonetic alterations occur were perceived, and then analysed, as corresponding to the end of a specific linguistic unit identified by the name *pada*.

The analysis of some sequences, especially compounds, reveals two more features of *pada*-units. First, as already noted by Cardona (2014: 91-92), the fact that the break is made only at the last junction of the derivation and even where there is no phonetic alteration, as in *prajā́-patiḥ* (ṚV 4.53.2 "master (*-patiḥ*) of creatures (*prajā́-*)", which is composed of three units *pra-*, *jā-* and *pati-*), indicates that authors of *Padapāṭha*s conceived of *pada*s as syntactic units, that is to say as "segments terminating with nominal or verbal endings *or which, in a derivational system, at one point contained such endings*" (italics are mine).[6] This is confirmed by the fact that, if the first member (or both members) of a compound is not used independently in the ṚV, it is not analysed in *Padapāṭha*s (see Jha 1992: 173). Hence, *Padapāṭha*s authors' conception of *pada*s is based on phonological as well as derivational considerations.[7] Second, as shown by Abhyankar (1974:10), breaks in compounds occur when the constituent parts are considered capable of expressing their separate meanings individually. Hence, there is no break in compounds used as proper names, such as *viśvámitra* (ṚV 3.53.9). Therefore, *pada*s are considered as meaningful units.

Pāṇini, who mentions Śākalya, the author of the *Padapāṭha* of the *Ṛgvedasaṃhitā*, inherits the subdivision in external and internal *pada*s (cf. Aussant forthcoming).

2.1.2. The *Aṣṭādhyāyī* of Pāṇini

The founding text of Vyākaraṇa is the *Aṣṭādhyāyī* ("The Eight-Chaptered") of Pāṇini (5th century BC). Brahmin and subject of a satrapy of the Persian empire, Pāṇini presumably composed his grammar at a time when some of the foundations of the Brahmanical society were being questionned by emerging Buddhism and Jainism. These philosophico-religious trends challenged, among others things, the supremacy of the Sanskrit language which, in

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[6] Secondary derivatives, which are analysed as derived from a syntactical pattern involving inflected forms, are submitted to the same analysis (e.g. *gó-mān* (ṚV 4.2.5), which is conceived as derived from *gāvo 'sya santi* "he to whom (*'sya*) cows (*gāvo*) belong (*santi*)").

[7] Note that Jha (1987: 20-23, 1992: 22-25), Kulkarni (1995: 9 *et al.*) and more recently Bhide (2015: 51) have pointed out the striking similarity which can be observed between the analysis adopted by authors of *Padapāṭha*s and the one achieved by the Western Immediate Constituents Analysis (ICA)—at the level of words, at least (Jha 1992: 67). The procedure is the following: if the case ending is not segmentable, the segmentation occurs before the previous constituent (e.g. *prajā́-vatīṣu* (ṚV 7.1.11), where *-su* is not segmented because it follows a long vowel). If this second constituent is not analysable, the separation is applied to the previous constituent, etc.

contrast to the Hindus, is not their holy language. Pāṇini's treatise was the basis for the establishment of a school of grammar of the same name, creating an institution which—at least as far as we can see from the texts which have reached us—largely dominated up to the 18th century. As for some other ancient Indian disciplines, the success of the *Aṣṭādhyāyī* eclipsed the works of other schools. Last but not least, Pāṇini's grammar settles, during the centuries following its composition, the norm of a language later named Sanskrit.

This treatise consists of some 4,000 *sūtra*s ("aphorisms"; the term is generally translated by "rules") which made up the grammar *stricto sensu*. On a practical level, Pāṇini's grammar provides abstract procedures for forming words (*pada*) with affixes (*pratyaya*); for more details, see Cardona (1980: 234-236). These affixes are directly introduced (under meaning conditions and co-occurrence conditions) in some of the 4,000 rules, unlike most of the bases with which they combine and which are either verbal roots (*dhātu*) or nominal bases (*prātipadika*). Verbal roots are listed in the *Dhātupāṭha* ("recitation of verbal roots"), whereas nominal bases are introduced in diverse ways. Verbal and nominal bases constitute the two main formal starting points[8] for the derivational process which is found throughout Pāṇinian rules, making it possible to generate more and more complex units up to correct Sanskrit sentences (*vākya*). For a concrete illustration of sentence derivation, see Pinault (1989). At first glance, the *Aṣṭādhyāyī* appears to have not been composed to be read from beginning to end: there is neither progression nor continuity in the linguistic facts it describes. Frequently, rules which are to be applied together are found in sections separated by several rules, or even by several sections. As a consequence, the word class definitions are not systematically followed by the operations (or "accidents") the classes undergo. Such a framework is explained by the fact that, except for the rules which strictly concern totally different groups of units (such as nouns and verbs) and for which the order of application is unimportant, the order of rules' application is mostly relevant. The fact remains that it is often governed, more than by the linguistic content, by: 1) the functions of the rules (general *vs* specific—*utsarga*/*apavāda*—, necessary *vs* non-necessary—*nitya*/*anitya*—, internal *vs* external—*antar-aṅga*/*bahir-aṅga*), 2) the fact that the application of one rule must precede the application of another rule, 3) the avoidance of repetition in the formulation of the rules. Whatever the explanation of the ordering may be, the core of Pāṇini's grammar concerns the derivation of words (always within the context of a sentence), a topic treated in the third, fourth and fifth sections, those that are the most consistent from the point of view of the order of the rules.

