A HISTORY
OF INDIAN LITERATURE

HARTMUT SCHARFE

GRAMMATICAL LITERATURE

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Contents of Vol. V

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CONTENTS

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CHAPTER I

THE ORIGINS

The power of speech/language *(vāc)* has intrigued Indian thinkers from the earliest times we know of.[1] Words were not merely the poet's tools, not only the magic keys by which the officiating priest opened the door to prosperity and heavenly bliss: often Speech was seen as a causal force behind even the gods and the universe. The Vedic verses dealing with Speech are couched in expressions as dark and mysterious as the power they praise: "Three parts which are hidden, mortals do not activate; the fourth part they speak" *guhā trīṇi [padāni] nihitā nêṃgayanti turīyaṃ vāco manuṣyā vadanti* (Ṛgveda I 164. 45cb).[2] When Speech was visualized as the cosmic Cow, her steps *(pada)* were first taken as the lines of the verse *(catuṣpadā triṣṭubh* Tait. S. III 2, 9, 1); advanced analysis saw in her steps the single words (Śat. Br. X 2, 6, 13[3]), and the (usually four) lines of a verse were henceforth called the 'feet' *(pāda*; e.g., Ait. Br. IV 4, cf. Greek πούς). *Akṣara*, originally perhaps 'the unmoving' part of the flow *(√kṣar)* of speech, came to denote the smallest element of speech recognized at that time, i.e. the syllable whose importance for the Vedic priests lay in the syllable counting nature of their metres;[4] the term became so popular

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[1] O. STRAUSS, ZDMG 81.99–105; L. RENOU, Études védiques et pāṇinéennes I (Paris, 1955), 1–27; A. PADOUX, Recherches sur la symbolique et l'énergie de la parole dans certains textes tantriques (Paris, 1963), 15–40; W.N. BROWN, in Pratidānam (Fs. F.B.J. KUIPER, The Hague, 1968), 393–397.

[2] A very original interpretation of this verse is Śat. Br. IV 1, 3, 16: one fourth of speech each for men, beasts, birds and small vermin. Note also Chānd. Up. I 1,2 *puruṣasya vāg rasaḥ* "the essence of man is speech."

[3] B. LIEBICH, Zur Einführung in die indische einheimische Sprachwissenschaft II (Heidelberg, 1919), p. 5; slightly different L. RENOU, JA 233.134–138.

[4] J.A.B. VAN BUITENEN, JAOS 79.176–187.

that we find it even in a rare colloquial form *akhkhalīkṛtya* 'syllabizing' in Ṛgveda VII 103, 3.[5] The mystical speculation on the power of speech and the efficacy of a properly chanted *mantra* is well documented in later Vedic texts; its heirs are probably the tantric systems attested since the middle ages but almost certainly much older than that.[6]

The interest in language deepened in the Brāhmaṇa period. Important words were frequently explained by relating them to a verb: *yad . . . aichaṃs, tad iṣṭīnām iṣṭitvam* "because they wished to . . ., the offerings are called *iṣṭi*" (Ait. Br. I 2, 1). This etymology is 'false' because *iṣṭi* 'offering' is historically derived from √*yaj* 'worship' and not from √*iṣ* 'desire' (from which there is a homonym *iṣṭi* 'desire'); but it underscores an aspect of every offering.[7] The etymology helps to fathom the full and 'real' meaning of a noun, but does not necessarily represent the 'grammatical' conviction of the author.[8] In time, this kind of etymology was to develop into a special auxiliary science *(vedāṅga) nirukta* 'etymology.'

The first branch of linguistics to attain independent status was the study of phonetics. The attempt to preserve the sacred texts in a strictly oral tradition (and to preserve not only the words but also their correct pronunciation!) led to an inquiry into the production of the sounds of speech. A few terms like *varṇa* 'sound' or *avasāna* 'pause' appear in the earliest Brāhmaṇa-s, and at the time of the Āraṇyaka-s and Upaniṣad-s the science was probably fully developed (vide Ait. Ār. III 5–6, Tait. Ār. VII, Chānd. Up. II 22, 3–5). The alphabet *(akṣara-samāmnāya)* consisted of vowels *(svara)*, stops *(sparśa)*, semivowels *(antastha* for **antas-stha)* and spirants *(ūṣman)*. One had recognized the role of voicing[9] and of mouth aperture, the nasalization of vowels and the nature of the stops as contact sounds as the name *sparśa* lit. 'contact' shows. Single sounds were named with an attached element *-kāra* 'maker' in analogy to older expressions like *hiṅ-kāra* 'the sound *hiṅ*' (which itself is based on still older verbal *hiṅṅ akṛṇot* 'made *hiṅ*' Ṛgveda I 164.28) or *vaṣaṭ-kāra* 'the exclamation *vaṣaṭ*'[10]: *a-kāra* '/a/', *ṇa-kāra* '/ṇ/' (consonant names employ an extra /a/ to facilitate pronunciation).[11] It is not surprising that the new science was usually referred to as just 'the study' *(śikṣā,* later *śikṣā*[12])*; its categories were fundamental for all further linguistic studies as was its pure interest in sounds rather than letters.

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[5] P. Thieme, KZ 71.109.

[6] A. Padoux, Recherches, p. 43f.

[7] Cf. also Atharva-veda III 13, 1–4 with four verb etymologies.

[8] Th. Aufrecht, The Aitareya Brāhmaṇa (Bonn, 1879), p. 432.

[9] It must be noted however that the technical side of voicing was not understood and that the Indians never knew about the vocal cords: P. Thieme, ZDMG 107.665.

[10] Cf. also the philosophical term *ahaṃkāra* 'the exclamation *aham* "I"': J.A.B. van Buitenen, JAOS 77.17.

[11] L. Renou, JA 233.149f.

[12] H. Lüders, Die Vyāsa-Çikshū (Kiel, 1895), p. 1, fn. 1.

It was taught in six chapters: *varṇa* 'sound,' *svara* 'accent,' *mātrā* 'quantity,'[13] *bala* 'articulation,' *sāman* 'recital' and *saṃtāna* 'connection.'[14]

There can be no doubt however that these insights were in due time applied to the art of writing. According to the dominant theory the Brāhmī script goes back to a North Semitic script as it was used in the eighth to sixth century B.C.;[15] according to others the source may have been a South Semitic script; and still others believe that the script is autochthonous. Whatever the origin, the phonetic principles of the *śikṣā* have been applied to this script: a separate letter (and only a single letter!) denotes each phoneme; short and long vowels are differentiated.[15a] The alphabet[16] is phonetically ordered which raises it above the Semitic (and European) arbitrary arrangements. The same principles characterize various later scripts found in India and in neighbouring countries where Indian culture traveled.

A distant and unexpected echo of this script (and indirectly of the phoneticians' work) is the rise of Chinese phonetical science in the fifth or sixth century A.D. with the creation of an almost phonetical script for Chinese. By the so-called *fan³-ch'ieh⁴* principle original word signs are used to denote initial and final consonants alone, e.g. *ku¹* plus *san¹* together denote *kan¹*; the inspirational source was the Indian *siddha*-script used for charms by the Chinese Buddhists.[17] The Korean *ǝnmun*-script (announced by royal proclamation in the year A.D. 1446; note the alphabetical order: k kh ng t th n p ph m . . .) is a further (maybe indirect) reflex[18] as also the disputed *Ahiru*-script of Japan.[19] In the west, Indian influence on the Arabic grammarian Ḥalīl (eighth century A.D.) at Basra

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[13] Note that the metrical schools also use *mātrā* but with different values. For a phonetician/grammarian a short vowel has 1 *mātrā*, a long vowel 2 *mātrā*-s and a consonant $^1/_2$ *mātrā*. In metrics an open syllable with a short vowel has 1 *mātrā*, a closed syllable and a syllable with long vowel 2 *mātrā*-s. The length of *agāt* would be phonetically $1 + ^1/_2 + 2 + ^1/_2 = 4$ *mātrā*-s, metrically $1 + 2 = 3$ *mātrā*-s.

[14] Tait. Ār., ch. VII. *saṃtāna* is probably the later *saṃdhi*. The discovery of sandhi was utilized early in mystical speculation; the sacred syllable *oṃ* is allegedly made up of three elements: $a + u + m > oṃ$ (Ait. Br. V 32, 2).

[15] H. JENSEN, Sign, Symbol, and Script, 3rd ed. (New York, 1969), p. 369.

[15a] The step from a half syllabic sign to single letters was taken only in rare cases: Mahānisīha ed. W. SCHUBRING, APAW 1918, p. 13 and 74ff.

[16] On the old alphabet found in the Bodh Gaya monastery, S. KONOW, AO 19, 303f. Cf. B. CH. CHHABRA, Bulletin National Museum, New Delhi, no. 2 (1970), p. 14–16.

[17] H. MASPÉRO, BEFEO 20 (pt. 2), 1–124; A. VON ROSTHORN, SAWW 219, no. 4; H. JENSEN, Sign, Symbol, and Script, p. 179; R.H. VAN GULIK, Siddham (Nagpur, 1956), p. 36–44; K. CH'EN, Buddhism in China (Princeton, 1964), p. 478f. and 548. A natural application of this technique was in the transcription of Buddhist names of Indian origin.

[18] H. JENSEN, Sign, Symbol, and Script, p. 211–214.

[19] H. JENSEN, Sign, Symbol and Script, p. 198f. On the influence of Sanskrit upon phonetic studies in Chinese and Japanese cf. KAZUO MABUCHI, Nihon ingakushi no kenkyu, I (Tokyo, 1962).

is almost certain: there is no other explanation for his adoption of a phonetic alphabet.[20] The Indian influence on modern European phonetics is well documented; in the words of J. R. Firth: "Without the Indian grammarians and phoneticians . . . it is difficult to imagine our nineteenth century school of phonetics."[21]

The beginning of grammar was linked to god Indra. We read in Tait. Saṃh. VI 4, 7, 3:

> vāg vai parācy avyākṛtâvadat; te devā Indram abruvann imāṃ no vācaṃ vyākurv iti . . . tām Indro madhyato 'vakramya vyākarot . . . "Speech spoke turned away, inarticulate. The gods said to Indra: 'Articulate this speech for us!' . . . Indra entered in the midst of it and articulated it."

Indra's involvement with grammar is later attested in the Mahābhāṣya (I 5, 25 f.: pupil of Bṛhaspati) while in the classical period it is always Śiva who bestows grammatical wisdom (see below p. 92 fn. 24).

Grammar was not a pure science; it was linked with the ritual duties of the priests who developed it. An example is the discovery of the cases in noun inflection and how it was used to make the ritual more sophisticated. In the ceremony of the repeated kindling of the fire (punarādheya or punarādhāna) a cake is offered to Agni with six verses taken from the R̥gveda. A condition is imposed that each verse must contain the name Agni in a different case form, as the varied incantation is more powerful. The term for 'case,' vibhakti lit. 'distinction,' has been retained in later grammatical literature; but while it originally belonged to the root √bhaj 'divide, share' (Ait. Br. I. 1; VII 1), later authors sometimes derived it from √bhañj 'bend' (Kātantra-vṛtti II 1, 2; III 1, 1,; cf. our 'inflection').

Even though the verb was not yet recognized as a class, the categories 'future' (kariṣyat; Ait. Br. IV 29, 3, etc.), 'present' (kurvat; Ait. Br. IV 31, 3) and 'past' (kṛta; Ait. Br. V 1, 3)[22] were applied to verbal forms. This allowed for no distinction between the different forms of the past (imperfect, aorist, perfect); it grouped the imperative with the future tense—in short, there was no attempt to describe the complicated structure of the Sanskrit verb. But the three time categories were there to stay—under different names. The later Brāhmaṇa-s and the Śāṅkhāyana Āraṇyaka have bhaviṣyat, bhavat and bhūta instead.[23] With one more replacement, Pāṇini has the definite set of bhaviṣyat, vartamāna and bhūta.

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[20] S. Wild, ZDMG 112.294–297. That Sanskrit grammar was known in Sassanidian Iran is proven by the reference to Indian works on 'βy'krn (i. e. vyākaraṇa 'grammar') in Dēnkart IV 99–100: P. de Menasce, JA 237.1–3.

[21] J. R. Firth, TPS 1946.119.

[22] Kauśītakī Brāhmaṇa XXII 3 has cakṛvas instead, possibly because the part. perf. pass. kṛta could be interpreted as the name of the root kṛ: G. B. Palsule, JUP 29.20. It is more likely that Kauśītakī Brāhmaṇa XXII 3 replaced kṛta with cakṛvas because thus all three terms became active participles.

[23] Cf. the discussion in Mahābhāṣya I 254,13–156, 27 on whether roots denote kriyā or bhāva.

It became clear at this time that many words belonged together as members of a word family, even if the exact nature of their relation was yet unknown. Due to the absence of a derivational hierarchy we find a motley group of head words. In the Ait. Br. the part. perf. pass. leads with about 50%, with agent nouns, action nouns, an adjective, an imperative, a third pers. sing. and a naked root[24] sharing the rest. These forms are used with a suffix *-vat* 'having [. . .]' which derives from a priestly praxis to refer to a verse that contains e.g. the word *pra* as *pra-vat* 'having *pra*' (Ait. Br. I 10, 1). *jāta-vat* is thus the head word for a wide variety of words derived from the root √*jan*, and *mahad-vat* for words like *mahām, mahas*, etc. In the Kauś. Br. the part. perf. pass. covers 90% of the instances.

The final redaction of the Vedic Saṃhitā-s[25] reveals the influence of grammatical thought in the mistaken extension of hiatus after the pronominal forms *asme* 'us' and *yuṣme* 'you' in analogy to the dual forms ending in *-e*, and in the compromise sandhi form *[devās]o a[pturaḥ]* Ṛgveda I 3, 8, etc. Because the Brāhmaṇa-s sometimes still quote the Ṛgveda words in their original pre-redaction form it can be assumed that the redactors' work extended into the early Brāhmaṇa period;[26] for all later authors the forms given in the sacred Saṃhitā-s are beyond dispute.

Major achievements were the Pada-pāṭha-s 'word-for-word recitations' to the Vedic Saṃhitā-s, probably in the sequence Sāma-veda, Ṛg-veda, Atharva-veda, Yajur-veda (first referred to possibly Ait. Br. V 4, 3 and certainly Ait. Ār. III 2, 6).[27] The Pada-pāṭha of the Ṛgveda is ascribed to a Vedamitra Śākalya. The whole text is broken up into its elements: sandhi between words is dissolved, compounds are split up by inserting a pause between their members. Even certain case suffixes are separated from the stem, i.e. those suffixes before which the stem undergoes the same morphophonemic changes as between words: *vacobhir* (Ṛgveda I 187, 11; instr. pl. of *vacas*) appears as *vacaḥ/ /bhiḥ* as against the instr. sg. *vacasā*. A late echo of this practice is found in Pāṇini's grammar where the noun stem before these suffixes is called *pada* 'word.' Occasionally the Pada-pāṭha replaces extinct forms with those more familiar, e.g. *uṣāsam* (Ṛgveda IV 3, 11) with *uṣasam* and *etana* (Ṛgveda V 61, 4) with *itana*. The Pada-pāṭha-s never achieved a status similar to the Saṃhitā-pāṭha;

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[24] *mad-vat* (Aitareya Brāhmaṇa III 29, 2, etc.) may have been taken from the compound *soma-mad*; in any case it comes close to the notion of the root.

[25] This is really a short form for *saṃhitā-pāṭha* 'recitation in connected speech' contrasting it with the later Pada-pāṭha (below). From sentences like *pada-prakṛtiḥ saṃhitā* "The *saṃhitā* [recitation] is made up from the word [-for-word recitation]" (Nirukta I 17 and Ṛgveda-prātiśākhya II 1) *saṃhitā* could be taken to denote the text itself.

[26] L. RENOU, Introduction générale in: J. WACKERNAGEL, Altindische Grammatik, I, 2nd ed. (Göttingen, 1957), p. 3, with literature.

[27] L. RENOU, Introduction générale, p. 118, fn. 571. A summary of their concepts is given by K. V. ABHYANKAR, ABORI 54. 9–44.

scholars occasionally disagreed with their analysis and did not hesitate to say so.[28]

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. The relative chronology of the preserved texts allows no inference on the genesis of the science. Inner logic as well as indirect testimony suggest that phonetics were the basis for the other two branches; actually phonetics and phonology are taken for granted by all authorities of etymology and grammar. This is especially clear in the sound table of Pāṇini's grammar which is based on the grouping worked out by the phoneticians.

The list of phonemes was more or less settled at an early time and what debates have survived deal only with such minor points as the status of *visarga*, *anusvāra* and other allophones[29] and with the question if /ḷ/ needs to be listed or can be accounted for as a rare substitute for /r/.[30] The sound table is generally phonemic and its authors deserve high praise for that; but it should be noted that at least one allophone (/ñ/) has slipped into the phonemic flock. Besides the vowels, semivowels and sibilants, the centre piece of the alphabet is the so-called *pañca pañca-vargāḥ* [Ṛgveda-prātiśākhya I 2(8)], the 'five groups of five':

	Voiceless Stops		Voiced Stops		Nasals
	1. tenuis	2. aspirata	3. media	4. media aspir.	5. nasal
guttural	k	kh	g	gh	ṅ
palatal	c	ch	j	jh	(ñ)
retroflex	ṭ	ṭh	ḍ	ḍh	ṇ
dental	t	th	d	dh	n
labial	p	ph	b	bh	m

The places of articulation *(sthāna)* move forward from throat (guttural) to lips (labial); the efforts of voicing and aspiration as well as the absence of them are well grouped. It seems that the beauty of the scheme led to the inclusion of /ñ/ which is really nothing but a predictable allophone in Sanskrit (cf. the correspondence loc. sg. *nāmani/nāmni* vs. *rājani/rājñi*).[31]

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[28] L. RENOU, Introduction générale, p. 37.

[29] Kātyāyana, vārttika 6 and 7 on Śivasūtra 5, proposes to include these sounds; his suggestion is adopted in the larger recension of the Jainendra grammar, the Śākaṭāyana grammar, and other grammatical works.

[30] A variance in the phonetical description of /r/ (retroflex or dental) may reflect the historical fate of /r/ in its relation to /ḷ/.

[31] M.B. EMENEAU, Lg 22.86–93. /ṇ/ lacks contrastive value (there is no *guna* besides *guṇa*!) but is predictable only in part of its occurences—and hence is not an allophone but a phoneme.

Every grammatical description presupposes some primitive etymology, if only to recognize that *gacchati* 'goes,' *jagāma* 'went' and *gatiḥ* 'gait' have a phoneme group and a notion in common. Etymology taken in this limited role may with Yāska 'neglect the formation' (*na saṃskāram ādriyeta*, Nirukta II 1). But etymology was not seen merely as a preliminary stage of grammatical analysis to be dropped later. It was as Yāska said 'the complement of grammar' (*vyākaraṇasya kārtsnyam*, Nirukta I 15); a student is warned not to discuss his science with somebody who is ignorant of grammar (*nirbrūyāt . . . nâvaiyākaraṇāya*, Nirukta II 3). We have to ask what this special contribution of *nirukta* was and why this branch of linguistics later became atrophic. Both questions are closely related.

The Sanskrit word for grammar[32] is *vyākaraṇa* lit. 'separation, distinction' (cf. Śat. Br. XIII 8, 2, 2 *daivaṃ caiva tat pitryaṃ ca vyākaroti* "He keeps separate what refers to the gods and what refers to the fathers").[33] Grammar distinguishes roots, suffixes, and prefixes and assigns each of the latter to a meaning or function. The interest is centered on forming correct words and sentences from these basic elements so that the intended meaning is expressed. The *nirukta* proceeds in the opposite direction: it explains words, especially Vedic words, by tracing the root or verb they are derived from.[34] This process is called *nirvacana* 'explicit mention [of the root/verb]': in the Brāhmaṇa-s a verse was called *a-nirukta* if the praised god is not named in it.[35] There is no interest in the formation of the word as long as it appears to be common and even if it is not, the etymology can proceed on the basis of the meaning alone with only the slightest formal support:

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[32] Kātyāyana, in vārttika 14 of his introduction, defines grammar as the sum of 'characterized [words]' and 'characterizing [rules]': *lakṣya-lakṣaṇe vyākaraṇam*. For Patañjali (Mahābhāṣya I 1, 19) and Bhartṛhari (Vākyapadīya I 11) grammar is the foremost of the six auxiliary Vedic sciences (*vedâṅga* lit. 'limb of the Veda'); the others are phonetics, metrics, etymology, astronomy and ceremonial. One has to remember that in the Indian way of speaking man has six limbs: arms, legs, head and sex organ. The Mīmāṃsā disputed the claim of grammar to be a *vedâṅga* as e.g. Kumārila, Tantravārttika on I 6.3, 18–27 regards it only as *smṛti*; cf. also K.C. CHATTERJI, JDLCU 24 (pt. 3), 1–21, summarized in J.F. STAAL, A Reader, p. 289.

[33] P. THIEME explains *vyākaraṇa* as '[word-] formation': *vividhena prakārenâkṛtayaḥ kriyante yena*; the sacred language is thus 'built up' or 'prepared' *(saṃskṛta)*: Studies . . . Fs. J. WHATMOUGH, ('s-Gravenhage, 1957), p. 267–269. G.B. PALSULE, JUP 29.26–29, contrasts *vyā-kṛ* 'to divide, analyse' and *saṃs-kṛ* 'to join, to synthesize, to form;' but he renders *vācaṃ vyākaroti* (Aitareya Brāhmaṇa 5.1) with 'utters speech' (p. 27, fn. 38). Cf. above p. 80.

[34] *nāmāny ākhyāta-jāni* "Nouns are derived from verb/roots," Nirukta I 12 in a quotation.

[35] H. OLDENBERG, Vorwissenschaftliche Wissenschaft—Die Weltanschauung der Brāhmaṇa Texte (Göttingen, 1919), p. 80; L. RENOU and L. SILBURN, Sarūpa Bhāratī [Fs. LAKSHMAN SARUP] (Hoshiarpur, 1954) p. 68–79. Even a grammarian like Patañjali occasionally availed himself of the *nirukta* technique, e.g. Mahābhāṣya I 206, 24 *svayaṃ rājante: svarāḥ* "They shine by themselves: therefore they are called vowels *(svara)*."

artha-nityaḥ parīkṣeta kena cid vṛtti-sāmānyena. avidyamāne sāmānye 'py akṣara-var-ṇa-sāmānyān nirbrūyāt, na tv eva na nirbrūyāt. na saṃskāram ādriyeta, viṣayavatyo vṛttayo bhavanti" ... examine them with regard to their meaning by the analogy of some [common] course of action. If there be no [such] analogy one should explain them even by the community of a [single] syllable or sound, but one should never give up [the attempt at] derivation. One should not attach importance to the grammatical formation, for these complex formations are subject to exceptions" (Nirukta II 1).

Looking at the noun forms *kartre* 'doer' (dat. sg.), *karma* 'deed' (nom. sg.) and *kṛtim* 'doing' (acc. sg.) the etymologist would be satisfied to 'explicitly mention' the verb *karoti* 'does' in order to settle the basic meaning of the nouns; the task of the grammarian would just have begun—but his interest in the notion of 'doing' would be small. This becomes clear in the lists of motivations we find in two prominent works of the two schools. According to Yāska one should study *nirukta* in order to grasp the precise meaning of the Vedic stanzas; whoever does not understand the meaning cannot conduct a thorough investigation of accent and grammatical form, nor can he understand the word divisions of the Pada-pāṭha; the attributes of the Vedic gods (e.g. archaic *tviṣita* 'shining') reveal their meaning only to the etymologist (Nirukta I 15 and 17). The grammarian is motivated in his study by his desire to guard the precise form of the Veda; to adapt the Vedic formulae to the people he is serving as a priest; because grammar is the most concise summary of the language; because it decides doubtful interpretations; because it is his duty (Mahābhāṣya I 1, 14–2, 2).[36] We understand now why the oldest grammar we have, Pāṇini's Aṣṭādhyāyī, avoids references to meaning as far as possible and why Pāṇini's root list *(dhātu-pāṭha)* originally was without lexical meanings. But there was a change later; sometime between Patañjali and Candragomin meanings were attached to the roots and thus grammars became complete language manuals. Etymology was retained in the schools of Veda interpretation, but there were no recasts of Yāska's classic work, let alone new *nirukta*-s for the Prakrits or other Indian languages.

What little we know about the period just preceding the great treatises comes from casual remarks in later texts, especially Yāska's Nirukta. The most important discovery was no doubt the 'root.' It did not come easy or in one step. The Nighaṇṭu, an old list of rare Vedic words, gave nouns and verbs separate; particles and adverbs also were grouped together. The idea of a root was hazy at best: several times we find even different verb forms of the same root listed side by side. The most common form of quoting verbs was the 3rd sg. (*jvalati*, etc.) which was found first in the Ait. Br. (V 20, 4, 8) and which has stayed on as an alternative mode of reference in all later grammatical literature.

The unclear conception is reflected in an equally unclear terminology: *ākhyāta* lit. 'told' is commonly used for the verb, while *dhātu* lit. 'part, element'[37] is

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[36] A second list, Mahābhāṣya I 2,3 – 5,4, likewise stresses the formal aspects; only one out of thirteen points refers to content.

[37] L. RENOU, JA 233. 138 f.

sometimes found in the same sense, but more often in the sense of the abstract entity called 'root.' A third use 'present tense stem' can be inferred from the Pāṇinian terms *sārvadhātuka* 'suffix attached to the whole stem' (e.g. [*bhava-*]*ti*) and *ārdhadhātuka* 'suffix attached to the halfstem = root (e.g. [*a-bhū-*]*t*) before which a piece of the stem *bhava-* is as it were cut off to get *bhū-*. An indication of how complex the problem is, is in Yāska's statement:

> *tatra nāmāny ākhyāta-jānîti Śākaṭāyano nairukta-samayaś ca* "Amongst them the nouns are derived from the *ākhyāta*; so says Śākaṭāyana and the doctrine of the etymologists" (Nirukta I 12).

Did Śākaṭāyana derive the nouns from verbs? Or did he use *ākhyāta* for 'root'? If he did, the anonymous author quoted in the Mahābhāṣya (II 138, 14 and 16) was right when he said in his own terminology:

> *nāma ca dhātu-jam āha Nirukte, vyākaraṇe Śakaṭasya ca tokam* "The noun is derived from the root; so he said in the Nirukta and [so said] in grammar the offspring of Śakaṭa."

Śākaṭāyana who evidently had claimed that all nouns are derived from *ākhyāta*-s, is opposed by others: *na sarvāṇîti Gārgyo vaiyākaraṇānāṃ caîke* "Not all—thus [say] Gārgya and some of the grammarians" (Nirukta I 12). From these sentences it is clear that Śākaṭāyana was not an etymologist but a grammarian;[38] and that Gārgya was not a grammarian—but Gārgya cannot have been an etymologist either because the etymologists subscribed all to the doctrine of general derivability.[39] Since a Gārgya is credited by tradition with the creation of the Pada-pāṭha of the Sāmaveda, the conclusion is plausible that the Gārgya mentioned by Yāska was a follower of the *śikṣā*. His influence on some grammarians was of great consequence because Pāṇini followed him rather than Śākaṭāyana (cf. below p. 104).

Another famous controversy goes back to this period: do prefixes have a meaning of their own (so Gārgya)[40] or do they merely illustrate *(dyotaka)* a meaning contained in the root (so Śākaṭāyana)? This debate, reported in Nirukta I 3, has later continued in the grammatical literature.[41] Pāṇini again seems to

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[38] According to an old saying, he would have been the founding father of grammar: *anu Śākaṭāyanaṃ vaiyākaraṇāḥ* "All grammarians are followers of Śākaṭāyana" (Kāśikā on Pāṇini I 4 86); cf. YUDHIṢṬHIR MĪMĀṂSAK, Saṃskṛt vyākaraṇ kā itihās, I (1963), p. 162f. Patañjali (Mahābhāṣya II 120, 20f.) has an anecdote that Śākaṭāyana was so immersed in thought that he did not notice a passing caravan of carts *(śakaṭa)*; the play on his name may well have been the cause of the story. In a verse quoted in Mahābhāṣya II 138.16 he is called the 'offspring of Śakaṭa.' Śākaṭāyana admitted only one root per noun (i.e. root +suffixes) while others used up to three roots to explain a single word, e.g. *hṛdayam* 'heart' from √*hṛ* +√*dā* +√*yam* (Śat. Br. XIV 8, 4, 1).

[39] L. RENOU, Introduction générale, p. 39.

[40] If Gārgya was the author of the SV Pada-pāṭha it fits perfectly that in this work prefixes are separated from the rest of the word: e.g. *sam udram* for *samudram*.

[41] D.S. RUEGG, Contributions à l'histoire de la philosophie linguistique indienne (Paris, 1959), p. 25, and K.V. ABHYANKAR, A dictionary of Sanskrit grammar (Baroda, 1961), p. 81.

follow Gārgya because he specifies in I 4 93 *adhi-pari anarthakau* "*adhi* and *pari* when they are meaningless;" this restriction is only appropriate if they usually are meaningful.

Grammatical analysis in itself was challenged by thinkers like Audumbarāyaṇa for whom the sentence was the linguistic unit; the reference to words in grammar is valid only because they allow a complete and convenient way to handle the language.[42]

Although Pāṇini and Yāska mention a good number of previous scholars on grammar, etymology and phonetics (Śākaṭāyana and Gārgya are mentioned by both[43]), we know very little about them.[44] Works running under their name are spurious[45] and alleged quotations in the later commentatorial literature are as a rule highly suspect.[46] Their insights were assimilated by their followers, but their compositions were lost when the classical works of Pāṇini and Yāska rose above the previous literature.[47] Oral tradition knows no mercy for outdated knowledge.

The scholarly literature of this period developed a new style which calls for some comments.[48] The new texts called *sūtra*-s 'threads' aimed at extreme precision and brevity; their single sentences, likewise called *sūtra*-s, reduced or eliminated finite verb forms and dependent clauses. Often they attained further economy by dittoing expressions that normally would be repeated in several

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[42] The best explanation of the controversial paragraph in Nirukta I 1–2 has been given by J. BROUGH, BSOAS 14.73–77.

[43] The references to Gārgya and Śākaṭāyana in the Prātiśākhya-s have been collected by A. C. BURNELL in his edition of the R̥ktantra-vyākaraṇa (Mangalore, 1879).

[44] The memory of a few rules of Āpiśali seems to have survived: F. KIELHORN, IA 16.102.

[45] The Śākaṭāyana-vyākaraṇa we have is a Jain grammar dating from the tenth century A. D.

[46] Whenever Patañjali, Kaiyaṭa, etc. encounter an unusual term or expression they offer readily the answer that this is a holdover from the *pūrvâcārya*-s 'earlier teachers;' but they never give specific references which they probably would have had such been available to them (F. KIELHORN, IA 16.101 f.). Such explanations should be viewed like other suggestions pointing out a possible cause for the apparent anomaly, not a statement of fact. *cekrīyita* 'intensive middle' (Mahābhāṣya II 232, 5 in a quote) is explained by Kaiyaṭa as a term of the *pūrvâcārya*-s but in Nirukta VI 22 *carkarīta* (which denoted an active intensive in II 28) comprises the middle as well: this makes *cekrīyita* a later fabrication (L. RENOU, JA 233.156 fn. 2). For a possible pre-Pāṇinian *auⁿ* (in Pāṇ. VII 1 18) 'nom./acc. dual -*au*' pleads M. D. BALASUBRAHMANYAM, JUP 25.77–82.

[47] Pāṇini quotes ten authors besides the general *ācāryāṇām* 'according to the teachers' (which teachers?). Kātyāyana vārttika-s 16 and 17 on I 1 44 notes that if words were not permanent one would have to conclude that forms quoted for a certain teacher or area are valid in that sphere only. But the prevailing dogma of *śabda-nityatva* 'permanence of speech sounds' must accept all these forms as equally correct. For the later commentators (Kāśikā, etc.) such rules are just optional and the use of names (instead of the shorter *vā* 'or') serves to honour earlier scholars.

[48] L. RENOU, JA 233.105–165 and JA 251.165–216.

consecutive sentences *(anuvrtti)*. This made it easier to memorize whole text-books but made interpretation more problematic. The memorized *sūtra* was accompanied by the teacher's interpretation that 'fleshed out' the skeleton information supplied in the *sūtra*. This puts us at a disadvantage as we generally lack such an authentic interpretation. Because the teacher's interpretation was not as rigidly recorded as the *sūtra*-s and because the wording of the *sūtra*-s is often ambiguous, inner developments in a school could creep into the traditional interpretation almost unnoticed; sometimes different branches of a school gave different interpretations of the same *sūtra*.

The name for this style is taken from the image of weaving where a thread is stretched out lengthwise as a warp to be crossed by the woof.[49] The warp may be one continuing thread or it may be cut on both sides of the frame: this explains the use of *sūtra* for both the whole work and its sentences. The *sūtra* is thus a stripped *textus*. This explanation is supported by the parallel case of *tantra* 'thread, text' with its counterpart *āvāpa* 'insertion.' In liturgical texts one discerns a) the special feature of a ritual *(pradhāna)* and b) the auxiliary rites that accompany various rituals in an identical manner *(aṅga)*: from a strictly formal point of view the ancient ritualists could call these auxiliary rites which turn up again and again, the warp *(tantra)* and the main rite which varies from ritual to ritual, the woof *(āvāpa)*.[50]

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[49] P. DEUSSEN, Das System des Vedānta, 2nd ed. (Leipzig, 1906), p. 27. The Tamil grammar Naṉṉūl (verses 24f.) offers two interpretations: a) spinning yarn (the text) from cotton (wool) (the words) and b) the use of a carpenter's line to draw markings on uneven wood. Could one connect the image of spinning with the expression *vrtti* 'turning' used for the teacher's elaboration in class and *anuvrtti* for dittoing? Others have suggested that the underlying image is that of a necklace held together by a thread; this explanation leaves the double use of *sūtra* for 'text' and 'sentence' unexplained. W. RUBEN, Einführung in die Indienkunde (Berlin, 1954), p. 146f., suggested a thread 'script' comparable to the Inca *quippu*; TH. GOLDSTÜCKER, Pāṇini (London, 1861; reprint Osnabrück, 1966), p. 24–26, saw the reason for the abbreviated style in a desire to save writing paper and identified *sūtra* with the thread that held the manuscript leaves together. The expression 'fils conducteur' [L. RENOU, Terminologie grammaticale (Paris, 1957), p. 341] is based on the Greek legend of Theseus and Ariadne in the labyrinth and hence not applicable here.

[50] L. RENOU, JA 233.113, fn. 1 and Vocabulaire du rituel védique (Paris, 1954), p. 30 and 69f., and G. ARTOLA, WZKM 52.382–385. *tantra* and *āvāpa* occur together also in Śabarasvāmin's Bhāṣya on Mīmāṃsā-sūtra XI 1, 1.

PĀṆINI

Pāṇini is not only the oldest grammarian whose work has come down to us—he is also the greatest. His full name was Dākṣīputra Pāṇini (Mahābhāṣya I 75, 13 and III 251, 12 in a quoted verse) in the common style which added a metronymic to the name itself. Even though in the old times the father's caste alone decided the caste of a son (cf. the story in Chānd. Up. IV 4), it could only increase a Brahmin's prestige if he could point out the equally high caste of his mother.[1] Pāṇini's date can be fixed only approximately; he must be older than Kātyāyana (c. 250 B.C.) who in his comments on Pāṇini's work refers to other still earlier scholars dealing with Pāṇini's grammar; his proximity to the Vedic language as found in the Upaniṣad-s and Vedic sūtra-s[2] suggests the 5th or maybe 6th c. B.C.[3] His home was the town of Śalātura[4] in ancient Gandhāra (northwest India), modern Lāhur in the angle where the Kabul River and the Indus meet, about 20 miles northwest of strategic Attock Bridge. Outside Lāhur, there are now some high mounds which likely contain ancient sites. The Chinese monk Hsüan-tsang visited the city in the 7th c. A.D. "To the north-west of U-to-kia-han-c'ha (i.e. Attock), 20 *li* or so, we come to the town of So-lo-tu-lo (Śalātura). This is the place where the Ṛṣi Pāṇini, who composed the Ching-ming-lun *(vyākaraṇa)*, was born."[5] He retold also a Buddhist legend in which a

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[1] P.V. KANE, IHQ 14.239f.; P.HORSCH, As. St. 18/19.227–246; T.R. TRAUT-MANN, JRAS 1972.12f.

[2] F. KIELHORN, GGN 1885.186f.; B. LIEBICH, BB 10.205–234; 11.273–315 and in his book, Panini (Leipzig, 1891), p. 38–50; O. WECKER, BB 30.1–61 +177–207; P. THIEME, Pāṇini and the Veda (Allahabad, 1935), p. 75–81.

[3] There is no shortage of inconclusive arguments. V.S. AGRAWALA, India as known to Pāṇini (Lucknow, 1953), p. 380–383, assumes that the word *maskarin* 'carrying a bamboo cane > religious mendicant' in VI 1 154 refers to Makkhali Gosāliputta the older contemporary of the Buddha and advocate of determinism, but the rule implies no reference to a certain person. If P.H.L. EGGERMONT, Persica 4.88–97 is right in fixing the date of Buddha's death at 384 B.C. instead of 484 B.C. the dates of some Vedic texts (and along with them Pāṇini) could come down a hundred years.

[4] Pāṇini is called Śālāturīya 'man from Śalātura' in an inscription of Śilāditya VII of Valabhī, J.F. FLEET, Corpus Inscr. Ind. III, p. 175, in Bhāmaha's Kāvyâlam-kāra VI 62 and in Vardhamāna's Gaṇaratnamahodadhi, commentary on verse 2.

[5] Si-yu-ki 'Records of the Western World' by Hsüen-tsang, trans. by S. BEAL (Boston, 1885), p. 114–116 [=J.F. STAAL, A reader on the Sanskrit grammarians (Cambridge, Mass., 1972), p. 6].

Brahmin claims that there was even a statue of Pāṇini in existence. Pāṇini's origin in the extreme Northwest explains several peculiarities of his grammar. He describes in minute detail features of the area as e.g. the different accents in the names of wells north and south of the river Vipāś (IV 2 73, 74 cf. below p. 108), while he limits himself to the larger geographical features of other parts of India. Furthermore, he shows great familiarity with the Vedic texts found in the North and West (notably certain branches of the Black Yajurveda), but never quotes forms from the White Yajurveda belonging to the East.[6] As the province Gandhāra was an Achaemenian satrapy from the time of Darius to the end of his dynasty, Pāṇini must have been a Persian subject at least in name,[7] but his work shows no trace of it.[8]

Pāṇini's grammar, the Aṣṭādhyāyī 'The Eight Chapters,' is composed in a most concise sūtra style and consists of a little under 4000 sūtra-s. The exact number varies depending on our judgement of a few interpolations and 'sūtra-splittings.' Most of the interpolations were originally vārttika-s of Kātyāyana or are at least based on Kātyāyana's or Patañjali's remarks; more frequently only the wording of a sūtra has been altered or enlarged on the basis of such remarks. As only the text in continuous recitation *(saṃhitā-pāṭha)* is authoritative, the Pāṇinīya-s often resorted to dividing a sūtra into two or even three: it allowed them to reinterpret the rules without actually altering them.[9]

Our vulgate text is the one explained in the Kāśikā-vṛtti (7th c. A.D.); it is about 20 sūtra-s longer than the text known to Kātyāyana or Patañjali.[10] The fate of the text before Kātyāyana is not known. It seems that the oral tradition suffered some interruption, for the technical accents and nasalizations which are an essential element of Pāṇini's metalanguage were lost and already Kātyāyana probably had to infer their existence from the context or from the results,

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[6] P. THIEME, Pāṇini and the Veda (Allahabad, 1935), p. 74–79.

[7] J. FILLIOZAT, JA 240.321.

[8] Of no historical value are the legends about Pāṇini in later literature such as the Pañcatantra (ed. G. BÜHLER) II 33, Kathāsaritsāgara I 4, 20–25 or Haracaritacintāmaṇi XXVII [ed. & tr. J. BROUGH, Selections from classical Sanskrit Literature (London, 1951), p. 2–21]; some poetical works attributed to him are really products of the late Middle Ages (F.KIELHORN, GGN 1885.185f.).

[9] F. KIELHORN, IA 15.203 counts 3983 sūtra-s (cf. the numbering in BÖHTLINGK's edition); L. RENOU, La Durghaṭavṛtti (Paris, 1940), vol. I, 1, p. 10, totals 3996 sūtra-s. It was of course impossible to recite a whole *adhyāya* or even a *pāda* without interruption. How do we account then for the assumed continuous recitation? Did the Aṣṭādhyāyī go through a stage of written tradition in which accents and nasalizations were lost and all rules subjected to sandhi (P.THIEME, Pāṇini and the Veda, p. 120–124)?