The *Aṣṭādhyāyī* of Pāṇini is the first attempt at a complete description of a language—which encompasses, within a synchronic perspective, the sacred language named *chandas* (i.e. Vedic Sanskrit) and the non-sacred common language named *bhāṣā* (i.e. classical Sankrit)—in the form of a generative grammar (cf. Gillon 2007), characterised by an extremely condensed formulation, a high level of formalism and very sophisticated metalinguistic tools (terms and devices). To give an example of Pāṇinian *sūtra*, one can quote the rule *iKo yaN aCi* "y, v, r and l are the substitutes of *i*, *u*, *ṛ* and *ḷ* before a vowel", where: 1) the operation of substitution (which is a pivotal operation in the *Aṣṭādhyāyī*) is indicated in the following way: the substitute is marked by the nominative case and the item which is substituted is marked by the genitive case (this technique makes it possible to avoid the use of a verb like "to replace"; 2) phonemes are denoted by abbreviations (*pratyāhāra*): *iK* stands for *i*, *u*, *ṛ* and *ḷ*, *yaN* stands for *y*, *v*, *r* and *l* (thanks to the rule *ādir antyena sahetā* (1.1.71),[9] a certain number of abbreviations (the *Aṣṭādhyāyī* uses 41 of them) can be formed, like *aC* which denotes the groups of vowels and *haL*, the groups of consonants); 3) the right context of an operation is

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[8] Note that the very first step, in the Pāṇinian derivational system, is a weak semantic level, closely related to syntax: nouns and verbs are derived bearing a clear relationship to the utterance of which they are a constituent (cf. Cardona 1997: 136-185).

[9] "An initial item joined with a final marker denotes not only itself but also all intervening items".

marked by the locative case: *aCi* "before a vowel" (the left context is marked by the ablative case). For a detailed description of the *Aṣṭādhyāyī*, see Cardona (1997).

2.1.3. The *Mahābhāṣya* of Patañjali

Patañjali (2nd century BC) is the author of the *Vyākaraṇamahābhāṣya* ("The Great commentary on the analysis [of words]", more generally named *Mahābhāṣya*). This monumental work quotes and discusses 4,300 *vārttika*s ("Remarks on the procedure" or scholia) composed by Kātyāyana,[10] the most ancient commentary on Pāṇini's grammar which has come down to us and which is known only through Patañjali's gloss. The *Mahābhāṣya*, which takes the form of controversies between a student (*śiṣya*), a master who knows only a part of the topics addressed (*ācāryadeśīya*) and a master who establishes the final true view (*ācārya*, *siddhāntin*), concerns slightly more than 1,700 Pāṇinian *sūtra*s on the whole. Through these scholastic debates, the content as well as the validity of the *sūtras* and of the *vārttika*s is carefully studied; examples as well as counter-examples are given to illustrate them. The discussion ends with the acceptance or the rejection of Kātyāyana's amendments, when it is not left to the reader to draw the conclusion.

Patañjali is the latest member—hence embodies the highest authority—of what is traditionally called the "triad of wises" (*munitraya*), the first two members being Pāṇini and Kātyāyana (about this triad and the notion of authority in the Pāṇinian tradition, see Deshpande 1998). He is unanimously considered as the most prominent commentator of the Pāṇinian work. His *Mahābhāṣya*, which is written in a simple but vigorous prose, constitutes a valuable dialectic instrument: thanks to it, the reader has access to the heart of Pāṇinian thought. Patañjali's work has been subjected to numerous commentaries, mostly incomplete, with the exception of Kaiyaṭa's *Pradīpa* ("The Lamp [of the Great commentary]", 2nd century). The *Mahābhāṣya* is a fundamental work because, on the one hand, it provides a "state of the art" of the questions related to language addressed at that time in the Brahmanical "milieu"[11] and, on the other hand, it contains the seeds of the issues which will be thought of and discussed during the following centuries. For an overview of these issues, cf. Coward and Kunjunni Raja 1990 (115-119).

2.1.4. The *Vākyapadīya* of Bhartṛhari

Bhartṛhari (5th century) is the author of the *Vākyapadīya* ("Work dealing with sentences and words") as well as of the *Mahābhāṣyadīpikā* ("Light on the Great commentary"), the earliest commentary on the *Mahābhāṣya* of Patañjali, which has survived in part. Bhartṛhari is traditionally depicted as *the* philosopher of grammar. Considering himself a grammarian (of the Pāṇinian school), he indeed created an original philosophy which borrows various elements from other disciplines of his time (cf. Bronkhorst 1998c: 764). His philosophy, which implies that the study of grammar would provide access to salvation,[12] goes well beyond the scope of grammar and deeply influenced later thinkers, Hindu as well as Buddhist. Bhartṛhari would have written the *Mahābhāṣyadīpikā* before the *Vākyapadīya*. In the latter text, the grammarian-philosopher adresses various topics which concern general Linguistics (such as the notions of sentence, word, action, tense, gender and number, the ways of understanding meaning, the meaning of linguistic units, the phenomenon of autonymy, etc.) as well as pure Sanskrit grammar (such as derivation, composition, etc.) in making reference to different positions defended at his time on the same topics. This perspectivist approach (the

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[10] Patañjali nevertheless comments directly 468 Pāṇinian *sūtra*s.