[10] F. KIELHORN, IA 16.178–184. The enigmatic sūtra-s I 2 53–57 with their argumentative style must be an interpolation, and their tenets point to a different school of thought. As only the first of them is commented on and mentioned in the Mahābhāṣya (Patañjali only), it is likely that the others got into the text later; Patañjali could otherwise hardly have avoided any comment on them [B. FADDEGON, Studies on Pāṇini's grammar (Amsterdam, 1936), p. 57–59; L. RENOU, JA 233.115 fn. 3; G.B. PALSULE, ABORI 30.135–144].

i. e. the known forms of the Sanskrit language.[11] In his remarks on I 4 1 Patañjali mentions a variant reading: I 4 1 was read both as *ā kaḍārād ekā saṃjñā* and as *prāk kaḍārāt paraṃ kāryam* (Mahābhāṣya I 296, 11f.).[12] Besides the 1713 sūtra-s discussed in the Mahābhāṣya, many others are incidentally mentioned in it, thus providing testimony of their existence. We have no reason to doubt the basic validity of our Pāṇini text; its limitations are in the phonetic presentation.

The loss of the technical accents[13] and nasalizations[14] was already mentioned. Other changes may have been caused by written fixation of the text. The technical language had—due to a combination of determinatives with suffixes of the Sanskrit language—a number of unusual consonant clusters: *ᵏtvā, ᶜPHañ*, etc. In many instances, the clusters were so unfamiliar to the Sanskrit speaker that he heard a hint of a vowel: *səᶜ, ᵗəTHaⁿ, ⁿaməˡ, tasəˡ* (but *traˡ!*),[15] etc. Whether Pāṇini consciously used an auxiliary vowel to facilitate pronunciation *(uccāraṇārtham)*[16] or whether it originated in the mind of the listener we do not know.[17] If the latter was the case, a serious problem must have arisen when the grammar was put down in writing: we find the three short vowels *(a, i, u)*[18] used with no apparent reason for their distribution except that the same vowel is used for a certain suffix in all its occurrences *(ᵗiTHaⁿ, ⁿamuˡ)*. In one case the new vocalization led to a secondary differentiation: the suffix *sᶜ* was rendered as *suᶜ* when attached to numerals (e. g. *dvi-s*) but as *siᶜ* when used as an aorist marker *(akār-ṣ-īt)* even though it had the same formal characteristics.[19]

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[11] F. KIELHORN, Gurupūjākaumudī [Fs. A. WEBER], p. 32. Many Vedic texts now without accent marks have suffered a similar loss. The loss of technical nasalization meant that the abbreviation *sᵃᵖ* for all case suffixes from *sᵃ* to *suᵖ* (I 4 14) became a homonym of the loc. pl. suffix *suᵖ*.

[12] Similarly III 2 134 *ā ᵏVEs tacchīla-taddharma-tatsādhukāriṣu* is also read *prāk ᵏVEs* ... (Mahābhāṣya II 135, 19f.). Occasionally Patañjali and repeatedly the Kāśikā ascribe such variant readings or alternative interpretations to Pāṇini himself (V. S. AGRAWALA, India as known to Pāṇini, p. 30f.).

[13] Two accented manuscripts of the Aṣṭādhyāyī mentioned by YUDHIṢṬHIR MĪMĀMSAK, Saṃskṛt vyākaraṇ kā itihās (Bahālgaḍh, 1973), vol. I, p. 230, must be recent attempts to reconstruct the original form of Pāṇini's work.

[14] One is surprised at first to see the nasal pronunciation retained in the rule I 1 17/18 *uᵃ.a ūm̐*; the obvious reason is that this *ūm̐* is not a technical form of Pāṇini's but a quotation from the well known Padapāṭha of the Ṛgveda (P. THIEME, Pāṇini and the Veda, p. 129).

[15] *tasiˡ* and *traˡ* are the suffixes found in *kutas* and *kutra*, respectively.

[16] Cf. the British acronym WRENS for 'Women's Royal Naval Service' with an /e/ thrown in '*uccāraṇārtham*.' That is in any case the traditional interpretation supported by A. WEZLER, Kratylos 18.24–26.

[17] Inspite of a superficial similarity, the genesis and distribution of these vowels is different from the 'vowel bits' *(svara-bhakti)* employed in the later recitation of Vedic texts (below p. 131).

[18] The non-utilization of *ṛ* and *ḷ* points to a time when these vowels had disappeared from vernacular speech.

[19] H. SCHARFE, Pāṇini's metalanguage (Philadelphia, 1971), p. 7–9.

Finally, Pāṇini had a unique way to indicate the short, long or protracted duration of a vowel: he likened it to the crow of a cock: "The short, long and protracted [vowel] respectively have the length of *u*, *ū*, *ū3*."[20] There was no proper way to put down the last imitative sound in writing and the three vowels were contracted into a single long /ū/: *ū-kālo 'j-jhrasva-dīrgha-plutaḥ* (I 2 27); the commentators from Kātyāyana on had to reach the true form by logical deduction.

Pāṇini's grammar was clearly meant to be memorized before it could be studied as any operation or definition involves numerous leaps from chapter to chapter, forward and backward. And indeed it was the custom for students to learn the grammar by heart at a tender age before the teacher explained its application.[21] To the uninitiated the first impression is one of organized chaos. This is largely due to a constant struggle between two principles: logical grouping and technical economy. While the logic of things has settled the basic structure of the work, the quest for economy often prevailed in its execution. Besides, there are numerous associative digressions that disrupt the basic scheme. L. Renou[22] has pointed out that Kātyāyana's proposals if inserted into the grammar at their points of reference would create much the same picture, and he has concluded that these digressions (or at least many of them) may be interpolations and indicate the gradual growth of the grammar. I would add that these interpolations are probably the work of Pāṇini himself. The theory that Pāṇini was only the last in a line of redactors of a traditional text[23] lacks proof and even probability because many of the 'interpolations' are indispensable parts of any Sanskrit grammar.

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[20] Nāgojībhaṭṭa's explanation: "*a*, etc. are not given because the quantity of 1, 2 and 3 measures is established for the *u*-sound crowed by cocks" (*kukkuṭa-rute ukāre eka-dvi-tri-mātratva-prasiddher akārâdayo nôktāḥ* Laghuśabdenduśekhara on I 2 27, KSS no. 128, p. 67) is based on Viṭṭhala's commentary of the Prakriyākaumudī I 2 27, BSPS no. 78, p. 21: "Because the status of 1, 2 and 3 measures is established in the *u*-sound in the cock's crowing the author of the sūtra used the *u*-sound setting the *a*-sound aside." Otherwise Indian phoneticians have compared the length of speech sounds to that of typical sounds of different animals: "A blue jay cries one measure, a crow two measures; a peacock should be recognized as having three measures" [Ṛgveda-prātiśākhya XIII 20(50)]. Cf. B. Liebich, Einführung in die indische einheimische Sprachwissenschaft II (Heidelberg, 1919), p. 42, and P. Thieme, Pāṇini and the Veda, p. 125f.; not convincing G. Cardona, Lg. 41.236f. The pitches of the 7 musical notes are measured against animal sounds, from a peacock's cry to the trumpeting of an elephant [Nārada Śikṣā, ŚS, p. 407, quoted by S. Varma, Critical studies in the phonetic observations of Indian grammarians (Oxford, 1929), p. 159].

[21] This is the common practice down to modern times (J. Ballantyne, in The Pandit 1.146–149).

[22] L. Renou, Introduction générale in J. Wackernagel, Altindische Grammatik, I, 2nd ed. (Göttingen, 1957), p. 116 fn. 545.

[23] I.S. Pawate, The structure of the Ashtadhyayi (Hubli, 1935??), p. 114, and R. Birwé, Studien zu Adhyāya III der Aṣṭādhyāyī Pāṇinis (Wiesbaden, 1966), p. 93 and 147–150.

The grammar proper is preceded by a sound table[24] based on the old phonemic alphabet worked out by the śīkṣā. Pāṇini reduced the vowels (*a*, *ā*, *i*, *ī*, etc.) to their types (*a*, *i*, etc.) comprising all varieties by duration, accent, nasalization, etc. The original sequence of sounds was modified in several ways; then the list was broken up into 14 sections, each with another consonant as end marker. This arrangement enabled the author to form groups almost at will by combining a sound of the list with an end marker further down: this combination comprises all sounds down to (and excluding) the end marker, e.g. in the sūtra-s 1 *a i u*^{n} 2 *ṛ ḷ*^{k} the abbreviation *a*^{n} would denote the vowels *a*, *i*, *u*, the abbreviation *i*^{k} the vowels *i*, *u*, *ṛ*, *ḷ*. This is done by a process of contraction called *samāhāra* 'gathering' introduced in rule I 1 71, *ādir āntyena sahêtā* "The beginning with the determinative that is last." Short labels thus denote whole classes: *ha*^{l} all consonants, *ya*^{r} all consonants except /h/, *kha*^{y} all voiceless stops, etc.

These formulae are used frequently in the grammar as in the very first sūtra of the grammar proper: *vṛddhir ā*^{d}*-ai*^{c} "[When I say] *vṛddhi* [I mean] *ā*, *ai*, *au*." In this rule the usual word order has been inverted to obtain an auspicious beginning: *vṛddhi* means ordinarily 'growth, prosperity.' This is taken up at the end of the grammar with the expression *udaya* which ordinarily means 'success' but here is used in the meaning of 'following.'[25] The very last sūtra VIII 4 68 *a a* reverts to the sound table at the beginning: it corrects an assumption made throughout the grammar—that the short /a/ is phonetically homorganic with the long /ā/. After we have used /a/ as just a short open *a*, we now learn that its phonetic value is that of a closed *a*. The phonemic oppositions contrast with the phonetic ones more in this way:

Phonemes		Sounds	
short	long	short	long
/a/	/ā/	o[26]	a:
/i/	/ī/	i	i:
/u/	/ū/	u	u:

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[24] The old name for it is *pratyāhāra-sūtra*-s 'contraction/summation rules'; under the influence of Kashmirian Śaivism, the names *śiva-sūtra*-s and *māheśvara-sūtra*-s became popular [K.M.K. SARMA, Pāṇini Kātyāyana and Patañjali (Delhi, 1968), p. 32–36].

[25] This sūtra VIII 4 67 *nôdātta-svaritôdayam . . .* (neglecting the names that follow) is by the way a *śloka* line (it occurs as such in Ṛgveda-prātiśākhya III 9d and 12d) just like the first two sūtra-s I 1 1–2 *vṛddhir ā*^{d}*-ai*^{c}, *a*^{d}*-e*^{n} *guṇaḥ* taken together. The Aṣṭādhyāyī belongs with the Mīmāṃsā-sūtra-s to those sūtra texts which show a tendency towards rhythmic formulations [H. SMITH, Retractationes rhythmicae (Helsinki, 1951), p. 31 f., and SUKUMAR SEN, Paninica (Calcutta, 1970), p. 24 f.]; it is therefore not necessary to assume that rhythmic sūtra-s like IV 4 35 f. were borrowed from a metrical grammar.

[26] This shows the antiquity of the present tendency (at least in northern India) to pronounce the short *a* very closed.

The first chapter is basically[27] taken up by 'meta-rules,' rules about the rules. Some of them are definitions *(saṃjña-sūtra)*; others, rules of interpretation *(paribhāṣā-sūtra)*. In the definitions, the defined term *(saṃjñā)* stands last, the content *(saṃjñin)* first (cf. Mahābhāṣya I 40, 9), e. g. I 1 60 *a-darśanaṃ lopaḥ* '*lopa* [means] not-being-seen' i. e. the word *lopa* lit. 'loss, deprivation' denotes no such physical action but merely states that a certain sound or suffix will not be seen. In his meta-rules Pāṇini established a special technical language (meta-language) to facilitate the grammatical description for which he uses the term *upadeśa* lit. 'instruction.'[28] The creation of a metalanguage meant in the first place new word-like elements:[29] the suffix of the part. perf. pass. *-ta* gets a determinative ^{k} to indicate the weak grade of the preceding element (e. g. *lup-ta*); a suffix *-a* may get the determinatives ^{ḍ} and ^{n}, the ^{ḍ} to indicate in the preceding stem the loss of the last vowel and any consonant that follows, and the ^{n} to indicate *vṛddhi* for the first vowel of the stem ($^ḍa^n$ V 1 62; thus we form from *trimś/at* '30' *traimś-a* 'containing 30 chapters' as the name of a text).

New values are assigned to several cases: the genitive is to be construed with a supplied *sthāne* 'in place of . . .' *(ṣaṣṭhī sthāne-yogā* I 1 49),[30] the locative denotes the following element ('before . . .;' I 1 66), the ablative the preceding one ('after . . .;' I 1 67). Often several such meta-rules are involved in the formulation of a single sūtra. In the manner described above the vowels *i, u, ṛ, ḷ,* short as well as long, can be summed up in the contraction i^k; likewise all the vowels from *a* to *au* in the contraction a^c and the semivowels *y, v, r, l* in ya^n. If we add now the proper case endings as per meta-rules we get the sūtra VI 1 77 $i^k.o$ ya^n $a^c.i$ "Instead of i^k ya^n is substituted before a^c"; as both the substitutes *(y, v, r, l)* and substituends *(i, u, ṛ, ḷ)* are equal in number, the substitution will proceed strictly parallel (cf. Pāṇini's rule I 3 10), corresponding to Whitney's rule number 129: "The i-vowels, the u-vowels, and ṛ, before a dissimilar vowel or a diphthong, are regularly converted each into its own corresponding semi-

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[27] Other rules entered the chapter by association.

[28] A grammar of it is H. SCHARFE, Pāṇini's metalanguage (Philadelphia, 1971). Because references in grammar are usually to word forms, references to content are marked with an *iti*—a direct reversal of the common Sanskrit practice: Kātyāyana's vārttika 3 on I 1 44 *iti-karaṇo 'rtha-nirdeśârthaḥ* "*iti* is used to make it refer to meaning."

[29] The attached determinatives *(it)* disappear when the Sanskrit word is formed, before the application of any rules. From that follows the explanation of their name: *i-t* 'the one that goes away' given by Candragomin in his vṛtti on I 1 5, Abhayanandin on Jainendravyākaraṇa I 2 3, commentary on Sarasvatīkaṇṭhābharaṇa I 2 6 (cf. the term *kṛt* 'primary suffix' from √*kṛ*, lit. 'that which makes [a noun]'; the Nirukta I 17, II 2, etc. uses *nāma-karaṇa* 'noun maker'). Less convincing is L. RENOU, Altindische Grammatik I (2nd ed.), Introduction, p. 41, with fn. 615: short for *iti*. In his Terminologie Grammaticale du Sanskrit (2nd ed.), RENOU accepted the interpretation 'ce qui s'en va.' Both publications appeared in 1957.

[30] On this use of a postposition-like *sthāne* 'instead of,' see A. WEZLER, KZ 86. 14–19; on the use of *yoga* cf. II 3 16, V 4 44 + 47 + 50, etc.

vowel, y or v or r."[31] /l/ though formally included in Pāṇini's rule has no application.

In the root list appended to the grammar, the *dhātu-pāṭha*, many roots were marked with one or two technical accents to subject them to certain rules of the grammar (below p. 101); most of these accents can be reconstructed ex resultatu. Besides, the *svarita*-accent was used to denote *adhikāra*-s 'charges' (I 3 11). The problem is that we no longer know for sure which of Pāṇini's rules were *adhikāra*-s and what their functions were. Headlines like III 1 1 *pratyayaḥ* "Suffix" were easily recognized as such and hardly needed additional marking. Occasional remarks in the Mahābhāṣya have led to another interpretation, viz. that these 'charges' were the expressions that are to be dittoed in the following rules. A difficulty is that the end of the dittoing is not marked as well. There is frequent overlapping and boxing; it is by no means true that a 'charge' would end where the next begins. Another possibility is that a marked 'charge' could refer to a certain section in the grammar, e.g. the word *stri-* in I 2 48 if marked as a 'charge' could refer to the *striyām*-section IV 1 3–81.[32]

Under the heading *kārake* 'for a factor [of the action]' Pāṇini introduces six basic semantic notions (I 4 23–55) that play a crucial role in his syntax and indirectly also in his morphology. Their number and character make it likely that these notions were originally conceived in analogy to the cases (excluding the vocative and the elusive genitive):

I 4 24 *dhruvam apāye 'pādānam* "[That which is] firm when departure [takes place] is [called] *apādāna* 'take-off'"
 32 *karmaṇā yam abhipraiti sa sampradānam* "He whom one aims at with the object is [called] *sampradāna* 'recipient'" (lit. 'bestowal')
 42 *sādhakatamaṃ karaṇam* "That which effects most is [called] *karaṇa* 'instrument'"
 45 *ādhāro 'dhikaraṇam* "Substratum is [called] *adhikaraṇa* 'location'"
 49 *kartur īpsitatamaṃ karma* "What the agent seeks most to attain is [called] *karman* 'deed, object'"
 54 *sva-tantraḥ kartā* "He who is independent is [called] *kartṛ* 'agent'"[33]

The objective relations and the *kāraka*-s do not run completely parallel and therefore the *kāraka* definitions are followed by amendments which substitute one *kāraka* for an expected other. By the definition I 4 45 we expect the substratum of *adhi*$\sqrt{sthā}$ 'rule' to be *adhikaraṇa;* but we are told in I 4 46 that it is

[31] W. D. WHITNEY, Sanskrit grammar (Leipzig, 1889), p. 44.

[32] F. KIELHORN, Gurupūjākaumudī [Fs. A. WEBER] (Leipzig, 1896), p. 29–33; essentially a re-statement (without reference to KIELHORN) is G. CARDONA, in Pratidānam [Fs. F. B. J. KUIPER] (The Hague, 1968), p. 448–454.

[33] Note that *karman* (defined in rule 49) is already used in the definition rule 32; likewise *kartṛ* of 54 in 49. But there is no circle: *kartṛ*, the last, is the kingpin. The sequence in which the definitions are given is the consequence of the rules I 4 1–2 as Kātyāyana vārtt. 30–34 on I 4 1 demonstrates: each item in this section can have only one technical name, and in case of conflict the one taught later prevails (G. CARDONA, JIPh 1.43 f.).

karman instead. Consequently we use (by II 3 2) the accusative *grāmam adhitiṣṭhati* ("He rules in the village") and not (by II 3 36) the locative **grāme 'dhitiṣṭhati;* and we form a passive *grāmo 'dhiṣṭhiyate* instead of **grāme 'dhiṣṭhiyate.*

If the notion of *kāraka*-s was perhaps derived from an observation of Sanskrit cases, Pāṇini has raised them above the level of case values and made them intermediaries between reality and the grammatical categories. Their importance, often misunderstood, goes far beyond the syntax of cases; next to the roots, they are the prime moving factors of the whole grammar. There are, as Kātyāyana vārtt. 5 on II 3 1 points out, five ways to express a *kāraka* relation: case suffix, verbal suffix, *kṛt* suffix, *taddhita* suffix and compound.

The use of cases is taken up only late in the next chapter (II 3 1–73), well separated from the *kāraka*-section. Though the *kāraka* values are the basis for the assignment of case suffixes, again there is no one-to-one relationship.[34] While basically the second case (= accusative) suffix is used to denote the object *(karman)*, in the Veda also the third case (= instrumental) suffix can be used (II 3 3–4). The number of such modifications in the case syntax section is larger than in the *kāraka* section which accounts for its greater length. The sequence in which the cases are treated is different from the morphological ranking of the cases as it appears in their names *(prathamā* 'first' = nominative, *dvitīyā* 'second' = accusative, etc. based on the suffix list IV 1 2);[35] nor is it related to the sequence of the *kāraka* definitions. It seems that the sequence is based on the convenience of dittoing expressions from one sūtra onto some following sūtra-s.

The section begins with the sūtra II 3 1 *anabhihite* which is dittoed through II 3 71 (the end of the section): "When it (i. e. the *kāraka* named in the respective rule) is not already expressed [otherwise]." Evidently, the case syntax rules are conditioned by a prior application of the *kāraka* definitions. The second case (= accusative) suffixes are used to denote the object *(karman)*, the third case (= instrumental) suffixes for the agent *(kartṛ)* or instrument *(karaṇa)*, etc., for sundry relations the sixth case (= genitive) suffixes[36]—all provided that these semantic relations have not already been expressed otherwise. The first case

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[34] Of course, the divergence would be even greater if we tried to pair the cases with the objective relations; cf. also G. CARDONA, JOIB 16. 207–210.

[35] The horizontal arrangement with the nominative first and the accusative second leaves the strong forms of the noun together; if read vertically (as in the *punarādheya* rite, cf. above p. 80) it allows maximal dittoing of forms.

[36] The rule II 3 50 *ṣaṣṭhī śeṣe* "The sixth [case ending] for the rest" reflects the difficulty to define in a few words the use of the genitive case; cf. A. DEBRUNNER, Aus der Krankheitsgeschichte des Genitivs (Bern, 1940), E. SCHWYZER, Griechische Grammatik, 2nd. ed. (München, 1959), vol. II, p. 89; and also cf. Mahābhāṣya I 118, 10 *eka-śataṃ ṣaṣṭhy-artāḥ* "101 are the meanings of the genitive [suffix]" and I 463, 13 *karmādīnām avivakṣā śeṣaḥ* "*śeṣa* 'rest' is the non-intention to express object, etc." For the residual form of the statement, cf. I 4 51 *akathitaṃ ca* "Also that which has not been told so far [is called 'object']." Bhartṛhari's Vākyapadīya III 7, 156 treats *śeṣa* like a *kāraka*, and Amaracandra's Kārakanirūpaṇa lists it as the seventh *kāraka* [Descriptive Catalogue of Sanskrit Manuscripts in the Adyar Library, VI (Madras, 1947), p. 151].

(=nominative) suffix is added when we want to express merely the gender and number of the nominal stem notion.[37]

In I 3 1 *bhūv-ādayo dhātavaḥ*, Pāṇini defines *dhātu* 'root' by referring to the root list *(dhātu-pāṭha)* appended to his grammar:[38] "Roots are √*bhū*, etc. (as listed)." He takes up the subject in II 4 35–57 when he teaches root substitutions for defective verbs like *han/vadh, as/bhū* that supplement each other in noun formation and verbal paradigm. With the word nucleus thus established, the process of growth—adding suffix after suffix like a tapeworm growing from its head—begins with the sūtra III 1 1 *pratyayaḥ* "[What follows now is a] suffix." The first suffixes taught are closest to the roots; in fact Pāṇini declares that they form new roots (III 1 32), for the desiderative and denominative taught here share many properties with the original roots.[39] The tapeworm develops, so to say, an enlarged head. The addition of further suffixes depends on the direction of growth: verbal or nominal.

In a verbal form the element affixed next to the root is what we call the tempus character, etc.; Kātyāyana and the later Pāṇinīya-s call it *vikaraṇa* 'modification'—but Pāṇini has no general name for this class of suffixes.[40] Before the personal endings of the first future an element *-sya-* is inserted after the root (e.g. *dā-sya-ti;* III 1 33), before the endings of the aorist an element *cLⁱ* which is immediately replaced by the special characters of the different aorist classes (*a-kār-ṣ-it*, etc.; III 1 43–66). Before the personal endings of the present tense, imperfect, imperative, etc. (called collectively *sārvadhātuka*) the stem forming elements are added to (viz. classes 1, 4, 5, 6, 8) and inserted into (viz. class 7) the root: *div-ya-ti, tud-a-ti*, etc. (III 1 68–81), but elided in the classes 2 and 3 (II 4 72–75): *ad-O-ti > at-ti*, etc.[41] It is evident in all these instances that the *vikaraṇa*-s are dependent on the personal endings (which are endowed with temporal or modal values) because this dependence is expressly laid down in III 1 67 *sārvadhātuke* . . . "Before a *sārvadhātuka* suffix . . ."

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[37] P. THIEME, JAOS 76.2.

[38] The form *bhūv-ādayaḥ* is strange. As Patañjali (Mahābhāṣya I 253, 2f.) points out we expect either (in continuous speech) *bhv-ādayaḥ* or (in discontinuous speech) *bhū-ādayaḥ*. But there are indications that for some grammarians *bhūv-ādayaḥ* would be normal sandhi (Abhayanandin on Jainendravyākaraṇa I 2 1; Bhāṣāvṛtti on Pāṇini VI 1 77: Vyāḍi, Gālava); then the expression could go back to Pāṇini's predecessors (YUDHIṢṬHIR MĪMĀṂSAK, Saṃskṛt Vyākaraṇ kā itihās, I, p. 152f.). Of course several forms of √*bhū* show an unexpected /v/ even in Sanskrit, e.g. *babhūva*.

[39] E.g. the formation of the present tense stem including its accentuation or the formation of primary nouns from them.

[40] While the tense value is vested in the personal endings only, the Mahābhāṣya on III 1 67 discusses at length whether *vikaraṇa*-s or personal endings denote the agent, object, or existence of the action (active or passive meaning in Western terminology); the case for the personal endings appears to be stronger—which leaves the *vikaraṇa*-s with no meaning at all.

[41] The sequence of the verbal classes is based on the length of the suffix (1, 6, 7, 8, 9); into this group the classes with disappearing (2, 3) or alternative (4, 5) suffixes are inserted [B. SHEFTS, Grammatical method in Pāṇini (New Haven, 1961), p. 2f.].

After this excursus on the verbal stems the joint presentation of verbal and nominal formations resumes. The three time-classes of reality (past, present and future) result in three sections for suffixes that have such a time connotation:[42] *bhūte* 'past' III 2 84, *vartamāne* 'present' III 2 123 and *bhaviṣyati* 'future' III 3 3. In the first section, e.g., the (nominal) zero suffix $^kVI^p$ is added to the root $\sqrt{ci}$ if it is joined with the noun *agni*: *agni-ci* = $\emptyset$ = *t* 'somebody who has arranged the sacrificial fire' (III 2 91),[43] in the third section *gamin* is taught as 'somebody who intends to go' (III 3 3), etc. The verbal suffixes stand side by side with nominal suffixes, but their tempus characterization is more differentiated. While the aorist suffix *(Luṅ)* is said to denote just past action, the imperfect *(Laṅ)* is more specifically noted for the past that precedes the present day, and the perfect *(Liṭ)* for the remote past. Even the present tense suffix *(Laṭ)* can be used for the past if it is accompanied by the particle *sma*. The category 'future' logically includes not only the future tenses *(Lṛṭ* and *Luṭ)* but also the modal forms: after all, the actions referred to in the imperative *(Loṭ)* and optative *(Liṅ)* all still lie in the future.

The user has now at his disposal a wide array of suffixes which he can add to the root, both verbal and primary nominal *(kṛt)* suffixes. But the order to start the whole process of word and sentence formation, and the decision which of the suffixes to take, comes in the last section, the pivot of Pāṇini's grammar which returns to the basic concept of the *kāraka*-s. "[If one wants] to denote the agent, [one can employ] a *kṛt*-suffix" (*kartari kṛt* III 4 67). But he can also use one of the *L*-forms (verbal personal endings, e.g. *paca-ti*); this is implied in III 4 69 [67 *kartari*] *Laḥ karmaṇi ca bhāve câkarmakebhyaḥ* "The verbal ending denotes [the agent] and the object and, after objectless[44] roots, the existence [of the root meaning itself]."[45] In traditional Western terminology,

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[42] L. RENOU, JA 248.305–337. It is not quite clear what the three participles refer to. Patañjali (Mahābhāṣya II 111, 2–5) considers first *kāle* 'for the past . . . time' but rejects it because *kāle* is not dittoed here. Then he suggests a locative *dhātau* to be obtained from the ablative *dhātoḥ* in III 1 91 which is dittoed through the chapter. However as the roots themselves are not subject to the time categories he concludes that the actions denoted by the roots are meant. Another, and it seems better, possibility would be an anticipating reference to *kartari, karmaṇi* and *bhāve* in III 4 67 + 69. A logical difficulty can easily be met: *gamin* 'somebody who intends to go' will be an agent of going only in the future even if the person happens to be present; the alternative would be to accept a present agent of a future action which makes no sense at all.

[43] The same suffix $^kVI^p$ is taught in III 2 177–179 in a 'present' meaning.

[44] I.e. intransitive; the action and its result reside in the same person or thing.

[45] R. ROCHER, in Recherches linguistiques en Belgique, ed. Y. LEBRUN, 1966, p. 113–120 and La théorie des voix du verbe dans l'école pāṇinéenne (Bruxelles, 1968), p. 23, and G. CARDONA, Lingua 25.213–220, have drawn attention to the close relation of *bhāva* and *kriyā*; but neither 'état' nor 'action' are satisfactory translations for *bhāva*. *bhāva* in V 1 119 *tasya bhāvas tva-tal.au* "-*tva* and -*tā* [denote] the existence of this" cannot be left aside. 'Existence [of the action]' for *bhāva* has been proposed independently by A. WEZLER, Bestimmung und Angabe der Funktion von Sekundär-Suffixen durch Pāṇini, Wiesbaden 1975, p. 99–104.

this would be the active voice, the personal and the impersonal passive. Of more limited importance are some of the following rules that rule in nominal suffixes to express the *kāraka*-s *sampradāna*, *apādāna* (*bhī-ma* is 'somebody of whom one is afraid') and *adhikaraṇa* (III 4 73–76). While we were made to believe that we could see the verbal 'tapeworm' grow: root, root enlargement, *vikaraṇa* and personal endings or *kṛt*-suffix, we see now that Pāṇini held the worm by its tail all along. That leads to the question what his grammar really is: analysis or construction (realization)? Does *kartari kṛt* state that 'a *kṛt*-suffix denotes the agent'[46] or does it direct the user to 'use a *kṛt*-suffix to denote the agent'?[47] Pāṇini's procedure indicates that he favoured the second alternative; his substitutions of roots, suffixes and sounds show that he did not start with the finished word or sentence but that these were the final products of the process. At the beginning stands the desire of a speaker to express himself: *artha-nimit-taka eva śabdaḥ* "The sound utterance of course is brought about by the meaning" as Patañjali later says (Mahābhāṣya I 114, 13 f. and III 253, 12–15). There has never been any doubt that the last three chapters, dealing with internal and external sandhi,[48] are synthetical. B. Faddegon assumed a dichotomy: the chapters 1 to 5 he labeled 'theory of the ultimate components of language, or the analytical part of grammar,' the chapters 6 to 8 'the theory of phonological and morphological coalescense, or the synthetic part of grammar.'[49] Pāṇini nowhere makes such a distinction—nor does Patañjali: the whole grammar is synthetic,[50] but its synthetic character is half hidden in the peculiar presentation which more or less follows the words as they emerge from the mouth of the speaker from root through *vikaraṇa* and suffix (nominal *kṛt* or verbal *L*) to the *vibhakti*-s. With the *vibhakti*-s verbs and nouns part their ways. For the *L*-element we substitute one of the 18 substitutes which correspond to the three numbers, three persons and the two genera verbi; in the case of certain tempora or modi, different forms will be substituted. The word components which have so far remained isolated are then joined in the latter part of the grammar through a great number of morphophonemic rules. The nouns too move from the abstract to the concrete: in IV 1 2 there are seven triplets corresponding to the seven cases (the vocative is regarded as a modified nominative) and three

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[46] O. von Böhtlingk: "Ein *kṛt* genanntes Suffix bezeichnet . . . den Agens."

[47] L. Renou: "Le suffix *kṛt* vaut quand it s'agit de l'agent . . ."

[48] The combination of the morphological elements into words and the morphophonemic interactions between words in a sentence.

[49] B. Faddegon, Studies on Pāṇini's grammar (Amsterdam, 1936), p. 51 and 53; cf. also H. E. Buiskool, The Tripādī (Leiden, 1939), p. 15–17.

[50] B. van Nooten, FoL 5. 242–255; but even van Nooten does not free himself completely from the idea of an analytical/synthetical dichotomy. The sūtra *anyebhyo 'pi dṛśyate* ["suffix . . . is also found after other [roots]" (III 2 178; 3 130)] and some similar rules are analytical; their style and general vagueness sets them apart from Pāṇini's other rules.

numbers,[51] 21 suffixes in all that are added to the noun in accordance with the rules II 3 1–73 (*kāraka*-case-relations). Again the coalescence into words is treated later, viz. in the last three books (together with the final development of the verbal forms as many morphophonemic rules apply equally to nominal and verbal forms).

Let us take as an example a simple fact and its expression in the Sanskrit language: Devadatta sings a praise (hymn). Besides the proper name Devadatta, there are the roots $\sqrt{gai}$ 'sing' and $\sqrt{stu}$ 'praise.' If the speaker wants to take 'singing' as the basic or connecting notion and if he chooses an agent-directed construction, then the form *gāy-a-ti* denotes not only 'singing' but also the (present!) agent in the singular 'he/she/it sings'; the nominative *Devadattaḥ* only fills the abstract notion 'agent' with a concrete personality; the object of singing, viz. the praise, appears in the accusative:[52] *Devadattaḥ stotraṃ gāyati* "Devadatta sings a hymn." In the goal-directed construction, *gī-ya-te* denotes (besides 'singing') the (present) object 'he/she/it is being sung'; the nominative *stotram* only details the specific item. The agent of singing appears in the instrumental: *Devadattena stotraṃ gīyate* "A hymn is being sung by Devadatta." But the speaker may as well decide to express 'praise' by the verb and ends up with a sentence *Devadatto gītena stauti* "Devadatta praises with a song;" or he may choose a noun construction like *Devadattasya stotra-gāyanam . . .* "Devadatta's praise singing . . ." The word *stotram* in the sentence *Devadattaḥ stotraṃ gāyati* contains two *kāraka* relations: the *kṛt*-suffix -*tra*- denotes the *karaṇa* 'instrument' of the root notion, i. e. 'instrument of praising' (by rule III 2 182), the accusative ending the *karman* 'object' of the action of 'singing' expressed by the verb.[53]

Nominal composition, though taught much earlier in the grammar (II 1 1–2 38), really enters only now into the grammatical process. The rule that releases this mechanism is II 1 1 *samarthaḥ padavidhiḥ* "[Now] the finite-word rule, with unified object:" when words are so close that they together refer to a single thing or notion, composition replaces case suffixes.[54] An example is rule II 1 37 *pañcamī bhayena* "[A word ending in] an ablative suffix is compounded with *bhaya*," e. g., *vṛkād bhayam* 'fear of a wolf' > *vṛka-bhayam* 'wolf-fear.'

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[51] Different from our system, number is not the primary classifier: the three nominatives (sing., dual, plural) come first, then the three accusatives; similarly among verbal endings: the three third persons, the three second persons, etc.

[52] *stotra* 'praise, hymn' is derived from the root $\sqrt{stu}$ 'praise' with the suffix -*tra* expressing the *kāraka*-function 'instrument' (III 2 182): 'instrument of praising'; this complex notion becomes the object of $\sqrt{gai}$ 'sing' and receives therefore the accusative case ending.

[53] In Patañjali's examples (Mahābhāṣya I 442, 7f.) *prāsāda āste*; *śayana āste* "He sits on the terrace; he sits on the bed" the suffix -*ana* denotes *adhikaraṇa* 'location'— and so does the locative suffix. Here -*ana* denotes the location of $\sqrt{sad}$ 'sit' and $\sqrt{śī}$ 'lie,' respectively; the locative, the location of $\sqrt{ās}$ 'sit.'

[54] Patañjali's discussion of this important sūtra has been translated and explained by S. D. Joshi, Patañjali'ṣ Mahābhāṣya, Samarthāhnika (Poona, 1968).

Most of the fourth chapter and all of the fifth are devoted to the secondary noun suffixes *(taddhita)*[55] which optionally (IV 1 82, viz., instead of an otherwise indicated compound) replace longer analytic expressions when the condition of a unified concept is met.[56] Examples are the patronymics (IV 1 92–178): *Dakṣasyâpatyam* 'Dakṣa's descendent' > *Dakṣa + iⁿ* > *Dākṣi* (IV 1 95), etc. The number of these secondary suffixes is great, and the variety of their meanings shows the sophistication of the language. The *kāraka*-relations play hardly any role, and even that only indirectly: V 4 45 [42 *anyatarasyām* 44 *pañcamyās tasⁱḥ*] *apādāne ca* . . . "*-tas* may be substituted for the ablative suffix if the suffix denoted *apādāna* . . ." The rules about *taddhita*-suffixes and composition presuppose a completed 'basic language' with verbal and nominal endings and primary noun formation; for 'unified concepts'[57] they offer abbreviated expressions. *Dākṣi* points to one certain person only, while *Dakṣasyâpatyam* refers to both Dakṣa and the person descended from him.

From the sixth chapter to the end of the grammar Pāṇini lays down the mechanics that create words and sentences[58] out of the morphemes taught so far:[59] where similar vowels meet they merge in their corresponding long variety (e. g. $i + i > ī$), in other cases we have diphthongs (e. g. $a + i > e$), etc.; consonants are also variously affected. A large segment of the sixth chapter (VI 1 158–2 199) deals with the three pitch accents as they result from suffixation and composition.

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[55] These suffixes form nouns from other nouns. Some of them are first taught with heterophonic elements which are later replaced with the actual morphemes: *YU* and *VU* stand for actual *-ana* and *-aka*, respectively (VII 1 1), *PH*, *ḌH*, etc. stand for *-āyan*, *-ey*, etc. (VII 1 2); cf. H. SCHARFE, Pāṇini's metalanguage, p. 24 f. The term *taddhita* is probably taken from an older grammar where it prominently defined the function of some suffixes similar to Pāṇ V 1 117 *tad-arham* "[The suffix *-vat*] is used to denote 'fitting for x.'" But in Pāṇini's grammar the corresponding rule reads slightly differently V 1 5 *tasmai hitam* "good for it" and does not occupy a prominent place. [A. WEZLER, Bestimmung und Angabe der Funktion von Sekundär-Suffixen durch Pāṇini, Wiesbaden 1975, p.139 proposes instead for *taddhita* a translation 'daran gefügt' (= 'joined to x').]

[56] *samarthānām* . . . *vā* of IV 1 82 refers back to II 1 1 *samarthaḥ padavidhiḥ* of the chapter on compounds. On the traditional interpretation of Pāṇ IV I 82 cf. A. WEZLER, Bestimmung, passim.

[57] To mention just one other group of derivatives, the suffix *ṬHaᵖ* (= *ika*) is joined to *prāvṛṣ* 'rainy season' to express the notion 'born in it:' *prāvṛṣika* 'born in the rainy season' (IV 3 25 f.)

[58] The crucial word here is *saṃhitāyām* (VI 1 72; 3 114; VIII 2 108) which means 'in connected speech,' i. e. in close contact (definition I 4 109). This is not necessarily the same as the sentence but often a sentence phrase *(varga)*: H. SCHARFE, ZDMG 117.146f.; K.L. JANERT, Abstände und Schlussvokalverzeichnungen in Aśoka-Inschriften (Wiesbaden, 1972), cf. Bhaṭṭasvāmin's commentary on Arthaśāstra II 10 (JBORS 11.20*), the verse quoted in Pradīpa and Uddyota on I 3 1 (beginning) and V.L. JOSHI, IL 26.66–71. In the text of the Mahābhāṣya the sandhi is frequently neglected within a sentence (K.V. ABHYANKAR, 3rd ed. of the Mahābhāṣya, vol. I, p. 561f.).

[59] *Dākṣi* and *prāvṛṣika* just mentioned are in this stage still *Dakṣi + iⁿ* and *prāvṛṣ + ṬHaᵖ*.

For the final section of his grammar Pāṇini creates a one-directional string of rules, i.e., each rule here applies to forms as they appear up to this point but is 'non-existent' *(asiddha)*[60] when it comes to the application of any earlier rule. This is the so-called *tripādi* 'The Three Sections' (VIII 2 1–4 68).[61] The *tripādi* deals mainly with special accent rules and with consonant sandhi. The linear nature of these rules prevents them from becoming the cause for the application of an earlier rule: when **rājan* looses its final /n/ before the suffix *-bhis* by VIII 2 7 (> *rāja-bhis*), this rules does not cause the application of VII 3 102 (lengthening of final /a/ before suffix) or VII 1 9 (stems ending in /a/ take the suffix *-ais* instead of *-bhis* in the instrumental plural)—because the rule VIII 2 7 is 'non-existent' with regard to these preceding rules. The very last rule (VIII 4 68 *a a*) corrects an assumption made throughout the grammar (cf. p. 92).