[11] Patañjali's thought was not influenced by the classical systems of Indian philosophy, "with the possible exception of Sarvāstivāda Buddhism" (cf. Bronkhorst 1998a).

[12] Cf. Cardona (1980: 300): "Grammar, as a means for discriminating correct (*sādhu*) from incorrect (*asādhu*, *apabhraṃśa*) usage, is a means of attaining ultimate release (*apavarga*), what we call salvation."

views of other schools of thought are not brought in for the sake of refutation but in a spirit of accomodation, cf. Subramanya Iyer 1992: 75) is a salient feature of Bhartṛhari's work, though Patañjali already paid attention to various points of view (cf. Cardona 2009: 121).

One of the key ideas in Bhartṛhari's philosophy is that any whole is more real than its constituents. On the linguistic level, this means that, among the three classes of units which constitute language (*varṇa* "phoneme", *pada* "word", *vākya* "sentence"), only the sentence is the primary linguistic unit; phonemes, stems, suffixes and words are inventions of grammarians. Another key idea developped by Bhartṛhari—but already formulated by Patañjali, though slightly differently and not on the same scale—is that linguistic units can be conceived of as different from the sounds that reveal them (cf. Bronkhorst 1998b: 382) and, as such, they are called *sphoṭa*. As noted by Subramania Iyer (1992: 160), the notion of *sphoṭa* is the grammarians' answer to the problem raised by the understanding of a meaning from sounds which are uttered in a temporal sequence (and, therefore, which cannot co-operate to convey the meaning). Bhartṛhari innovates in making *sphoṭa* the meaning-bearer (cf. §2.2.1), thus inaugurating a long series of debates, inside as well as outside grammar (cf. Bronkhorst 1998b: 382-383). For an overview of arguments for and against the *sphoṭa* resorted to in premodern India, cf. Gaurinath Sastri (1980); for more information on *sphoṭa*, cf. Coward (1980) and Matilal (1990: 77-105).

2.1.5. The *Siddhāntakaumudī* of Bhaṭṭoji Dīkṣita
Bhaṭṭoji Dīkṣita (late 16th century, early 17th century) is one of the late major figures of the Pāṇinian school, which he helped to renew. He composed various works on different topics, four of which are related to grammar: the *Śabdakaustubha* ("The jewel of words"), which is a commentary on Pāṇini's *Aṣṭādhyāyī*; the *Vaiyākaraṇamatonmajjana* ("The advent of grammarians' views"), which consists in a collection of 76 stanzas dealing with syntax, semantics and philosophy of language; the *Siddhāntakaumudī* ("The moonlight of the conclusions"), which is a re-arrangement of Pāṇini's *Aṣṭādhyāyī* with a commentary; and the *Prauḍhamanoramā* ("The one which delights the spirit of advanced [students]"), an extensive commentary on the *Siddhāntakaumudī*.
Bhaṭṭoji Dīkṣita is widely known for his *Siddhāntakaumudī*. This work does indeed represent a turning point in the Sanskrit grammatical tradition: it is the most accomplished arrangement of Pāṇinian rules by topic (or *prakriyā*, cf. §1.2 "Grammar"). Grammars arranged by topic are mainly organized according to kinds of *pada*: the rules which introduce constituent units of one kind of *pada* as well as the rules which teach operations which apply inside the *pada*'s boundaries are gathered together (contrary to the *Aṣṭādhyāyī*, cf. §2.1.2). The *Siddhāntakaumudī* brought the *prakriyā* method to such a level of refinement—including all the Pāṇinian rules, but also Kātyāyana's *vārttika*s and some of Patañjali's observations—that it was very successful and eclipsed Pāṇini's grammar itself (Indian scholars who are traditionally trained today still learn grammar through the *Siddhāntakaumudī* first).

2.1.6. Nāgeśa's works
Nāgeśa (late 17th century, early 18th century) is traditionally considered the last great representative of the Pāṇinian school. He is the author of several works, some related to grammar and some others related to disciplines such as poetry, dialectics and yoga. His grammatical works include commentaries, such as the *Uddyota* ("The Light [of the lamp of the Great commentary]") which is a commentary on Kaiyaṭa's *Pradīpa* and the *Śabdenduśekhara* ("The moon crest of words") which is a commentary on Bhaṭṭoji Dīkṣita's *Prauḍhamanoramā*, but also independant treatises, such as the *Paribhāṣenduśekhara* ("The moon crest of metarules") which critically examines 133 metarules, as well as the *Vaiyākaraṇasiddhāntamañjūṣā* ("The chest of grammarians' conclusions", in three recensions

of different length), which provides a synthesis of the main ideas related to the philosophy of grammar, ideas initiated by Patañjali and largely developped by Bhartṛhari.