Tradition attaches several appendices to the Aṣṭādhyāyī, yet not all of them appear authentic when scrutinized closely. The first and foremost appendix is the root list *(dhātu-pāṭha)* which contains all roots of the language arranged in ten classes—dependent on how their verbs form their present tense stem;[62] roots whose verbs can follow one or the other formation are listed under both classes (e.g. $\sqrt{mṛj}$ in classes 2 and 10). Pāṇini refers in his grammar to these lists with references like *div-ādibhyaḥ* (in III 1 69) "After the roots $\sqrt{div}$, etc." In six instances he refers to a certain number of roots from such a class, e.g. VII 3 98 *rudaś ca pañcabhyaḥ* "After the five roots $\sqrt{rud}$, etc." (i.e. $\sqrt{rud}$ and the four roots that follow it in the root list). Pāṇini was not satisfied merely to list the roots according to their present tense classes; through various attached determinatives and technical accents he marks them for active or middle inflection of their verbs, insertion of /i/ between the root and certain suffixes, loss of a final nasal, etc. These additional markings are conclusive proof that the *dhātu-pāṭha* is authentic, for Pāṇini teaches these markings in his sūtra-s (e.g. *ḍu* in I 3 5 and III 3 88) while their applications occur only in the root list. Occasionally Pāṇini wants to grasp in a sūtra several roots that even with all these devices cannot be called upon summarily; in these cases he has no choice but to list the roots in his sūtra one by one (e.g. III 2 182). Though the *dhātu-pāṭha* as a whole is proven old, this cannot be said about many single roots: there are many apparent doublets that may have entered into the text at a later date;[63]

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[60] Pāṇini has invoked the *asiddha*-principle also in VI 1 86 and VI 4 22, though on a more limited scale.

[61] This part of the Aṣṭādhyāyī has been studied in an exemplary fashion by H. E. Buiskool, Pūrvatrāsiddham (Amsterdam, 1934); an abridged English recast of this study is The Tripādī (Leiden, 1939).

[62] This arrangement is easily justified by the statistical preponderance of present stem forms.

[63] *yuch puch much* I 229 and *jhaṣ ūṣ* I 720 are graphic variants due to the similarity of the first letters in some script or other. Extensive commentaries on the Dhātupāṭha are the Dhātupradīpa of Maitreyarakṣita from Bengal and the Kṣīrataraṅgiṇī of Kṣīrasvāmin from Kashmir (both 12th c. A.D.) and the Mādhavīya-dhātuvṛtti of Sāyaṇa (14th c. A.D.).

the Pāṇinīya *dhātu-pāṭha* is less well preserved than the root lists of some later grammatical schools. Patañjali has on several occasions proposed adding a root or changing a technical accent[64] and even where he finally rejected the amendment it has found its way into the traditional text. A major addition to the *dhātu-pāṭha* is the root meanings which we now find after each root in the form of a noun in the locative case, e.g. II 1 *ad^a bhakṣaṇe* '$\sqrt{ad}$ in the meaning of eating.' When Patañjali once (Mahābhāṣya I 254, 12) recites a segment of the root lists, he recites the roots only: *bhv-edh-* (cf. the reading of the traditional list *bhū sattāyām; edh^a vṛddhau; . . .* with the meanings added after each root). Patañjali may however already have known a list of root meanings, because he contrasts in Mahābhāṣya I 256, 11–15 certain standard (*dṛṣṭa* 'noted') root meanings with other occurring meanings.[65] Tradition attributes the addition of meanings to a certain Bhīmasena[66] who probably only codified traditions current at his time. The modernity of the root meanings is still recognized by Bhaṭṭojidīkṣita (17th cent.).[67]

A second appendix consists of the over 200 word-lists *(gaṇa)*, often collectively called *gaṇa-pāṭha*. These lists do not form a corpus but occur in the commentary on the sūtra-s, e.g. in the Kāśikā-vṛtti, wherever a sūtra with an expression like *svar-ādīni* ('*svar*, etc.') called for such elaboration. It is generally conceded that the lists were expanded over the centuries, not only through copying mistakes but also through deliberate additions; the occurrence of a word in the gaṇa-pāṭha is therefore no proof that the word or its object were known to Pāṇini.[68] The insertion of new words into the list was facilitated by the doctrine (first indicated by Patañjali, Mahābhāṣya I 400, 13) that besides 'complete' lists *(sampūrṇa-gaṇa)* there are lists that comprise all words of the same type *(ākṛti-gaṇa)* even if these are not expressly mentioned in it. As the need to insert new words continued, more and more *gaṇa*-s were gradually claimed to be such *ākṛti-gaṇa*-s: *gaṇa* 219 *vrihy-ādayaḥ* on Pāṇini V 2 116 was not regarded as an *ākṛti-gaṇa* in the Kāśikā, but later was so regarded in Vāmana's Kāvyâlaṃkāra-sūtra V 2 57. The distinction is not based on any indication of Pāṇini's who uses in his sūtra-s references like *aṃśv-ādayaḥ, uraḥ-prabhṛtayaḥ, gavâśva-prabhṛtīni, gotrâdīni* and *ardharcāḥ* with no apparent difference in meaning. In a few instances (*ayasmayâdīni* I 4 20, *indrajananâda-yaḥ* IV 3 88, *tujādayaḥ* VI 1 7) the vṛtti has no list at all. Besides such words the gaṇa-s contain a number of sūtra-like sentences which the later Pāṇinīya-s

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[64] S. INSLER, Verbal paradigms in Patañjali, Yale thesis, 1963 (University Microfilms, 1967), p. XIX f.

[65] G. B. PALSULE, The Sanskrit Dhātupāṭhas (Poona, 1961), p. 93 f.

[66] Earlier than A. D. 600 (P. K. GODE, NIA 2. 108–110); already Candragomin presupposes the addition of the root meanings.

[67] Siddhāntakaumudī 3210 (= Pāṇ III 1 47). The frequently given meaning *gatau* 'motion' (337 times) may indicate the author's inability to give a more specific meaning; cf. G. BÜHLER, WZKM 8.25.

[68] S. SENGUPTA, JAS (Calc.) 3.89–186 and S.M. AYACHIT, IL 22.1–63.

call *gaṇa-sūtra*-s; many of them are identical with sūtra-s of Pāṇini or vārttika-s of Kātyāyana while the origin of others is unclear.[69]

What is the evidence for Pāṇini's authorship of the *gaṇa*-s? The question must be asked because a sūtra like I 1 27 *sarvâdīni sarvanāmāni* "Pronouns are *sarva*, etc." does not necessarily indicate the existence of a list '*sarva*, etc.' It is likely that Pāṇini explained the rule to his students and named other words that fell under his term *sarvanāman*, but he need not have given them a fixed list, on a par with the sūtra-s themselves or with the *dhātu-pāṭha*. Six times he refers to the *dhātu-pāṭha* with a numbered reference (e.g. VII 2 75 *kiraś ca pañcabhyaḥ* "And after the five roots √k$\bar{r}$, etc."),[70] twice to the sūtra-s (VI 2 135 *ṣaṭ ca kāṇḍâdīni* "And the six words *kāṇḍa*, etc." refers to words mentioned in the rules VI 2 126–129; VII 1 16 *pūrvâdibhyo navabhyo vā* "Optionally after the nine words *pūrva*, etc." refers to the nine words mentioned in I 1 34–36). But only once Pāṇini seems to refer to the *gaṇa*-s in this way: VII 1 25 *ad ḍatarâdibhyaḥ pañcabhyaḥ* "The ending -*at* is substituted after the five words ending in -*atara*,[71] etc." which includes words ending in -*atama*[72] as well as *itara, anya* and *anyatara*—altogether 9 words. Is this a reference to a section of the *gaṇa sarvâdīni* (241, 5–9) or did Pāṇini merely want to indicate that five analogous formations or words form the neuter nom./acc. sing. in -*at* and left it to the student to identify these five? Twice, it was mentioned, Pāṇini refers with numbered references to words taught in the sūtra-s: VI 2 135 *ṣaṭ ca kāṇḍâdīni* and VII 1 16 *pūrvâdibhyo navabhyo vā;* if there were fixed *gaṇa*-s there is a danger that the first would be taken to refer to *kāṇḍa* in the *gaṇa bilvâdayaḥ* (thus denoting the six words *kāṇḍa, mudga, masūra, godhūma, ikṣu* and *veṇu*), the second to *pūrva* in the *gaṇa ardharcāḥ* (and thus denoting the nine words *pūrva, camasa, kṣīra, karṣa, ākāśa, aṣṭāpada, maṅgala, nidhana* and *niryāsa*). The difficulty disappears if there were no fixed *gaṇa*-s in Pāṇini's time.

If the fixed *gaṇa*-s should go back to Pāṇini himself, it remains unclear why we have so many sūtra-s with long lists of words (e.g. II 1 65; III 1 21) instead of a short reference to an attached *gaṇa*; Vedic *nipātana* rules (which teach the desired forms directly) almost never use the *gaṇa*-technique to reduce their bulkiness (e.g. III 1 123).[73] When a quotation of roots cannot be given with a

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[69] An extreme position was taken by R. Birwé, Der Gaṇapāṭha zu den Adhyāyās IV und V der Grammatik Pāṇinis (Wiesbaden, 1961), who on p. 18, fn. 1, attributes most *gaṇa-sūtra*-s to Pāṇini and on p. 26f. some to his predecessors because of their 'pre-Pāṇinian terminology:' *ākhyāta* 'verb' in *gaṇa mayūra-vyaṃsakâdayaḥ, sa* 'compound' (short for *samāsa*) in *gaṇa utsâdayaḥ* and *saṃdhy-akṣara* 'diphthong' in *gaṇa svar-ādīni*. This argument however is inconclusive because *ākhyāta* and *saṃdhy-akṣara* were used by Kātyāyana and other Pāṇinīya-s, *sa* in the late Jainendra-vyākaraṇa.

[70] The other instances are III 2 141; VI 1 6 and 4 125; VII 3 74 and 98.

[71] I.e. *katara, yatara* and *tatara* (V 3 92: *ḍatara^c*).

[72] I.e. *katama, yatama* and *tatama* (V 3 93: *ḍatama^c*).

[73] L. Renou, Études védiques et pāṇinéennes I (Paris, 1955), p. 109; sole exception is VII 1 49 *snātvy-ādayaś ca*.

reference to the *dhātu-pāṭha*[74] because the roots are not consecutive in it,
Pāṇini lists the roots in the sūtra (e.g. I 2 7 *mṛda-mṛda-gudha-kuṣa-kliśa-vada-*
vas.aḥ ᵏtvā) without recourse to a *gaṇa*. In Pāṇini's treatment of the particles
(nipāta) the only element of vagueness is in the sūtra I 4 57 [56 *nipātāḥ*] *câdayo*
'sattve "*ca*, etc. [are *nipāta*-s] except when they denote substances": the defini-
tion of '*ca*, etc.' depends on the *gaṇa* attached to it. It is worth noting that the
Bṛhaddevatā II 93 states that *iyanta iti saṃkhyānaṃ nipātānāṃ na vidyate*
"There does not exist an enumeration of the particles stating explicitly: 'there
are so many'"; almost identical is the statement of Ṛgveda-prātiśākhya XII 9
(26) *nêyanta ity asti saṃkhyā*. Shall we assume that the *gaṇa*-s were non-existent
when these two texts were composed? This would force us to assume for them
a higher date than for Kātyāyana who was quite familiar with the *gaṇa*-s. Or did
the author(s) of the two texts ignore this part of Pāṇini's work deliberately?
The likely answer is that the *gaṇa câdayaḥ* was regarded by them as an *ākṛti-*
gaṇa.[75]

The *gaṇa*-s lack a feature typical for *sūtra*- and *dhātu-pāṭha*: Pāṇini's knack
of putting every formulation to double or triple use through a resourceful
employment of sequence, accents and determinatives. The *gaṇa*-s may in
character if not in the exact formulation represent the explanations given to
students. If that is so, then even the insertion of *sūtra*-s into a *gaṇa* (e.g. I 1
34–36 in the *gaṇa sarvâdīni*) is justified: as a mere duplication it cannot claim to
teach anything new but it assists in the interpretation of the sūtra I 1 27
sarvâdīni sarvanāmāni. It is remarkable that Jinendrabuddhi (11th cent.) in his
Nyāsa on the Kāśikā on IV 1 106, V 3 2 and VII 4 3 claims that the *gaṇa*-s are
not Pāṇinian and that the author of the *gaṇa*-s is not the author of the sūtra-s
(anyo hi gaṇa-kāraḥ, anyaś ca sūtra-kāraḥ).

A third alleged appendix is the *uⁿ-ādi-sūtra*-s[76] in which nouns are derived
from roots in a more irregular fashion. Pāṇini twice (III 3 1 and 4 75) refers to
the suffixes *uⁿ*, etc., but it is not clear whether he referred to a specific list and
if he did, to which or whose. The *uⁿ-ādi*-list which is now attached to his gram-
mar (e.g. in the appendix to the Siddhānta-kaumudī) is sometimes ascribed to
Śākaṭāyana.[77] Because Śākaṭāyana, Pāṇini's forerunner, held the view that
every noun can be derived from a root he must almost of necessity have had a
similar list of irregular suffixes; the Pāṇinīya-s, on the other hand, believe that

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[74] A reference to the Dhātupāṭha is VII 2 75 *kiraś ca pañcabhyaḥ* "Also after the
five roots [beginning with] *kṝ*" which refers to Dhātupāṭha VI 116–120.

[75] Note also that Nirukta I 4–11 gives a list of 22 *nipāta*-s but claims no complete-
ness.

[76] Edition with commentary of Ujjvaladatta by Th. AUFRECHT (London, 1859).
The Uṇādisūtra-s in various recensions ed. T.R. CHINTAMANI (Madras, 1933–38).
Uṇādisūtrapāṭhaḥ in S. PATHAK and S. CHITRAO, Word Index to Pāṇini-sūtra-
pāṭha and pariśiṣṭas (Poona, 1935), p. 724–744. Uṇādi-kośa of Mohādeva Vedāntin,
ed. K.K. RAJA (Madras, 1956). L. RENOU, JA 244. 155–165 surveys the uṇādi-s.

[77] E.g. S. PATHAK and S. CHITRAO, Word Index, p. 724 and 744.

the words with u^n-ādi suffixes are really not built up (u^n-ādayo 'vyutpannāni prātipadikāni, paribhāṣā 22 in Nāgojībhaṭṭa's Paribhāṣenduśekhara). The question arises why Pāṇini referred to u^n-ādi suffixes at all if he disapproved of the procedure. It is perplexing, to say the least, that Pāṇini often refers to suffixes which he has never introduced. Some of these are mentioned without determinatives, e. g. as-anta '[stems] ending in -as' (VI 4 14), -tu- (VII 2 9) or is-us.oḥ 'of [words ending in] -is or -us' (VIII 3 44); one could possibly argue that /as/, /is/, /us/ and /tu/ were not conceived as suffixes. This is however not possible for VI 4 97 is-man-tra^n-^{k}VI.ṣu ca "Also before [the suffixes] -is, -man, -tra and ZERO" where the suffixes -is (chadis), -man (chadman), -tra (chattra) and ZERO (upacchad) are mentioned side by side: tra^n has a determinative ^{n}; it cannot be a reduced form of previously taught ṣṭra^n (III 2 181–186) because the sphere of ṣṭra^n is restricted to certain roots excluding √chad. As Pāṇini has never taught the use of these suffixes one must conclude that they were u^n-ādi suffixes; tra^n and u^n are quoted with their determinatives, others (e. g. -is, -us and -tu) without them. That corresponds to Pāṇini's frequent practice to refer to his own suffixes in a short form. While a suffix is^t is found in our (spurious) Uṇ-ādi-sūtra-s to account for chadis (265), chattra is not accounted for. If Pāṇini knew some u^n-ādi lists, there is no indication that he knew the Uṇ-ādi-sūtra-s we have. In fact Uṇ-ādi-sūtra 73 cāyaḥ kiḥ gives every impression of being modelled after Pāṇini VI 1 21 cāyaḥ ki,[78] Uṇ-ādi-sūtra 215 ^{k}VI^b vaci-pracchi-śri-sru-dru-pru-jv.ām dirgho 'samprasāraṇam ca after Kātyāyana's vārttika 2 on III 2 178 vaci-pracchy-āyatastu-kaṭapru-ju-śrīṇām dirghaś ca. Patañjali's suggestion (Mahābhāṣya II 135, 14) bhiyaḥ ^{k}ruka^n api vaktavyaḥ "The suffix -ruka- after √bhī also must be taught (to account for bhīruka 'fearful')" was apparently the source for Uṇ-ādi-sūtra 189 bhiyaḥ ^{k}ruka^n.[79] I conclude that Pāṇini knew some u^n-ādi list but that the ones we have are later than Patañjali.

The Liṅgânuśāsana 'Instruction about gender'[80] sometimes attributed to Pāṇini (e. g. Appendix to the Siddhānta-kaumudī) is probably much later than Patañjali. It is not mentioned in the Mahābhāṣya and Patañjali's thesis liṅgam aśiṣyaṃ lokâśrayatvāl liṅgasya "The gender need not be taught because it is based on usage" (Mahābhāṣya I 390, 18 f. and often) speaks against the existence of an authoritative work on gender in his time. The composition of gender manuals was probably inspired by the lexica which often have a special section on gender.

The Phiṭ-sūtra-s[81] of Śāntanava are also probably later than Patañjali. They teach in a mechanical way the Vedic accents of noun stems.

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[78] Cf. also Pāṇini VI 2 139 and Uṇādisūtra 666 which in spite of a striking similarity are materially incompatible.

[79] The śloka quoted Mahābhāṣya I 36.8 corresponds to Uṇādisūtra 350.

[80] O. FRANKE, Die indischen Genuslehren (Kiel, 1890).

[81] F. KIELHORN, Phiṭsūtrāṇi, Çāntanava's Phiṭsūtra (Leipzig, 1866; reprint Nendeln, Liechtenstein , 1966); ed. G. V. DEVASTHALI (Poona, 1967).

Pāṇini seven times refers to the 'language' (*bhāṣā*; e. g. III 2 108), in contrast to the language of the older Vedic literature *(chandas)*.[82] Several of his rules refer clearly to spoken language: in VIII 2 83 f. we are told that the last vowel in a sentence has the high pitch accent and is extra long when one responds to a greeting—except when the other man is a *śūdra* (low caste man); the same applies if one shouts from a distance. But Pāṇini is concerned only with the spoken idiom of the educated classes; the language of the lower classes was, in his time, probably much closer to the Prakrit dialects as the occurrence of popular forms in texts as old as the Ṛgveda (e. g. *akhkhalīkṛtya*) and the prominence of Middle Indo-Aryan dialects at the times of Buddha and Aśoka Priyadarśin indicate.

Pāṇini's verbal paradigm had lost many of the competing options we find in the older Vedic texts and verb and prefix are now joined together; in noun inflection, the ancient distinction of *devī* and *vṛkī* types is a thing of the past. On the other hand, the distinctions of the past tenses (perfect for the distant past, aorist for the most recent past, imperfect for the past before the present day) are still retained, the verbal duals in *-āte* and *-āthe* are not yet *pragṛhya* and the subjunctive is still taught. The periphrastic perfect (unknown to the oldest Vedic texts) is formed only with $\sqrt{kṛ}$: *corayāṃ cakāra* in accordance with later Vedic usage. Pāṇini's language is virtually the language of the brāhmaṇa-s and sūtra-s of the later Vedic period.[83]

Considering that Pāṇini hailed from Śalātura in the northwest Punjab it is not surprising that his language is especially close to that of the Kāṭhaka-saṃhitā which represents the northern Yajurveda tradition as opposed to those traditions of the East (Vājasaneyi-saṃhitā), South (Taittirīya-saṃhitā) and the West (Maitrāyaṇī-saṃhitā):[84] *amāvasyà* besides *amāvāsyà* (III 1 122), *apāṃ-naptriya* (IV 2 28) and *katipayatha* (V 2 51).[85] The syntax of cases fits closely with the Vedic prose of the brāhmaṇa-s and sūtra-s.[86] The language of the North was regarded the best in Kauśītaki Brāhmaṇa VII 6 *tasmād udicyāṃ diśi prajñātatarā vāg ucyata udañca u eva yanti vācaṃ śikṣituṃ yo vā tata āgacchati tasya vā śuśrūṣante* "In the northern region, speech is spoken particularly distinct. So, people go to the North to learn speech. Or, if someone comes from there, they like to hear (learn) from him." Pāṇini's grammar must have acquired

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[82] P. THIEME, Pāṇini and the Veda, p. 67–69. From the few references to *bhāṣā*, L. RENOU (JA 233.106) first concluded that the *bhāṣā*-rules were unimportant. But actually they mark the return to the basic language description after an excursus on Vedic peculiarities (L. RENOU, Études védiques et pāṇinéennes I, p. 114 f.).

[83] The part. perf. in *-vas/vāṃs* and in *-āna* may still be used instead of a finite verb form, not only in the Veda (III 2 106–107) but sometimes even in the current language (*bhāṣā*; III 2 108–109): P. THIEME, KZ 78.95.