Faithful to the Pāṇinian tradition, Nāgeśa nevertheless does not hesitate to make reference to some ideas from other disciplines. For instance, when he describes the word-meaning relation as being threefold—primary (*śakti*), secondary (*lakṣaṇā*), suggestive (*vyañjanā*)—he makes reference to a classification initially found in poetry and, saying that *śakti* is threefold—conventional (*rūḍhi*), derivative (*yoga*), conventional-derivative (*yogarūḍhi*)—he makes reference to a classification initially found in dialectics (note that grammarians disagree with both of these views, cf. §2.2.3). In his *Sphoṭavāda*, an independent treatise on *sphoṭa*, Nāgeśa defines *sphoṭa* as "that from which the meaning bursts forth" and mentions an eightfold classification of it: 1) phoneme, 2) word, 3) sentence, 4) indivisible word, 5) indivisible sentence, 6) phoneme-universal, 7) word-universal, 8) sentence-universal (for more details on this classification, cf. Matilal 1990: 104). Nāgeśa indicates that this classification presents the conceptions of grammarians regarding *sphoṭa* but, in his *Paramalaghumañjūṣā*, he says that the sentence-*sphoṭa* is the most important. According to Bronkhorst (1998b: 383), Nāgeśa's vacillations regarding *sphoṭa* can be explained by the conflict which lies between two grammatical views: 1) grammatical derivations, for several reasons, cannot presuppose that stems and affixes are imaginary units *vs* 2) only the sentence is real.

2.2. Main topics addressed

2.2.1. Minimal meaning-bearer units

The search for minimal meaning-bearer units—brought together with the question of their real existence—has been a topic of great interest, for grammarians as well as for thinkers from other schools (cf. Bronkhorst 1998b: 380-383).

Some thinkers claimed that phonemes are meaning-bearers (cf. *Vākyapadīya* stanza 2.62: "Just as a minute perceptible object, when associated with something else, is perceived with it, in the same way, a phoneme becomes expressive [of a meaning] when it is associated with other phonemes", translation by Subramania Iyer 1977). For Pāṇini and some other grammarians, the minimal meaning-bearer units are verbal roots, nominal stems and affixes: *arthavad adhātur apratyayaḥ prātipadikam* (1.2.45) "[The unit] which is *meaningful*, which is neither a verbal root nor an affix [is called] *prātipadika* ('nominal stem')" (italics are mine). Some other thinkers consider that finished words (*śabda* or *pada*) are meaning-bearer units; this view can be inferred from definitions of the sentence such as "[the sentence is] a collection of words" (*śabdasaṃghātaḥ*) or "[the sentence is] the first word" (*padam ādyam*), which are quoted by Bhartṛhari in his *Vākyapadīya* (stanzas 2.1-2). What is interesting to note regarding such conceptions is the analysis of the way words express their meaning within the sentence of which they are part. According to one analysis (called *abhihitānvaya*), the words of a sentence first convey their own meaning; these meanings subsequently relate syntactically to each other and produce the sentence meaning. According to another analysis (called *anvitābhidhāna*), the words of a sentence convey their own meaning *as well as* their syntactic relation to each other (for more details on these analyses, cf. Kunjunni Raja 1963, chapter 5). According to Bhartṛhari and some later grammarians (such as Nāgeśa, cf. §2.1.6), the minimal meaning-bearer unit is the *vākya-sphoṭa*, i.e. the sentence-*sphoṭa* (cf. §2.1.4).

2.2.2. Classes of words

The analysis of language into units seems to have been fundamental in all traditions of language study. Indeed, in each *Vedāṅga* related to language as well as in the other Sanskrit language sciences, one finds at least one classification of words (*pada*).

Classifying words is an activity which is neither self-explanatory nor consistent: the classifier (whether an individual scholar, a school of thought, or a trend) has an epistemological aim and we must consider the regularities (in other words, the classes) established on this basis. An accurate study (cf. Aussant 2016a) shows that words (and nouns especially) are more often classified according to semantic criteria in the language sciences of premodern India. This can be explained by the importance given to the relation between the word and its meaning: what understanding a word triggers and how it does so constitutes a central topic of thought for ancient Indian theoreticians of language. Moreover, and unsurprisingly, one notes that grammar resorts to the widest range of word classifications, according to criteria which are: 1) formal (for instance, the Pāṇinian distinction between noun—*sUB-anta* "[A unit] that terminates in a nominal [ending]"—and verb—*tiṄ-anta* "[A unit] that terminates in a verbal [ending]"—and their 29 subclasses, cf. Aussant 2016b), 2) semantic, i.e. ontological (nouns denoting a class, a quality, an action or a substance) and semiological (words having a generic property, a quality, an action or the wish of the speaker as connotation), 3) pragmatic (for instance, the distinction between words of spoken language—*bhāṣā*—and words of sacred literature—*chandas*—).

2.2.3. Relation between word and meaning

According to premodern Indian thinkers, the "designating relation" (*vṛtti*) may have two forms: 1) a primary designating relation, called *śakti* (by grammarians and dialecticians), *abhidhā* (by exegetes and poeticians) or still *mukhya*, 2) a secondary designating relation, called *lakṣaṇā* or *gauṇa*. Grammarians and exegetes consider the primary designating relation as being innate (*autpattika*), natural (*svābhāvika*) and not relying on a soul (*apauruṣeya*);[13] dialecticians, on the contrary, consider it as being dependent on a convention (*saṃketa*), divine (according to ancient dialecticians) or human (according to neo-dialecticians). Unlike other thinkers, grammarians uphold that the word has only one designating relation (the *śakti*), whatever its uses: secondary or figurative meaning does not result from any particular signification function. Some later Pāṇinīyas like Nāgeśa explain the difference between various meanings of a word—which are all considered as primary—saying that some are well-known (*prasiddha*) while others are not or less well-known (*aprasiddha*), cf. Aussant 2014a: 29-30.

2.2.4. Primary referent of nouns

The ongoing question related to the primary referent of nouns—whatever the school of premodern Indian thinkers is, with the exception of Buddhist logicians, cf. Kunjunni Raja (1963: 78-94)— has been to determine whether this primary referent was particular (e.g. "cow" denotes a specific cow) or universal (e.g. "cow" denotes cowness). Different key issues are tightly related to this question, such as the relation between language and reality (in the case of evolutive referents or referents which do not yet exist —"weave a cloth!"— in the case of general rules or Vedic injunctions, etc.) or the nature of the primary designating relation (natural or conventional, cf. §2.2.3).

Different views have been claimed by grammarians: some, like Vyāḍi (cf. Scharfe 1977: 124-126), considered that the primary referent of a noun is the particular (*dravya*); some others, like Vājapyāyana, considered that it is the universal or the generic property (*jāti*) while some others, like Patañjali, considered that it is both the particular and the universal/generic property, one being principal and the other subordinate according to the speaker intention (*vivakṣā*). In addition to these three cardinal theses, some other views were discussed by

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[13] This did not prevent grammarians from thinking about issues related to conventional relations, such as proper names and metalinguistic terms. See Aussant (2009) for more details on this point.

grammarians: a) the noun would denote the generic property, the individual and the gender, b) it would denote these three items plus the number, c) it would denote these four items plus the semantic role the noun takes on within the sentence (cf. Aussant 2014b: 273-275). According to dialecticians of the old school, a noun primarily denotes the particular (*vyakti*), its generic configuration (*ākṛti*) and its generic property (*jāti*); dialecticians of the new school slightly modify this view (cf. Kunjunni Raja 1963: 70-71). According to exegetes, the noun primarily denotes the class property (*ākṛti*), which is common to all the particular instances of one class and only to them. For more details about the denotation of (generic) nouns, see Scharf (1996).

Bibliography

- Abhyankar, K.V., 1974. *Veda-padapāṭha-carcā, together with the text of Upalekhasūtram of Bhāradvāja Bṛhaspati edited with explanation in English*, Poona, Bhandarkar Oriental Research Institute.
- Abhyankar, K.V. and Devasthali, G.V., 1978. *Vedavikṛtilakṣaṇa-saṃgraha (A collection of twelve tracts on Vedavikṛtis and allied topics)*, Compiled and critically edited with Introduction and variant readings, Poona, Bhandarkar Oriental Research Institute.
- Allen, W.S., 1953. *Phonetics in Ancient India*, London, Oxford University Press.
- Auroux, S., 1992. "Le processus de grammatisation et ses enjeux", in Auroux, S. (ed.), *Histoire des idées linguistiques* vol. II, Liège, Mardaga, pp.11-64.
- Auroux, S., 1994. *La révolution technologique de la grammatisation*, Liège, Mardaga.
- Arjunwadkar, K.S., 1992. *Maraṭhi Vyakaraṇaca Itihas [A history of Marathi Grammar]*, Mumbai, Mumbai Vishva Vidyalay.
- Aussant, E. 2009. *Le nom propre en Inde. Considérations sur le mécanisme référentiel*, Lyon, ENS Editions.
- Aussant, E., 2012. "Pāṇinian Features of the Oldest Known Malayāḷam Description", in Cardona, G., Aklujkar, A. and Ogawa, H. (eds.), *Studies in Sanskrit Grammars - Proceedings of the Vyākaraṇa Section of the 14th World Sanskrit Conference*, New Delhi, D.K. Printworld, pp.87-101.
- Aussant, E., 2014a. "Sanskrit Theories on Homonymy and Polysemy", *Bulletin d'Études Indiennes* 32, pp.13-36.
- Aussant, E., 2014b. "Les grammairiens indiens du sanskrit et le sens des mots", in Archaimbault, S., Fournier, J.-M. & Raby, V. (dir.), *Penser l'histoire des savoirs linguistiques. Hommage à Sylvain Auroux*, Lyon, ENS Éditions, pp.273-283.
- Aussant, E., 2016a. *Classifications of words in traditional Sanskrit grammar and related disciplines*. Habilitation (HDR) dissertation. 95 p.
- Aussant, E., 2016b. "Classifications of Words in Ancient Sanskrit Grammars", in *History of Linguistics 2014: Selected papers from the 13th International Conference on the History of the Language Sciences (ICHoLS XIII), Vila Real, Portugal, 25–29 August 2014*, ed. by C. Assunção, G. Fernandes & R. Kemmler, Amsterdam & Philadelphia, John Benjamins, Studies in the History of the Language Sciences 126, pp.97-109.
- Aussant, E. (dir.), 2017. "La Grammaire Sanskrite Étendue" (thematic issue), *Histoire Epistémologie Langage* 39.2.
- Aussant, E., forthcoming. "Les *pada* et leurs classifications : un point d'entrée pour étudier l'émergence et le développement de la tradition grammaticale sanskrite", in Aussant, É. and Colas, G. (eds.), *Les scolastiques indiennes : naissances, développements, interactions*, Paris/Pondicherry, EFEO/IFP.