[84] L. v. SCHRÖDER, Maitrāyaṇī Saṃhitā (Leipzig, 1881), I, p. XIX–XXVIII; H. LÜDERS, Antidoron [Fs. J. WACKERNAGEL] (Göttingen, 1923), p. 301 f. = Philologica Indica, p. 554.

[85] L. v. SCHRÖDER, ZDMG 49.168; P. THIEME, Pāṇini and the Veda, p. 17.

[86] Cf. above p. 88 fn. 2.

its position of authority at a time when the language of the North was yet felt to be exemplary. Later the highest authority on language and customs rests with the people of Āryāvarta (central North India): Mahābhāṣya III 174, 7–10.[87]

Pāṇini's credibility was severely challenged by W. D. Whitney[88] who pointed out the great number of unattested roots in the Dhātu-pāṭha (he found only little more than one third of its roots attested in other than grammatical texts) and other peculiar forms taught in the Aṣṭādhyāyī but not found in literature. We must consider however that we have only fragments of the Vedic literature and that Pāṇini, along with such texts, relied on the spoken language that was familiar to him. It is only natural that he knew and taught words and forms that have not come down to us. This became apparent when subsequently some such forms came to light in L. von Schroeder's editions of the Kāṭhaka and the Maitrāyaṇī Saṃhitā. Concerning the unattested roots, one must further keep in mind that the tradition of the Dhātupāṭha is much less reliable than that of the Sūtrapāṭha; it is easier to insert items into a list and moreover the Mahābhāṣya affords us hardly any checks on the tradition of the root lists. The existence, side by side, of the roots *kakh* (I 124 and 821) with the variants *kakkh* and *khakh* (I 124) and *ghaggh* (I 170) with the variants *gaggh* and *ghagh* all meaning 'laugh' points to onomatopoetic formations in colloquial usage; similarly *carc*, *jarc*, *jarts*, *jharjh* 'rebuke, chide' which remind of *tarj* and *bharts* may be local variants. Other roots have only nominal and no verbal derivatives, which still makes them eligible for the root lists; the notion of 'verbal' roots is not Pāṇinian. It may be true that these roots have been set up to account for the formation of a few nouns: they are 'artificial,' fictitious, e.g. $\sqrt{ghṛ}$ (I 985) accounting for *ghṛta*, *ghṛṇa* and *gharma*.[89] But so are all of Pāṇini's roots; they are abstracts, attempts to pronounce mental images, and he never entertained the notion that these at some time past formed separate words with suffixes following. Pāṇini thought strictly synchronically, not historically.

Harsh criticism was also directed at the Vedic rules in Pāṇini's grammar. It was felt that here we have, in contrast to the spoken language, the control material to test his competence. On the one hand Pāṇini notices the finest distinctions: he has observed that the *abhinihita-saṃdhi*, i.e. the elision of an initial /a/ after word final /e/ or /o/ is not observed inside a verse line unless /a/ is followed by /v/ or /y/ (VI 1 115)—and the next rules give seven exceptions to

[87] Cf. Baudhāyana Dharmasūtra I 1, 2, 10 and Vāsiṣṭha Dharmaśāstra I 8–9.

[88] W. D. WHITNEY, AJPh 5. 279–297; 14. 171–197; GSAI 7. 243–254.

[89] Mahābhāṣya III 275. 15f., cf. G. B. PALSULE, The Sanskrit Dhātupāṭhas, p. 198 and 208 f. On what basis these roots were assigned to verb classes and why they received determinatives is not clear. But this problem is not confined to roots like $\sqrt{ghṛ}$; *dṛś* that has no present tense stem is listed with the first class (I 1037) as are also some other defective roots without present tense stems that are taught as root substitutes *(vadh* for *han*, *ah* for *brū)*. In some cases root substitutes in present tense stems *(yach* for *dā*, *paśy* for *dṛś*, *dhau* for *sṛ*, etc.) are not listed in the Dhātupāṭha.

the exception. All these statements check out perfectly with the Vedic texts. On the other hand, the presentation of the Vedic peculiarities is very spotty. Major features are not treated at all and the selection of archaisms seems to be without principle.[90] It is clear from this that the Vedic rules have only the character of a supplement; moreover, it was not necessary to repeat the treatment of features that the Vedic dialects had in common with the later language. A method of description somewhat strange to the spirit of Pāṇini's grammar is more frequently employed for Vedic forms, viz. mentioning of the finished form without any grammatical build-up (so-called *nipātana-sūtra*-s; *nipātana* lit. 'letting it drop in');[91] sometimes a whole Vedic passage is quoted (e.g. VII 1 43; 2 69).

Several times Pāṇini refers to the Eastern or Northern usage;[92] the genitives *prācām* and *udīcām* need not refer to Eastern or Northern gram m ar i an s as the Kāśikā on IV 1 17 suggests *(prācām ācāryāṇāṃ matena)*. Being himself from the North, Pāṇini gives more intimate details concerning Northern usage: IV 2 74 informs us that the names of some wells north of the river Vipāś (modern Bias) vary in their accent from those south of the river (a well dug by a man named *Datta* would be called *dåtta* north but *dāttá* south of that river). Other Northern expressions were probably rare archaisms like *mātara-pitarau* 'mother and father' (VI 3 32) against common *mātā-pitarau* or *pitarau* (I 2 70). The 'Eastern' rules refer to Eastern cities, their inhabitants and to features of their speech. Of these the word *ekatama* 'one of many' (V 3 94) is actually first attested in an Eastern text, the Śatapatha-brāhmaṇa I 6, 3, 23.

Pāṇini's object was the colloquial as well as literary language of the educated without any reference to certain Vedic branches of tradition. Once his work was classified as a 'limb of Veda' *(vedâṅga)* it became necessary to say this, because ordinarily Vedic traditions were the property of certain schools alone. Patañjali defends the formulation of optional rules by saying: *sarva-veda-pāriṣadaṃ hîdaṃ śāstram; tatra naîkaḥ panthāḥ śakya āsthātum* "This instructional work belongs to all Vedic schools; therefore it is not possible to resort to one single way" (Mahābhāṣya I 400, 10f.; III 146, 15f.). Pāṇini's rules were accepted, we do not know since what time, as authority on Sanskrit grammar wherever Sanskrit was used; later remakes were concerned almost exclusively with easier or more logical presentation and only rarely with new observations of usage. That does not mean that everything Pāṇini taught was put into practice. The rule VIII 4 56 *vâvasāne* states that in final position with no other word following immediately (i.e. at the end of a sentence or sentence segment)

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[90] Did the noted archaisms occur in Veda sections that played a larger role in priestly practice?

[91] L. RENOU, Études védiques et pāṇinéennes I, p. 103–114. The technique probably derives from lists of rare Vedic words (cf. the Nighaṇṭu). It explains the almost complete absence of Vedic *gaṇa*-s (sole exception VII 1 49 *snātvy-ādayaś ca*).

[92] Cf. Mahābhāṣya I 105, 4–13.

voiced stops are only optionally devoiced: *suhṛd* besides *suhṛt*.[93] Later grammarians paid lip service to this rule (e. g. the Kāśikā on this rule; Candragomin VI 4 149; Jainendra V 4 131) but the voiced stop is never found in this position in any texts as far as our manuscripts go.[94]

Pāṇini and with him the grammarians that contributed to the science of grammar before him, owe their greatness to a combination of fundamental discoveries: 1) the insight that the proper object of grammar is the spoken language, not its written presentation; 2) the theory of substitution; 3) the analysis in root and suffix; 4) the recognition of ablaut correspondences; 5) the formal description of language as against a 'logical' characterization; and 6) the concise formulation through the use of a metalanguage. It is often said that the transparent nature of Sanskrit made the analysis possible. But we can argue as well that it was first Pāṇini's (and his predecessors') analysis which made the structure so transparent: was the relationship of *dohmi* and *adhukṣat*, or *majjati* and *madgu* really that obvious?

While the Prātiśākhya-s and our own popular grammar have it that e. g. the sound /b/ becomes /p/ under certain conditions, it has always been the view of Indian grammarians that the sound /p/ is substituted for /b/; /b/ does not change, it is our mind that switches from one phoneme to the other. Before certain suffixes, the root *bhū* is substituted for the root *as* (II 4 52); here it would be difficult anyway to speak of 'change.' Substitutions apply to single sounds, sound groups, suffixes and roots. Substitutions make it possible to derive the parallel inflections of different noun classes and the pronouns from a single set of case suffixes;[95] but no attempt is made to further reduce the case suffixes of singular, dual and plural to a single set with separate number markers because no Sanskrit paradigm shows such a reduction. It is necessary that the substitutions are valid throughout unless limited by special conditions. Strict application of the theory led to remarkable results of internal reconstruction. The sentence variants *aśvas, aśvaḥ, aśvaś, aśvo, aśva*, etc. can be explained from a basic form *aśvas;* this happens to be historically the oldest form (I. E. **ek̑yos*). Even more striking is the assumption of a root *masj* as the common basis of the verb *majjati* 'submerges' and the noun *madgu* 'diver-bird' which can be derived from it by independently established substitution rules. The comparison with Latin *mergo* 'submerge' and *mergus* 'diver-bird' leads us to a reconstructed Indo-European root *mesĝ* 'dive:' Pāṇini's internal reconstruction could not have been closer.

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[93] Ṛgveda-prātiśākhya I 3 (15/16) tells us that Gārgya favoured the voiced, Śākaṭāyana the unvoiced stop; Caturādhyāyikā I 8 recognizes only the unvoiced as correct.

[94] W. D. WHITNEY, Sanskrit grammar, § 141 b; J. WACKERNAGEL, Altindische Grammatik I, p. 302 f. § 260 a.

[95] The case suffixes taught in IV 1 2 are essentially those that appear with the noun stems ending in consonants; but the nom. sing. suffix s^u is only reached by internal reconstruction as it never appears with the above-mentioned stems. The internal reconstruction is confirmed by comparative and historical reconstruction: Sanskrit *vāk*, Latin *vōx* (i. e. *vōk-s*).

At a later time the substitution theory came into conflict with the Mīmāṃsā dogma of the permanence of words/speech sounds *(śabda-nityatva)*: how can the *śabda*-s be permanent if their constituent elements are subject to substitutions? Kātyāyana who raised the question in his vārttika 12 on I 1 56 answered in vārttika 14 that it is only our notion of sounds that undergoes substitution. In deference to the Mīmāṃsā finally a compromise was reached that left both concepts outwardly intact but warped: all of Pāṇini's substitutions are substitutions of complete words; in a series of substitutions *aśva + su > aśve + su > aśveṣu* we have not just a substitution of *a > e* and *s > ṣ* (nor do /a/ and /s/ 'change' to /e/ and /ṣ/) but first *aśvesu* is substituted for *aśvasu* and then *aśveṣu* for *aśvesu*.[96]

The analysis in root and suffix went beyond a mere separation of 'word' and 'ending' or a mechanical division of root and the remainder of the word. To a meaning-carrying nucleus called 'root' a well ordered string of suffixes is added. Some of these suffixes called *kṛt* can only be attached to roots directly, others called *taddhita* can be added only to such previously established composites, sometimes a few in a row. The suffixes indicate a functional relation of the nuclear meaning: 'location of x,' 'agent of x,' 'existence of x,' etc. The case endings of nouns and the personal endings of the verb finally relate these words to other words in the sentence. This should not, however, be understood as an historical statement in the spirit of the 19th century linguistics when it was for some time believed that people originally used in their speech naked roots to which rootlike elements were attached until the latter became gradually mere suffixes to the root. Pāṇini's rules are purely descriptive and synchronic; the furthest concession ever made by Sanskrit grammarians to an historical approach is the recognition of *nirūḍha-lakṣaṇā* 'stabilization of an originally secondary meaning.'[97] Pāṇini's suffixes are as much abstractions as his roots. When he derives from *utsa-* 'well' an adjective *autsa-* 'being in or produced by a well' by adding to *utsa-* a suffix $a^{ñ}$, the only visible effect is the *vṛddhi* in the first syllable: *útsa + $a^{ñ}$ > aútsa-* (IV 1 86), besides the capacity to be inflected in any of the three genders as demanded by its noun of reference. From the (abstract) root *diś* 'point' Pāṇini derives the (inflectable) noun *diś-* fem. 'direction' by adding a suffix $^{k}VI^{n}$ which disappears after creating the accented noun: *diś + $^{k}VI^{n}$ > diś* (III 2 59). These 'zero suffixes'—rediscovered for modern linguistics by F. de Saussure—may have created the frame of mind that led to another great achievement in India: the position value of ciphers including zero.[98]

From correspondences like *patati papāta; vidyā veda vaidika; buddha bodha bauddha; kṛti kartṛ kārya* a scheme of vowel alternation (ablaut) was abstracted in which the first and shortest vowel constituted the unnamed base form, the

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[96] Verse quoted in the Mahābhāṣya I 75, 13f. and III 251, 12f. See below p. 124f.

[97] K. K. RAJA, Indian theories of meaning (Madras, 1963), pp. 10, 38–47, 59–69; A. AKLUJKAR, ABORI 51.25.

[98] W. S. ALLEN, IL 16.106–113; S. AL-GEORGHE, E&W 17.115–124.

second the 'quality' *(guṇa[99])* form, the third the 'growth' *(vṛddhi)* form. Again
this is not an historical statement on the relative age of the ablaut vowels. Before
certain suffixes the base vowel of the root (or of another, preceding suffix) is
replaced by the *guṇa* or *vṛddhi* vowel.[100] The roots are usually[101] given in the
base form because this constitutes the smallest unit that still contains the full
meaning. The beauty of the three-level scheme is marred by two irregularities.
Pāṇini had not recognized that parallel to *i e ai* and *u o au* the base form cor-
responding to *guṇa* /a/[102] and *vṛddhi* /ā/ is 'zero'. Pāṇini explains the reduplicated
aorist *a-pa-pt-am* (from the root *pat* 'fall'), therefore, as an *a*-aorist with an ad
hoc invented infix /p/: *a-pa[p]t-am* (VII 4 19). The roots following this ablaut
type are taught with the *guṇa* vowel: *pat, pac*, etc. One could argue that these
roots would be hard to pronounce with a zero vowel; if they could be, we would
still need to know where to put the *guṇa* or *vṛddhi* vowel. It is possible that
Pāṇini for these reasons chose to teach these roots as he did; but with his usual
ingenuity he could certainly have found a solution to this problem and it
remains probable that he had not recognized the full ablaut scheme. Whether
Pāṇini failed to recognize a second type of ablaut *(ṛ ra rā; i ya yā; u va vā)* is
hard to say. He teaches roots with such ablaut in the *guṇa* grade: *prach*,[103] *vac*,
yaj, etc. and institutes a special procedure to achieve the shortest vowel grade,
the 'stretching' *(saṃprasāraṇa)* of the semivowel into the corresponding vowel
and consequent loss of /a/: *pṛch, uc, ij*. Had Pāṇini given these roots in their
shortest form, this would have called for a special marker or a list in order to
prevent the usual *guṇa* and *vṛddhi* substitutions (**parch, **oc, **ej, **pārch,
etc.). This would not seem overly complicated and it appears likely, therefore,
that Pāṇini had not recognized this type of ablaut as an independent variety.

Whenever grammar is developed as an ancilla philosophiae there is a danger
that logical or metaphysical categories are forced on the grammatical analysis:
subject, predicate, substantive, etc. In India grammatical analysis preceded,
due to the role of Vedic tradition and the techniques of text preservation, the
systematic philosophies. Pāṇini gives us neither a logical nor a psychological
but a grammatical description of his language. Words that end in one of the
case suffixes s^u ... su^p are our 'nouns,' those that end in personal endings from

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[99] Lit. '-fold' (L. RENOU, JA 233.139–142).

[100] These vowels may be further affected by internal sandhi: *cikai-a > cikāya*.

[101] Exceptions are roots of which no forms with the base vowel commonly
occurred in the language.

[102] For reasons given below, *guṇa* /a/ is never ruled in and rarely alluded to (cf. VI
1 97). The main use of *a* in I 1 2 is for the *guṇa* of /ṛ/, i.e. /ar/ (with the assistance of
I 1 51); cf. below, p. 163, fn. 7.

[103] This is one instance where internal and comparative/historical reconstruction
differ: Pāṇini separates *gacchati (gam > gach*; VII 3 77) from *pṛcchati*. The I.E. type
gʷm̥-skō pṛḱ-skō was no longer transparent in Pāṇini's time due to phonological
developments. *prach* offered a base for the derivation of both *pṛcchati* (VI 1 16 + 73)
and *praśna* (III 3 90; VI 4 19).

ti^p to *mahi^ñ* our 'verbs.'[104] The verb is used in the second person if the word 'you' stands with it in congruence or at least could stand with it; in the first person if 'I/we' could go with it; and in the third person in the remaining cases (I 4 105–108). The verb [-ending] denotes in itself the agent (in the active and middle voice) or the object or existence [of the action] (in the so-called passive). The action expressed by the verb has a large potential to supplement itself with expressions for 'factors' *(kāraka)* of the action such as instrument, location, agent, object, etc. which can be expressed by noun cases or by other suffixes. The concept of *kāraka*-s helps to separate and link at the same time logical and grammatical notions.

The algebraic formulation[105] of Pāṇini's rules was not appreciated by the first Western students; they regarded the work as abstruse or artificial. This criticism was evidently not shared by most Indian grammarians because several of them tried to outdo him in conciseness by 'trimming the last fat' from the great teacher's formulations: notably Devanandin, the author of the Jainendra grammar, and Vopadeva, the author of the Mugdhabodha. The Western critique was muted and eventually turned into praise when modern schools of linguistics developed sophisticated notation systems of their own. Grammars that derive words and sentences from basic elements by a string of rules[106] are obviously in greater need of a symbolic code than paradigmatic or direct-method practical grammars.

It is interesting to observe in contrast what Pāṇini does not teach. First he does not deal with phonetics. When he appears to do so, the thrust of his rule is nevertheless grammatical: terming sounds with an equal pronunciation effort in the mouth[107] *sa-varṇa* 'of equal colour' (I 1 9) is necessary for the use of this term in several later rules (e.g. I 1 69; VI 1 101). The term *anunāsika* 'nasal sound' and the three pitch accents were possibly defined because they form part of the metalanguage.[108] The reason for this exclusion of phonetics is that they are presupposed, because "grammar is the science studied later on" *(vyākaraṇaṃ nāmêyam uttarā vidyā,* Mahābhāṣya I 208, 19).

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[104] The terms *nāman* 'noun' and *ākhyāta* 'verb' were known to Pāṇini because he teaches in IV 3 72 the formation of *nāmika* and *ākhyātika* (or *nāmākhyātika*?) which obviously refers to works or a work dealing with nouns and verbs.

[105] Often mislabeled in the past as 'mnemotechnical devices.'

[106] This string can be very long. The fixation of the root vowel (i.e. *ṛ > ar*) alone in the aorist form *ajāgariṣam* 'I woke up' involves the application of nine sūtra-s (VI 1 77; VII 2 1 through 5 and 7; VII 3 84–85) in an amazing zigzag of rules and restrictions. Important is the reduction to a few basic and recurrent processes. Processes that apply in different stages of the word formation are stated only once, e.g. the replacement of simple vowels by the corresponding semi-vowels in internal and external sandhi (VI 1 77).

[107] P. THIEME, GGA 1958.42. G. CARDONA, Lg 41.226, proposes 'homogeneous' which is an awkward term when applied to the diphthongs.

[108] G. CARDONA, Pratidānam [Fs. F. B. J. KUIPER] (The Hague, 1968), p. 458–461; H. SCHARFE, Pāṇini's metalanguage, p. 39. Differently, P. THIEME, Studies [Fs. J. WHATMOUGH] ('s-Gravenhage, 1957), p. 265–267.