- Balbir, N., 2000. Notices from the *Corpus des Textes Linguistiques Fondamentaux* (http://ctlf.ens-lyon.fr): Vararuci (notice 4331), Puruṣottama (notice 4335), Hemacandra (notice 4336), Mārkaṇḍeya (notice 4340).
- Bandyopadhyay, A., 2011. *A History of Bengali Grammar*, Delhi, Sanskrit Pustak Bhandar.
- Belvalkar, S.K., 1915. *An account of the different existing systems of Sanskrit grammar*, Poona, Aryabhushan Press.
- Bhatia, T., 1987. *A History of the Hindi Grammatical Tradition - Hindi-Hindustani Grammar, Grammarians, History and Problems*, Leiden, E.J. Brill.
- Bhide, P.R., 2015. *IC Analysis in Modern Sanskrit Lexicography with special reference to Encyclopaedic Dictionary of Sanskrit on Historical Principles*, PhD Thesis (Dir.: M. Kulkarni), Indian Institute of Technology Bombay, Department of Humanities and Social Sciences.
- Bloomfield, L., 1933. *Language*, New York, Henry Holt.
- Bronkhorst, J., 1998a. "Patañjali", in Craig, E. (ed.), *Routledge Encyclopedia of Philosophy* vol. 7, pp.248-250.
- Bronkhorst, J., 1998b. "Indian Theories of Language", in Craig, E. (ed.), *Routledge Encyclopedia of Philosophy* vol. 7, pp.379-384.
- Bronkhorst, J., 1998c. "Bhartṛhari", in Craig, E. (ed.), *Routledge Encyclopedia of Philosophy* vol. 7, pp.764-766.
- Bronkhorst, J., 2014. "Deviant voices in the history of Pāṇinian grammar", *Bulletin d'Études Indiennes* 32, pp.47-53.
- Bronner, Y., 2012. "Sanskrit Poetics", in Greene, R. and Cushman, S. (eds.), *The Princeton Encyclopedia of Poetry and Poetics*, 4th ed., Princeton, Princeton University Press, pp.1244-1250.
- Cardona, G., 1980. *Pāṇini – A survey of research*, Delhi/Varanasi/Patna, Motilal Banarsidass (1st ed.: The Hague, Mouton, 1976).
- Cardona, G., 1997. *Pāṇini. His work and its traditions, volume I : Background and Introduction*, 2nd revised and completed edition, Delhi, Motilal Banarsidass (1st edition: 1988).
- Cardona, G., 2008. "Theoretical Precedents of the Kātantra", in Kaul, M. and Aklujkar, A. (eds.), *Linguistic Traditions of Kashmir. Essays in Memory of Pandit Dinanath Yaksh*, New Delhi, D.K. Printworld, pp.300-367.
- Cardona, G., 2009. "Bhartṛhari and Patañjali: Traditions Preserved", in Chaturvedi, M. (ed.), *Bhartṛhari, Language, Thought and Reality*, Delhi, Motilal Banarsidass, pp.119-161.
- Cardona, G., 2012. "Pāṇini and Padakāras", in F. Voegeli, V. Eltschinger, D. Feller, M.P. Candotti, B. Diaconescu & M.A. Kulkarni (ed.) *Devadattīyam – Johannes Bronkhorst Felicitation Volume*, Bern, Peter Lang, pp.39-61.
- Cardona, G., 2014. "Segmentation of Vedic texts : padapāṭhas", *Bulletin d'Études Indiennes* 32 (Proceedings of the workshop "The Indian Traditions of Language Studies", *ICHoLS XI*, Potsdam, ed. by É. Aussant and J.-L. Chevillard), pp.87-100.
- Cardona, G. and Jain, D., 2007. *The Indo-Aryan Languages*, London & New York, Routledge, Language Family Series (1st ed.: 2003).
- Chevillard, J.-L., 2000a. "Les débuts de la tradition linguistique tamoule", in Auroux, S., Koerner, E.F.K, Niederehe, H.-J. and Versteegh, K. (eds.), *History of the Language Sciences, An International Handbook on the Evolution of the Study of Language from the Beginnings to the Present*, Berlin/New York, Walter de Gruyter, pp.191-194.
- Chevillard, J.-L., 2000b. "Le *Tolkāppiyam* et le développement de la tradition linguistique tamoule", in Auroux, S., Koerner, E.F.K, Niederehe, H.-J. and Versteegh, K. (eds.), *History of the Language Sciences, An International Handbook on the Evolution of the Study of*

Language from the Beginnings to the Present, Berlin/New York, Walter de Gruyter, pp.194-200.

- Chevillard, J.-L., 2000c. "Les successeurs du *Tolkāppiyam* : le *Naṉṉūl*, le *Vīracōḻiyam* et les autres écoles", in Auroux, S., Koerner, E.F.K, Niederehe, H.-J. and Versteegh, K. (eds.), *History of the Language Sciences, An International Handbook on the Evolution of the Study of Language from the Beginnings to the Present*, Berlin/New York, Walter de Gruyter, pp.200-202.

- Chevillard, J.-L., 2000d. Notices from the *Corpus des Textes Linguistiques Fondamentaux* (http://ctlf.ens-lyon.fr): Tolkāppiyaṉār (notice 4351), Iḷampūraṇar (notice 4352), Puttamittiraṉār (notice 4353), Kuṇavīrapaṇṭitar (notice 4354), Pavaṇanti Muṉivar (notice 4355), Mayilai Nātar (notice 4356), Cēṉāvaraiyar (notice 4357), Nacciṉārkkiṉiyar (notice 4358), Cuppiramaṇiya Tīṭcitar (notice 4359), Civañāṉa Muṉivar (notice 4360).

- Chevillard, J.-L., 2009. "Elementary Grammatical Devices in Classical Tamil Grammar", in Hummel, P. (ed.), *Epilanguages, Beyond Idioms and Languages*, Paris, Editions Philologicum.

- Coward, H.G., 1980. *The sphoṭa Theory of Language*, Delhi/Varanasi/Patna, Motilal Banarsidass.

- Coward, H.G. and Kunjunni Raja, K. (eds.), 1990. *Encyclopedia of Indian Philosophies - Vol. V, The Philosophy of the Grammarians*, Delhi/Varanasi/Patna/Bangalore/Madras, Motilal Banarsidass.

- David, H., to be published. "Les définitions de l'énoncé (*vākya*) dans la tradition sanskrite : entre grammaire et exégèse", in Raby, V. (dir.), "L'énoncé dans les traditions linguistiques : *logos, vākya, kalām, oratio* et les autres", *Langages* 205 (2017/1).

- De, S.K., 1960. *History of Sanskrit Poetics*, Calcutta, K.L. Mukhopadhyay, 2 vols.

- Deshpande, M.M., 1998. "Evolution of the notion of authority (*prāmāṇya*) in the Pāṇinian tradition", *Histoire Épistémologie Langage* 20.1, pp.5-28.

- Deshpande, M.M., 2000. "Indian Theories on Phonetics", in Auroux, S., Koerner, E.F.K., Niederehe, H.-J., Versteegh, K. (eds.), *History of the Language Sciences, An International Handbook on the Evolution of the Study of Language from the Beginnings to the Present*, Berlin/New York, Walter de Gruyter, pp.137-146.

- Emeneau, M.B., 1988. "Bloomfield and Pāṇini", *Language* 64.4, pp.755-760.

- Ezhuthachan, K.N., 1975. *The history of the grammatical theories in Malayalam (part I)*, Trivandrum, Dravidian Linguistics Association.

- Gaurinath Sastri, 1980. *A study in the Dialectics of* Sphoṭa, Delhi, Motilal Banarsidass.

- Gerow, E., 1971. *Indian Poetics*, Wiesbaden, O. Harrassowitz (A History of Indian Literature).

- Gerschheimer, G., 1996. *La théorie de la signification chez Gadādhara*, 2 vol., Paris, Publications de l'Institut de civilisation indienne, Diffusion De Boccard.

- Gillon, B., 2007. "Pāṇini's *Aṣṭādhyāyī* and Linguistic Theory", *Journal of Indian Philosophy* 35.5, pp.445-468.

- Grierson, A.G., 1918. "The Prakrit Vibhasa", *Journal of the Royal Asiatic Society*, pp. 489-517.

- Harris, Z., 1954. "Transfer Grammar", *International Journal of American Linguistics* 20.4, p. 259-270.

- Hock, H.H., 2016. "Indo-Aryan grammatical traditions (Sanskrit and Prakrit)", in Hock, H.H. and Bashir, E. (eds.), *The Languages and Linguistics of South Asia – A comprehensive guide*, Berlin, De Gruyter, p. 707-716.

- Jha, G., 1942. *Pūrvā-Mīmāṃsā in Its Sources*, with a critical bibliography by U. Mishra, Benares, Benares Hindu University (Library of Indian Philosophy and Religion, 1).

- Jha, V.N., 1987. *Studies in the Padapāṭhas and Vedic Philology*, Delhi, Pratibha Prakashan.

- Jha, V.N., 1992. *A Linguistic Analysis of the Ṛgveda-Padapāṭha (Pre-Pāṇinian Grammatical Traditions, Part I)*, Delhi, Sri Satguru Publications.

- Kahrs, E., 1998. *Indian Semantic Analysis: The Nirvacana Tradition*, Cambridge, Cambridge University Press (Oriental Publications 55).

- Kulkarni, N.R., 1995. *A Grammatical Analysis of the Taittirīya-Padapāṭha (Pre-Pāṇinian Grammatical Traditions, Part II)*, Delhi, Sri Satguru Publications.

- Kulli, J.S., 1991. *History of Grammatical Theories in Kannada*, Tiruvanantapuram.

- Kulli, J.S., 1997. "Grammars-Kannada", in Subramoniam, V.I. (ed.), *Dravidian Encyclopedi*a Vol. III, Thiruvananthapuram, pp.244-246.

- Kunjunni Raja, K., 1963. *Indian Theories of Meaning*, Madras, The Adyar Library and Research Center.

- McCrea, L., 2000. "The Hierarchical organization of language in Mīmāṃsā interpretive theory", *Journal of Indian Philosophy* 28, pp.429-459.

- Macdonell, A.A., 1995. *A Vedic Grammar for Students*, Delhi, Motilal Banarsidass (1st Indian edition: 1993; 1st edition: 1916, Oxford, The Clarendon Press).

- Matilal, B.K., 1977. *Nyāya-Vaiśeṣika*, Wiesbaden, O. Harrassowitz (A History of Indian Literature).

- Matilal, B.K., 1990. *The Word and the World. India's Contribution to the Study of Language*, Oxford, Oxford University Press.

- Meenakshisundaram, T.P., 1974. *Foreign Models in Tamil Grammar*, (= *Dravidian Linguistics Association Publication*, 15), Trivandrum, University of Kerala.