While Pāṇini teaches the formation of many nouns he is not interested in their lexical aspect, nor does he teach grammatical gender. The root list likewise is free of lexical meanings. Due to the relatively free word order in Sanskrit there are but few references to such ordering.[109]

It is a puzzling question[110] why Pāṇini has failed to derive some common Sanskrit nouns with lucid root and ablaut relations: *manas* from $\sqrt{man}$, *śravas* from $\sqrt{śru}$, *cetas* from $\sqrt{cit}$. Similarly *havis* from $\sqrt{hu}$ and *yajus* from $\sqrt{yaj}$, *chattra* from $\sqrt{chad}$ and *saktu* from $\sqrt{sañj}$ are not taught in his grammar although the suffixes are occasionally alluded to—they must be u^n-*ādi* suffixes (cf. our Uṇādi-sūtra no. 628–678). L. Renou[111] has suggested that maybe these formations were not taught because they had ceased to be productive. But Pāṇini has not hesitated otherwise to derive archaic nouns (in his Vedic rules) and he has even taught a suffix for the benefit of a single noun: he derives *gāthaka* 'singer' from $\sqrt{gai}$ with the unique suffix *thaka^n* (III 1 146).[112]

Though it is sometimes said that Pāṇini's grammar lacks instruction in syntax, we have seen above that this is not quite correct. Syntax is amalgamated with the formation of words in the process from thought to its verbal expression. I find it surprising though that on the one hand the dominant role of the verb (and some verbal nouns called *kṛtya*, etc., III 4 70f.) is fully appreciated, and yet on the other hand, no attention is given to other frequent nominal (i. e. verbless) sentences of Sanskrit. Kātyāyana felt the shortcoming and sought to remedy it. One could amend the rule for the nominative case ending so that it covers also instances of identification: *viraḥ puruṣaḥ* 'the man [is] a hero'; the amendment is however found unnecessary because the identification is obtained from the sentence as a whole. Or one could assume that the word 'is/are' must be understood in all 'verbless' sentences.[113] The lack of any reference to this type of nominal sentences is not quite consistent with the usual process of sentence and word formation in which, as a rule, the options are spread out for selection.

Pāṇini's description is so complex that the author must have reworked it repeatedly, and one can only wonder if this formidable task could have been carried out without written notes. Writing was certainly known to Pāṇini as he himself refers once to script (*lipi/libi* 'script' III 2 21). Whether Pāṇini used written notes or not, after the task was completed the work was handed down by oral tradition like other texts of that time. The result is a work that is not easy to

[109] J.F. STAAL, Word order in Sanskrit and universal grammar (Dordrecht, 1967).

[110] It is also curious that Pāṇini has failed to teach the formation of *ekādaśa(n)* 'eleven(th)' when he teaches the parallel *dvādaśan* '12' and *aṣṭādaśan* '18' (VI 3 47).

[111] L. RENOU, JA 244.159, fn. 2; cf. also G.B. PALSULE, JUP 27.145–151, who shows the weakness of all explanations offered so far.

[112] WACKERNAGEL-DEBRUNNER, Altindische Grammatik, vol. II, pt. 2, p. 536 §367bα and p. 722 §536.

[113] Vārttika 1 on II 3 46 (cf. P. THIEME, JAOS 76.3f.) and vārttika 11 on II 3 1.

understand, every syllable frought with meaning, often a double or triple meaning; even the sequence of the rules is often important. At the same time, one cannot understand a rule properly if one lacks instant recall of every rule in the Aṣṭādhyāyī as only careful memorizing can give it. Through Pāṇini's associative digressions many items are treated in unlikely sections and whoever attempts to follow through the formation of a word has to jump forward and backward in the grammar from one rule to another. This has earned the Aṣṭādhyāyī the nickname of the 'untimely grammar' (*a-kālakaṃ vyākaraṇam*, Candravṛtti on II 2 68).[114] The first explanation of this expression is found in the Nyāsa on Kāśikā II 4 21, viz., that Pāṇini's grammar has no section on grammatical time, and a few centuries later the Padamañjarī, on the same passage, elaborates that in contrast to previous grammars Pāṇini's Aṣṭādhyāyī is devoid of metarules on 'today's,' etc. In the 14th c. A.D. Sāyaṇa tells us in his Dhātuvṛtti (under *jñā avabodhane*) that Pāṇini was the first to break with the tradition. One can see how the growing distance in time lent wings to the commentators' fancy; had they known any such older grammars they would not have failed to mention them. It must be noted that the expression is first found in a Buddhist text, the Candravṛtti, from which the Kāśikā frequently borrows,[115] and that *a-kālaka* is a Buddhist *vinaya* term found in the Sanskrit Mahāparinirvāṇa-sūtra 40.54, Divyāvadāna 130.22 and Mahāvastu I 306, 13 meaning 'provided at odd times.' It voices a critique on Pāṇini (the use of the Buddhist term must have had an ironical effect) from a scholar who tried to improve on Pāṇini's grammar – even if Candragomin should not be the author of the bonmot. The arrangement of rules in the Aṣṭādhyāyī[116] has indeed called for more attempts to improve it than anything else and it is not hard to see why later a work like the Siddhāntakaumudī was so eminently successful.

The first European contacts with Pāṇini's work in the 18th century were indirect, through popular handbooks based on Pāṇini's analysis until soon afterwards Henry Th. Colebrooke mastered the original text and translated it.[117] But only Otto v. Böhtlingk gained for Pāṇini his rightful place in the centre of Indological studies; after his first edition of 1839/40, it was his second edition of 1887 with translation, notes and detailed indices that has been the main tool of research in this field. While his translation has been variously improved

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[114] The material has been conveniently compiled by S.D. LADDU, IL 25.187–199 (also in XXVIth International Congress of Orientalists, vol. III, pt. 1, p. 99–104).

[115] F. KIELHORN, IA 15.183–185.

[116] B. FADDEGON, Studies on Pāṇini's grammar (Amsterdam, 1936), p. 49–68; M. FOWLER, JAOS 85.44–47; J.F. STAAL, JAOS 86.206–209. Already Kātyāyana VI 4 1 vārtt. 5–11 criticizes the creation of the *aṅga*-section (VI 4 1–VII 4 97) that tears many rules from related rules taught earlier.

[117] Unpublished manuscripts in the Göttingen University Library; only about one quarter of the rules (mostly dealing with accents and Vedic forms) remained untranslated (F. KIELHORN, GGN 1891.101–112).

since, the important indices are still unrivaled.[118] In a period rich in acrimonious debates, Theodor Goldstücker challenged many established doctrines and their proponents in his 'Pāṇini: his place in Sanskrit literature' (1861); the elegance of his style has gained some of his ideas a longer life than they deserve, especially in India where his arguments are still being refuted. Even though Franz Kielhorn's work centered around the Mahābhāṣya he furthered the study of Pāṇini's work as well by investigating the ways in which Pāṇini's sūtra-s have been amended and supplemented by later grammarians, and by clarifying the inner workings of the grammar.

Acquaintance with the Pāṇinian analysis of root and suffixes and his recognition of ablaut—though only indirect via Ch. Wilkins' Sanskrit Grammar—inspired Franz Bopp and others to develop the imposing structure of Indo-European comparative and historical linguistics. The generality of phonetic and morphophonemic rules was rigidly established only in the last decades of the 19th cent.; at about the same time the notion of 'becoming' gave way to that of 'substitution.' A purely grammatical description of language and a formalized set of derivational strings are hotly debated issues today.[119] It is a sad observation that we did not learn more from Pāṇini than we did, that we recognized the value and the spirit of his 'artificial' and 'abstruse' formulations only when we had independently constructed comparable systems. The Indian New Logic (navya nyāya) had the same fate: only after Western mathematicians had developed a formal logic of their own and after this knowledge had reached a few Indologists, did the attitude towards the navya nyāya school change from ridicule to respect. A striking example of how we only understand what we already know is the frequent translation of varṇa as 'letter' by F. Kielhorn and others who followed the Western grammatical tradition at least in their choice of words, while the linguistically inclined O. v. Böthlingk at the same time correctly used 'Laut' (e. g. in his translation of I 3 9 and in the index under varṇa).

The last decades have seen a revival of Pāṇinian studies both in India and the West (notably in the U.S.A.). This stretches from antiquarian interest[120] to

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[118] Additions and corrections by R. ROCHER, in Kratylos 10. 69f. Before accented Sanskrit texts were known, O. v. BÖHTLINGK Mem. Imp. Akad. (St. Petersburg VI, 6, 1ff., "Ein erster Versuch über den Akzent im Sanskrit"), described the Sanskrit accent on the basis of the grammatical treatises. B. DELBRÜCK, IF (Anzeiger) 17. 132f. recalls the shock Böhtlingk felt when shortly afterwards accented texts became available that seemed to contradict his deductions—until their notation system was understood. See also L. RENOU, La grammaire de Pāṇini, Paris 1948–1954 (La French transl. and notes based on Indian commentaries).

[119] E. OBERMILLER's attempts in the 1920's to write a Russian grammar in Pāṇinian style (cf. TH. STCHERBATSKY, IHQ 12. 380), if any drafts of it could still be found, would make interesting reading.

[120] After what has been said, it is not advisable to rely for antiquarian studies on materials supplied solely by the Gaṇapāṭha. Unfortunately, this is done frequently. Because of the nature of the sūtra text, there can be in it only the shortest of references, mostly a bare noun (name): Vāsudeva and Arjuna (IV 3 98), Bhārata and Mahābhārata (VI 2 38). Beyond that we are dangerously free to speculate.

studies on his grammatical theory and method of description. The problem in studying Pāṇini's method has often been a premature identification with one's own theories; we have first to find out what Pāṇini's conceptions are before we can use them to support our own. The attempt of Indian scholars to improve our understanding of the Ṛgveda through Pāṇini's rules has not yielded the hoped for results,[121] while the comparison of Pāṇini's language with the Middle Indo-Aryan languages[122] has not been pursued vigorously.

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[121] L. RENOU in Current trends in linguistics, edited by TH. SEBEOK, vol. V (The Hague, 1969), p. 492.

[122] F. KIELHORN, JRAS 1898. 20f.; O. FRANKE, BB 16. 64–120.

YĀSKA

The ancient science of *nirukta* 'etymology' is for us more or less synonymous with the work of Yāska. The Nirukta is a commentary on the Nighaṇṭu, a Vedic glossary in five chapters. The first three chapters give groups of synonyms in the way of the later *kośa*-s (mostly nouns, but there are also a few groups of verbs given in the 3rd person singular).[1] The fourth chapter has three large groups of rare forms and of homonyms and the fifth contains classes of divine names. No author is named for this glossary.[2]

After a lengthy introduction (I 1 to II 4), Yāska offers a running commentary: in II 5 to III finis he comments on the synonym lists of Nighaṇṭu I–III, though not on every word given there; the three batches of odd forms from Nighaṇṭu IV are treated in chapters IV to VI, and the six classes of divine names (Nighaṇṭu V), in chapters VII to XII, preceded by a lengthy discussion on theology at the beginning of chapter VII.[3]

The text of the Nirukta has come down to us in a shorter and a longer version; the word-for-word commentary[4] of Durgasiṃha (c. 13th cent. A. D.), written in a Jammu hermitage, represents a third still shorter version. A study of the versions shows that the text grew through many small insertions and a new chapter of Addenda (*pariśiṣṭa;* later split into the two chapters XIII and

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[1] The first of these chapters deals with the physical world, the second with man and the third with abstractions.

[2] On the basis of Nirukta VII 13 *samāmane* 'I enlist . . .,' B. BHATTACHARYA [Yāska's Nirukta (Calcutta, 1958), p. 31–33] assumes that Yāska is also the author of the Nighaṇṭu; but Nirukta I 1 states: *samāmnāyaḥ samāmnātaḥ; sa vyākhyātavyaḥ* "A traditional list has been handed down; it is to be explained."

[3] The first half of the Nirukta (chapters I to VI) is called *naigamaṃ kāṇḍam* in the colophone; the latter (chapters VII to XII), *daivataṃ kāṇḍam.*

[4] It is curious that Durgasiṃha refused to explain the Ṛgveda stanza III 53, 23 quoted in Nirukta IV 14: "The stanza in which this word (i. e. *lodham*) occurs is hostile to Vasiṣṭha and I am a descendant of Vasiṣṭha, belonging to the Kapiṣṭhala branch; hence I do not explain the stanza" *yasmin nigama eṣa śabdaḥ sa Vasiṣṭha-dveṣiṇi ṛk. ahaṃ ca Kāpiṣṭhalo Vāsiṣṭhaḥ. atas tāṃ na nirbravīmi.* The oldest extant commentary is that of Skandasvāmin. K. KUNJUNNI RAJA, ALB 28.250–262, reports on a fragment of Nīlakaṇṭha's Nirukta-ślokavārttika written in Kerala (14th c. or earlier). The Nirukta-bhāṣya of Ugrabhūti or Ugrācārya (18th c.) has not yet been edited.

XIV) still unknown to Durgasiṃha.[5] Even the text commented on by Durga-siṃha contains insertions and this author frequently mentions variant read-ings.[6]

The question of Yāska's date has so far not been settled. All that can be said with safety is that he is older than Patañjali and the ślokavārttika-s quoted by him in his discussion of Pāṇ III 3 1 (Mahābhāṣya II 138, 3–19). Yāska is also quoted repeatedly in the Bṛhaddevatā.[7] But the crucial question is his relation to Pāṇini. The first impression of Western scholars was that Yāska must be older because his outlook is ritualistic and his treatment of language primitive when compared with that of Pāṇini. But these arguments are not conclusive: theories in parallel sciences need not develop in lockstep. Pāṇini's knowledge of a name Yāska (Pāṇ II 4 63) proves nothing.

P. Thieme[8] has pointed out that Yāska, when he refers to regular formations, frequently betrays a familiarity with Pāṇinian technique and terminology. He does know the concept of the root because he explains the gerund gatvā 'having gone' as an example of the loss of a final sound ([gam > ga] + tvā, II 1); and he is aware of the suffix classes called kṛt and taddhita (primary and secondary suf-fixes, II 2). When Yāska mentions the loss of the initial vowel of the root √as 'be' in the nivṛttisthāna-s (II 1) he speaks the language of the ancient Pāṇinīya-s: the basic injunction to substitute a guṇa vowel is 'turned away' (nivṛtti) before certain suffixes, i.e. we have the weakest grade—Yāska's expression presup-poses a rule like Pāṇini VII 3 84 being 'turned away' by a rule like Pāṇini I 1 5: s-taḥ, s-anti.

While this is no proof that Yāska refers to Pāṇini's work rather than to that of a forerunner of Pāṇini, it shows that the apparent archaism of the Nirukta is not "Pāṇini in the making,"[9] but the special (in some ways conservative) position of the etymologists. In several instances the wording of the Nirukta and the Aṣṭādhyāyī is very close or even identical: the definition paraḥ saṃni-karṣaḥ saṃhitā "The closest conjunction is [called] connected [speech]" is

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[5] In some manuscripts of the commentary there is an additional section com-menting on the pariśiṣṭa.

[6] Devarājayajvan in the introduction to his commentary on the Nighaṇṭu (probably older than Durgasiṃha) also describes the poor state of the tradition of that text [L. SARUP, The Nighaṇṭu and the Nirukta (Lahore, 1927), pt. II, p. 10].

[7] Embarrassingly, most references are not found in our Nirukta (B. BHATTA-CHARYA, Yāska's Nirukta, Calcutta, 1958, p. 46–56). When Kātyāyana (vārttika 15 on Śiva-sūtra 5) recognized the transmutation of sounds (varṇa-vyatyaya) as an etymological principle, he likely summarized Nirukta II 1 [P. THIEME, Pāṇini and the Veda (Allahabad, 1935), p. 18, fn. 2]. On the other hand, S.D. LADDU (VIJ 5.58–62) suggests that Yāska may be younger than Kātyāyana.

[8] P. THIEME, ZDMG 89. *23 *f.; GGA 212.46–48. Cf. also M.A. MEHENDALE, Some aspects of Indo-Aryan linguistics (Bombay, 1968), p. 1–14, and G. CARDONA, Lg. 48.172–174.

[9] S.K. BELVALKAR, Systems of Sanskrit grammar (Poona, 1915), p. 5.

found both in the Nirukta I 17 and Pāṇini I 4 109. Twice Yāska uses a deter-
minative: in XI 24 the prefix $ā$ is technically called $ā^n$ as in Pāṇini I 3 20[10] and
in II 2 he derives $kakṣa$ 'armpit' from the root $gāh$ with a suffix ^ksa. Though
Pāṇini nowhere teaches such a suffix, he refers in VII 2 9 to an $uṇ-ādi$ (?) suffix
sa (as in $vat-sa$ 'yearling, calf'). It means little that our Uṇ-ādi-sūtra 342 derives
$kakṣa$ from the root $kaṣ$ with a suffix sa because these sūtra-s are of a much later
period. While we cannot be certain that Yāska knew Pāṇini, he must have
known a grammar so close to the Aṣṭādhyāyī as to be almost identical with it.
Considering that Pāṇini lacks familiarity with the White Yajurveda (studied
in the more eastern parts of India) while Yāska quotes from all branches of the
Yajurveda, it is not hard to assume that Pāṇini preceded Yāska and did not
know his work.

The most interesting part of the Nirukta is for us the detailed introduction
in which Yāska defines his aims and methods. In the course of these discussions
he gives us more information on early grammatical studies than any other
author. This is all the more valuable as two of these earlier scholars, Śākaṭāyana
and Gārgya, are also mentioned in the Aṣṭādhyāyī, showing they definitely pre-
ceded both Pāṇini and Yāska. Almost[11] all other information on pre-Pāṇinian
grammarians in later literature is suspect.

Set against Pāṇini's formal-grammatical attitude, Yāska's interest in philo-
sophy is remarkable. He gives in Nirukta I 1 a possibly traditional classification
of words: noun, verb, prefix and particle; the first two are established by defini-
tions, the remaining by enumeration. Though the noun is named first, the verb is
evidently more important and is dealt with before the noun.[12] The verb has
'becoming' $(bhāva)$ as its basic notion, the noun has 'existing thing' $(sattva)$;[13]
if there should be two expressions for 'becoming' the one with a time sequence
will be expressed by a verb, the consolidated whole by a noun ($pacati$ 'cooks' vs.
$pakti$ 'cooking'). Then Yāska suggests a formal characterization: "$adas$ 'that'
is a reference to existing things: cow, horse, man, elephant; $bhavati$ 'becomes'
[is a reference] to becoming: sits, sleeps, goes, stands."[14] This anticipates Patañ-
jali's statement that a verb denotes 'action' because it is in potential congruence
with the verb 'to do': $kiṃ\ karoti?\ pacati$ "What does he do? He cooks;" or
that it denotes 'being' because of its congruence with the verb 'to be': $bhavati$

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[10] Yāska derives the word $āgas$ 'sin' from $\sqrt{gam}$ with the prefix $ā$: 'that which
comes.'

[11] Patañjali and a verse quoted by him (Mahābhāṣya II 281.3–5) have some
apparently authentic information on a rule of Āpiśali.

[12] $nāman$ 'noun' precedes the $ākhyāta$ 'verb' in the compound $nāmâkhyāte$
'noun and verb' because it has less syllables.

[13] J. A. B. van Buitenen, JAOS 77.104; cf. Vākyapadīya III 1 35 where $kriyā$
and $sattva$ are characterized as having and lacking sequence, respectively.

[14] $ada\ iti\ sattvānām\ upadeśaḥ:\ gaur\ aśvaḥ\ puruṣo\ hastīti.\ bhavatîti\ bhāvasya:$
$āste\ śete\ vrajati\ tiṣṭhatîti$ (Nirukta I 1).

pacati "It is [that] he cooks."[15] Yāska's association of the noun with *sattva* and the verb with *bhāva* has been quoted in the Ṛgveda-prātiśākhya XII 5 (18–19), Bṛhaddevatā II 121, Arthaśāstra II 10, 16 and Vākyapadīya II 342; often we find *dravya* 'thing' instead of *sattva*, and *kriyā* 'action' instead of *bhāva*, e.g. Mahābhāṣya II 418, 14–16, Bṛhaddevatā I 44/45, Arthaśāstra II 10, 17 and Vākyapadīya II 342.

In contrast it is remarkable that Pāṇini has kept philosophical notions out of his grammatical description; exceptions are only apparent. While the adjectives *stoka* 'little,' *alpa* 'small,' etc. often denote an 'existing thing' (*sattva*; e.g. *stokena viṣeṇa* 'with a little poison'),[16] there are instances when they do not; the ablative ending may be used to express the semantic notion 'instrument:' instrumental *stokena* or ablative *stokāt* 'hardly, with difficulty' (Pāṇini II 3 33 ... *a-sattva-vacanasya*). The interest of this problem reaches far beyond grammar. A certain similarity of some Indian philosophical systems (notably Nyāya and Vaiśeṣika) with ancient Greek thought has struck many observers, especially when these were contrasted with Chinese, etc. philosophies. Historical contact between India and the Hellenistic world can explain at best only single features—and the skepticism of scholars regarding such borrowing is mounting. The independent emergence of the categories substance, quality and action in the two traditions has been attributed to the common structure of their language: the existence of substantives, adjectives and verbs led, it is supposed, to the first three metaphysical categories;[17] and grammar is assigned a leading role in this development. Without passing judgement on the role of language itself,[18] the role that grammatical science actually played has been reversed. The adjective was often not recognized as a main word class but was included in *nāman* 'noun' as a special group;[19] the particles on the other hand, correspond to no metaphysical category. Philosophical categories and terms are introduced

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[15] This notion was further developed by Bhartṛhari, Vākyapadīya III 4, 3. Compare with this the remark of the American logician, W.V.O. QUINE: "To be assumed as an entity is, purely and simply, to be reckoned as the value of a variable. In terms of the categories of traditional grammar, this amounts roughly to saying that to be is to be in the range of reference of pronouns" [From a logical point of view, 2nd ed. (Cambridge, 1961), p. 13, quoted by B.K. MATILAL, Epistemology, logic, and grammar in Indian philosophical analysis (The Hague, 1971), p. 110, fn. 17].