- Miller, Roy A., 2000. "The Establishment of Tibetan Linguistics", in Auroux, S., Koerner, E.F.K, Niederehe, H.-J. and Versteegh, K. (eds.), *History of the Language Sciences - An International Handbook on the Evolution of the Study of Language from the Beginnings to the Present* vol. I, p. 203-206.

- Mone, M.S., 1927. *Marathiche Vyakarankar ani Vyakaran-prabandhakar [Marathi's Grammarians]*, Pune, Shrimant Holkar Sarkar Granthamala.

- Nitti-Dolci, L., 1938. *Les grammairiens prakrits*, Paris, Adrien-Maisonneuve.

- Patkar, M.M., 1981. *History of Sanskrit Lexicography*, Delhi, Munshiram Manoharlal.

- Pinault, G.-J., 1989. "Le système de Pāṇini", in Auroux, S. (ed.), *Histoire des idées linguistiques* Tome 1 ("La naissance des métalangages en Orient et en Occident"), Liège, Mardaga, pp.371-400.

- Pollock, S., 2007. *The language of the Gods in the world of men. Sanskrit, culture and power in premodern India*, Delhi, Permanent Black (1st ed.: University of California Press, 2006).

- Purushottam, Boddupalli, 1996. *The Theories of Telugu Grammar*, Tiruvanantapuram.

- Raghavan, V., 1974. "How many grammars?", in Chatterji, S.K. et al. (eds.), *Charudeva Shastri Felicitation Volume: Presented to Prof. Charudeva Shastri on the Occasion of His Seventy-fifth Anniversary by his Friends and Admirers*, Delhi, Charudeva Shastri Felicitation Committee, pp.271-278.

- Renou, L., 1947. *Les écoles védiques et la formation du Veda*, Paris, Cahiers de la Société Asiatique 9.

- Rogers, D.E., 1987. "The influence of Pāṇini on Leonard Bloomfield", *Historiographia Linguistica* 14.1/2, pp.89-138.

- Salomon, R., 1982. "The *Ukti-Vyakti-Prakaraṇa* as a Manual of spoken Sanskrit", *Indo-Iranian Journal* 24.1, pp.13-25.

- Sarveswara Sharma, P., 1973. "What the native grammarians say about Telugu language", *Zeitschrift der deutschen morgenländischen Gesellschaft*, Supplement II.XVIII, Leipzig/Wiesbaden, Deutscher Orientalistentag, pp.384-389.

- Scharf, P.M., 1996. *The Denotation of Generic Terms in Ancient Indian Philosophy: Grammar, Nyāya, and Mīmāṃsā*, Philadelphia, American Philosophical Society.
- Scharfe, H., 1977. *Grammatical Literature*, Wiesbaden, O. Harrassowitz (A History of Indian Literature).
- Shapiro, M.C., 2000. "The Hindi grammatical tradition", in *History of the Language Sciences - An International Handbook on the Evolution of the Study of Language from the Beginnings to the Present* vol. I, pp.178-181.
- Subrahmanya Sastri, P.S., 1997. *History of Grammatical Theories in Tamil*, Chennai, The Kuppuswami Sastri Research Institute.
- Subramanya Iyer, K.A., 1977. *The Vākyapadīya of Bhartṛhari, Kāṇḍa II*, English Translation with Exegetical Notes, Delhi/Varanasi/Patna, Motilal Banarsidass.
- Subramanya Iyer, K.A., 1992. *Bhartṛhari - A study of the Vākyapadīya in the light of ancient commentaries*, Poona, Deccan College (Deccan College Building Centenary and Silver Jubilee Series 68).
- Thieme, P., 1982-1983. "Meaning and form of the 'grammar' of Pāṇini", *Studien zur Indologie und Iranistik* 8/9, pp.3-34.
- Vergiani, V., 2013. "The adoption of Bhartṛhari's classification of the grammatical object in Cēṉāvaraiyar's commentary on the *Tolkāppiyam*", in Cox, W. and Vergiani, V. (eds.), Pondicherry, Institut français de Pondichéry & École française d'Extrême-Orient, pp.161-197.
- Verhagen, P.C., 2000a. "The classical Tibetan grammarians", in Auroux, S., Koerner, E.F.K, Niederehe, H.-J. and Versteegh, K. (eds.), *History of the Language Sciences - An International Handbook on the Evolution of the Study of Language from the Beginnings to the Present* vol. I p. 207-210.
- Verhagen, P.C., 2000b. "The influence of the Sanskrit tradition on Tibetan indigenous grammar", in Auroux, S., Koerner, E.F.K, Niederehe, H.-J. and Versteegh, K. (eds.), *History of the Language Sciences - An International Handbook on the Evolution of the Study of Language from the Beginnings to the Present* vol. I p. 210-214.
- Verpoorten, J.-M., 1987. *Mīmāṃsā Literature*, Wiesbaden, O. Harrassowitz (A History of Indian Literature).
- Vogel, C., 1979. *Indian Lexicography*, Wiesbaden, O. Harrassowitz (A History of Indian Literature).
- Zwartjes, O., 2011. *Portuguese Missionary Grammars in Asia, Africa and Brazil*, 1550-1800, Amsterdam/Philadelphia, John Benjamins (Studies in the History of the Language Sciences 117).
- Zwartjes, O. and Pytlowany, A., forthcoming. "Pre-modern Descriptions in Dutch of Languages in India: Ketelaar's grammar of Hindustani (1698) and Rüell's grammar of Sinhala (1700)".