[16] More specifically they refer to the qualities of things (*guṇavacana*) which they follow in gender and number (vārttika 6 on IV 1 3); but a quality may also be expressed by a noun as Patañjali points out: *gāvo dhanam* "Cows [are his] wealth" (Mahābhāṣya II 356.18f.).

[17] B. FADDEGON, The Vaiçeṣika system (Amsterdam, 1918), p. 108–110; J.F. STAAL, BSOAS 23.109–122 and PhE&W 15.104f.

[18] For the category 'generality' there is no grammatical counterpart, and note that 'action' is exemplified in Mahābhāṣya I 1, 7f. by verbal nouns like *iṅgitam*, etc. Cf. also H. VON GLASENAPP, Entwicklungsstufen des indischen Denkens (Königsberg, 1940), p. [1] – [3].

[19] Patañjali's *guṇa-śabda* (Mahābhāṣya I 19, 20; 316, 23, etc.) and *guṇa-vacana* (Pāṇini etc.) come close to our notion of an adjective; but even then the category is not primarily grammatical. Cf. S.D. JOSHI, JUP 25.19–30.

into grammar:[20] *dravya* 'substance,' *guṇa* 'quality,' *kriyā* 'action' (besides *sattva* and *bhāva*)—not grammatical notions into philosophy: *nāman* 'noun,' *ākhyāta* 'verb' and *dhātu* 'root' remain just grammatical terms.

Regarding the prepositions, Yāska notes the controversy between Śākaṭā-yana and Gārgya:[21] do prepositions have a meaning of their own or not? Then he lists 20 prepositions *(upasarga)*, each with one or two nouns indicating their value. This list (Nirukta I 3) corresponds materially if not in sequence to that given in the Vājasaneyi-prātiśākhya VI 24, Ṛgveda-prātiśākhya XII 6 (20), Pāṇinīya Gaṇapāṭha *prâdayaḥ*.

Particles are of three kinds: comparative, conjunctive, verse filler (Nirukta I 4); the latter term is secondarily expanded to 'sentence filler' (I 9), though a sentence has—contrary to a verse—no fixed frame that must be filled. It is surprising that the Indian grammarians with their astute observation have accepted so many meaningless fillers.[22]

Of these four word classes, a special relationship exists between the first two, i.e. nouns and verbs: the nouns can be derived from the verbs (or the roots behind them).[23] Again Yāska notes the opposing standpoints of Śākaṭāyana and Gārgya, clearly siding with Śākaṭāyana: all nouns can be thus derived. Gārgya and some of the grammarians derived only those nouns where accent, formation and derivational modification[24] (viz. of the root) were regular. Gār-gya's arguments are given and refuted one by one (I 1 12–14). Though Yāska argues here the theories of Śākaṭāyana and Gārgya, it is by no means certain or even likely that he literally reproduced their argumentation.

The term used to denote word derivation is *pradeśa* as in the following argu-ment of an opponent. "And it is said: the existing thing precedes becoming; the derivation (or: designation?) of the earlier from becoming—which is later—is not possible [and hence nouns cannot be derived from verbs]."[25] The derived form is characterized by the appropriate accent and suffix, and is accompanied

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[20] The old categories of past, present and future (above, p. 80) were not grammati-cal but philosophical in nature.

[21] Kātyāyana (vārttika 7 on I 3 1) sides with Gārgya: prepositions modify the action. The controversy, whether prepositions modify the root meaning or only illuminate a shade of meaning already present in the root, was carried on in later grammatical literature; cf. Mahābhāṣya III 93.21–94.1 on the question what the root joins with first: preposition or suffix.

[22] Cf. the Tamil grammars' *acai-nilai* and *acai-ccol*.

[23] An exception would be the onomatopoetic words, especially bird names (Ni-rukta III 18); the followers of Upamanyu denied the existence of onomatopoetic words.

[24] *vikāra*. The longer version and Durgasimha in 3 out of 5 occurrences have *guṇa* instead (and so also Śabarasvāmin on Mīmāṃsā-sūtra X 4 34) which may have been an explaining gloss; cf. L. SARUP, The Nighaṇṭu and the Nirukta, pt. II, p. 222f. Yāska uses *vikāra* also for the lengthening of the vowel in *rājan : rājā* (II 1).

[25] *athâpi sattva-pūrvo bhāva ity āhuḥ. aparasmād bhāvāt pūrvasya pradeśo nôpapa-dyata iti* (Nirukta I 13).

by *prādeśika vikāra* 'derivational modification.'[26] If all these features are present in a fitting manner, etymology is easy. If not, one shall explain a word on the basis of the meaning it has in a given context without excessive regard for its formation; in extreme cases the similarity of a single sound or syllable is regarded sufficient. Never is one to abandon the effort to etymologize (II 1). And etymologize he does: *kakṣa* 'armpit' is derived from $\sqrt{g\bar{a}h}$ 'plunge into' with the suffix *ᵏsa*; or from $\sqrt{khy\bar{a}}$ 'make known' with redundant reduplication: 'what is there worth seeing?'; or it is derived from $\sqrt{kaṣ}$ 'rub against' (II 2).

If the words' meanings are uniform, their etymologies are uniform; if their meanings are multiform, their etymologies are multiform (II 7). This theory led to the assumption of an excessive number of homonyms with the possibility of metaphor, specialization, etc. being neglected.[27] The distinction of descriptive and naming nouns was known to Yāska as the following debate shows. An objection to etymology was raised: every person who performs a certain action should be named after it; and a thing or person should be named after all the actions performed by it or him.[28] This objection is countered by the argument that in some cases a word is used descriptively for everybody and everything that fits the meaning—and then often this is not the case when the meaning has been narrowed down to a certain item.

One of the motives for the study of etymology is that, without it, the Vedic verses cannot be understood. For Kautsa and his followers this claim was not convincing: he believed the Veda-s to be free of ordinary meaning. Powerful magic formulae, they must be applied according to the dictates of the sacred texts to be effective, but their efficacy is not dependent on any meaning seen in their words. Besides, these words are different in many ways from those of ordinary speech, their sequence is unalterably fixed and their meanings often appear to be contradictory. Against Kautsa, Yāska maintains that the language is the same and that apparent obscurities can be explained by metaphor, hyperbole, etc. But Yāska misses the point when he compares the rigidity of the Vedic texts (a closed corpus!) with word order rules pertaining to spoken language. Neither Kautsa nor Yāska imply any critique of the Veda-s, but the dispute has occasionally been taken by modern scholars as a sign of emerging anti-Vedic skepticism;[29] in reality it only exhibits the same mechanistic-magical attitude towards the ritual as so many late-Vedic texts.[30]

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[26] O. STRAUSS, ZDMG 81.115 and L. RENOU, Terminologie, p. 467, derive *prādeśika* from an assumed *pradeśa* 'base:' *prādeśika vikāra* would then be 'root modification.' There is no need for such an assumption. From the attested word *pradeśa* 'injunction' derives *prādeśika [vikāra]* '[modification] based on the injunction' (i.e. on the suffixation rules).

[27] S. VARMA, The etymologies of Yāska (Hoshiarpur, 1953), p. 8.

[28] This is supposedly the case in the Aranta language in Australia [A. SOMMERFELT, Journal de Psychologie 35.170–184 (especially p. 180) and W.S. ALLEN, TPS 1948. 56, fn. 6.].

[29] L. SARUP, The Nighaṇṭu and the Nirukta, part II, p. 71 f.

[30] O. STRAUSS, ZDMG 81.119–124; P. THIEME, ZII 8.26–28.

The bulk of the Nirukta, though of considerable interest in other respects, falls outside the theme of this survey. If Yāska's etymologies are often primitive and tortured and if they lack the perspicuity of Pāṇini's analysis, we must consider that Yāska dealt with different language material: with the words that did not yield to Pāṇini's methods because they were isolated and whose make-up could only be explained perhaps by modern comparative and historical linguistics.

SHADOWS OF SOME EARLY THEORISTS

The philosophical interpretation of grammar was pursued by two authors whose works have not survived, Vājapyāyana and Vyāḍi. Both are mentioned by Kātyāyana in his vārttika-s 35 and 45 on Pāṇini I 2 64. Vājapyāyana held the view that words denote the 'form' or universal because a word evokes a general picture of its objects beyond special features, just as the traditional rules have general value: e.g. "Do not kill a Brahmin" means "nobody shall kill any Brahmin." Vājapyāyana guards against the assumption that the single object is the meaning of words because that would make general statements and commands impossible. But that is exactly what Vyāḍi proposes: all orders are actually carried out with individual objects, and statements such as "The dog died," are valid individually but not for the whole race of dogs. It is not surprising that Kātyāyana in summing up the arguments sides with Vājapyāyana. The Mīmāṃsā has always held that words denote universals because this assumption met its need for universal rules; and the Vedic scholar Kātyāyana regarded grammar as a *dharma-śāstra* (vārttika 1, introduction).

The contrast to the individual 'thing' is the universal 'attribute' or 'quality' and thus Vājapyāyana's theory was developed into a conception of syntax as an 'association of qualities;' 'the white cow' denotes the association *(saṃsarga)* of whiteness and cow-ness, and as both reside in one place (i.e. the cow) the words form a syntactic unit in conformity with grammatical rules. How much of these doctrines (found in works of the classical period) goes back to Vājapyāyana himself is not known, even if they are occasionally ascribed to him,[1] because his work was probably long lost. While there may have been a line of tradition we know nothing about, these doctrines can be just logical extensions of the well-known position of Vājapyāyana's that words denote universals.

We know more about Vyāḍi; his followers were called *vyāḍīya*-s[2] or *sāṃgraha-sūtrika*-s;[3] his work apparently was called the Saṃgraha[4] which may be a short form for Saṃgraha-sūtra. It dealt principally with the question of whether the

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[1] E.g. Helārāja on Vākyapadīya III 1, 5, ed. K.A.S. IYER (Poona, 1963), p. 15, 4.

[2] Mahābhāṣya III 125, 11.

[3] Mahābhāṣya II 284, 4.

[4] A.WEZLER, Paribhāṣā IV, V und XV (Bad Homburg, 1969), p. 20–22. A work on meta-rules called Paribhāṣā-sūcana ascribed to a Vyāḍi [K.V. ABHYANKAR, Paribhāṣenduśekhara, ed. (Poona, 1962), Introduction, p. 4f.] is spurious (WEZLER, Paribhāṣā, p. 19–23.

language sounds (including words) are permanent *(nitya/siddha)* or made *(kārya*, i.e. of a passing nature).[5] Patañjali's sentence "Beautiful is Dākṣāyaṇa's work, the Saṃgraha"[6] shows the high esteem in which the Saṃgraha was held, but there remains one uncertainty: while both problems, i.e. the permanence of words and the meaning of words, are closely related and could well have been the subject of one and the same work, there is no definite link between the passages quoted. Patañjali does not say that Vyāḍi was the author of the Saṃgraha nor does he say that Vyāḍi had the patronymic Dākṣāyaṇa (which could make Vyāḍi a distant relative of Pāṇini through Pāṇini's mother Dākṣī). The earliest extant testimony for Vyāḍi's authorship of the Saṃgraha is Bhartṛhari's remark in his commentary on Mahābhāṣya I 6, 22.[7] If this Vyāḍi is identical with the one cited several times in the Ṛgveda-prātiśākhya (III 14 + 17; VI 12f.; XIII 15), we would get the picture of a scholar who is basically a linguist. Indeed, his contention that words denote things reflects the attitude of everyday speech better than Vājapyāyana's theory and it is more compatible with grammatical categories.[8] The question of whether words are permanent or not—which was so important for the Mīmāṃsā—was apparently left undecided after Vyāḍi weighed the pros and cons: all that mattered for him was that either way one must study grammar (Mahābhāṣya I 6, 13f.).

From Patañjali's remarks we can conclude that he perhaps had the Saṃgraha still before him and even expected his reader to be familiar with it. But all later references are suspect, the work having perished as Bhartṛhari tells us.[9] Its stupendous size alone was remembered: it dealt with 14,000 matters[10] and had 100,000 verses.[11] Detailed statements on Vyāḍi's theory of language in Helārāja's commentary on the Vākyapadīya can be logical extensions of his known theorems and the numerous quotations from the Saṃgraha in Bhartṛhari's own vṛtti on the Brahma-kāṇḍa of the Vākyapadīya can hardly have been taken from Vyāḍi's work—also they are never linked to the name Vyāḍi. The tone and level of discussion in these quotations are so similar to Bhartṛhari's own that it is hard to believe they could have been taken from a text older

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[5] Mahābhāṣya I 6, 12f. and 21f. A clear exposition of this problem and how it occupied the minds of grammarians and philosophers for two thousand years is given in SRIKRISHNA SARMA, Jñānamuktāvalī [Fs. J. NOBEL] (New Delhi, 1963), p. 182–193.

[6] Mahābhāṣya I 468, 11; the sentence shows alternative use of the genitive or instrumental case denoting the author of a work.

[7] Mahābhāṣya-dīpikā, ed. K.V. ABHYANKAR and V.P. LIMAYE, ABORI 43. *23,19.

[8] B.K. MATILAL, Epistemology, logic, and grammar in Indian philosophical analysis (The Hague, 1971), p. 107f. and p. 117.

[9] Vākyapadīya II 478 ... *Saṃgrahe 'stam upāgate* "... when the Saṃgraha had perished"; cf. also Puṇyarāja's commentary on Vākyapadīya II 484.

[10] Mahābhāṣya-dīpikā on Mahābhāṣya I 6, 12, ABORI 43. *21,4f.

[11] Helārāja(?) on Vākyapadīya II 484; Nāgojībhaṭṭa's Mahābhāṣya-pradīpod-dyota on Mahābhāṣya I 6, 12.

than Kātyāyana's vārttika-s. Bhartṛhari says humbly in Vākyapadīya II 484
that his teacher (whose name was Vasurāta) produced 'this compendium of
tradition' *(āgama-saṃgraha)*. It is to be expected that Bhartṛhari quotes his
teacher sometimes, and therefore I propose to see in these quotations from a
Saṃgraha the tribute he pays his *guru*. A systematic study of these quotations
is still wanting.

In contrast to Vājapyāyana's concept of association, Vyāḍi's is said to be a
theory of exclusion *(bheda)*:[12] a word denotes a 'thing' to the exclusion of all
other things. Thing or substance must be taken in this context in a wider sense
because it includes theoretical constructs such as universals, fictional objects,
etc. An indication of this kind of thinking in an early period can be obtained
from the dicussion in the Mahābhāṣya II 367,14–23; because of the non-Pāṇi-
nian enigmatic term *varti(n)*,[13] it is likely that Patañjali relies here on a foreign
source. While there is no problem in attaching the suffixes *-tva* or *-tā* '-ness' to
words like *vṛkṣa* 'tree:' *vṛkṣatva* or *vṛkṣatā* 'tree-ness' it is feared that the rule
cannot operate for words like *śukla* 'white' to obtain *śuklatva* or *śuklatā* 'white-
ness' because they are not or have not *varti(n)*. Words like *vṛkṣa* denote (prima-
rily) a thing and (secondarily) a quality;[14] the suffix is added to the word in its
primary meaning of a thing—which is not possible in the case of *śukla* 'white.'
And yet, it is—if we assume the loss of an imaginary suffix *-mat* 'having . . .';
then the adjective *śukla* 'white' is really short for *śuklamat* '[a thing] having
white' and we can attach the suffixes *-tva* and *-tā* after the basic *śukla*. The un-
derlying notion is evidently that things are associated with an implied quality
which can also be directly expressed with the abstract noun and treated like a
thing; but this cannot be so in the case of adjectives: a quality cannot have a
quality. Therefore the attempt is made to treat adjectives as nouns plus zero-
suffix. The philosophical interpretation of grammar leads to a distortion of the
grammatical description.[15]

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[12] Helārāja on Vākyapadīya III 1, 5, ed. K.A.S. IYER, p. 15, 2.
[13] L. RENOU, Terminologie grammaticale (Paris, 1957), p. 270 under *varta* is not
quite satisfactory.
[14] The only words for 'things' without quality connotations are names of people
one has just met (e.g. *Ḍittha*, a made-up name free of associations); later they too
acquire quality connotations: *Ḍitthatva* 'Ḍittha-ness.'
[15] B.K. MATILAL, Epistemology, logic, and grammar, p. 114–116; K.K. RAJA,
Indian theories of meaning (Madras, 1963), p. 191–193. It would be a different
matter if the aim were to derive adjectives from nouns, but there is no indication of
such intent.

THE PRĀTIŚĀKHYA-S

The analysis of the Vedic *saṃhitā*-s in their respective *padapāṭha*-s (and the subsequent reassembling of the *saṃhitā-pāṭha*-s from the *pada-pāṭha*-s) implied a thorough knowledge of the sandhi procedures, i.e. the ways in which isolated (abstracted) words interact when joined in a sentence. To attain their goal of perfect preservation of the sacred texts, the Veda students required also a sound knowledge of pronunciation techniques. This was a concern for every school *(pariṣad/parṣad)* or branch *(śākhā)* of the Vedic tradition and hence the manuals devoted to this task are called *pārṣada* or *prātiśākhya*. As a matter of procedure they start with the (historically later) 'word-for-word recitation' and give rules on how to construct from it the 'text in continuous recitation:' "The school-treatises of all schools are based on [the recitation of isolated] words."[1] A notable exception to this pattern is the third chapter of the Taittirīya-prātiśākhya which gives rules in the opposite direction, viz. how vowels that appear long in continuous Vedic recitation are short in the word-for-word recitation (and for that matter, also in ordinary language).

The chronology of these texts has been hotly disputed for over a century and is not finally settled. Of at least four Prātiśākhya-s (Ṛgveda Pr., Taittirīya Pr., Vājasaneyi Pr., Ṛktantra), one or the other has variously been acclaimed as the oldest. But three of these texts (Ṛgveda Pr., Taittirīya Pr., Ṛktantra) are, in the opinion of some scholars, the youngest of all Prātiśākhya-s. The question of their relative chronology is so hard to decide because the Prātiśākhya-s—despite their identical basic aim—differ greatly in design.[2] This is a result of their being school manuals in very conservative traditions. Besides, each Prātiśākhya had to address itself to the problems of its *saṃhitā*. For the same reasons it is so difficult to relate them to the works on grammar and etymology. L. Renou[3] has pointed out the great number of technical terms formed from the root *gṛh* (*pragraha, avagraha, udgrāha, grahaṇa*, etc.) in the Prātiśākhya-s which contrasts with the extensive use of derivatives from the root *kṛ* (*kartṛ, karman, kāraka, kṛt*, etc.)[4] in grammar. We have here two very different scholastic

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[1] Nirukta I 17 *pada-prakṛtīni sarva-caraṇānāṃ pārṣadāni*.

[2] For a recent discussion of all problems of the Prātiśākhya literature see L. RENOU, JA 248.1–40.

[3] L. RENOU, JA 248.37, fn. 98.

[4] G.B. PALSULE, JUP 29.11–29 (= PCASS Class A, No. 24).

traditions; and yet, occasional identical sūtra-s and frequent agreements in their expressions show that they were not isolated.

The basic question for modern scholars has been the relation of the Prāti-śākhya-s to Pāṇini. The belief in the continuous progress of mankind seemed to have the answer: the less scientific Prātiśākhya-s, each concerned only with its respective *saṃhitā* in its outward form and often formulated in a clumsy style, had to be earlier than Pāṇini's grammar with its wide outlook and concise formulation. But it soon became evident that at least some of the Prātiśākhya-s were quite familiar with Pāṇini's work. Caturādhyāyikā I 88 mentions (without explanation or definition!) stems ending in *-vas^u* which is the form in which Pāṇini teaches the suffix of the part. perf. act. *-vāṃs*;[5] the same Prātiśākhya gives in I 87 three roots in their abstract form *(śān, mān, dān)* as Pāṇini III 1 6 does even though only one of them (viz. *mān*) occurs in the Atharvaveda for which the Prātiśākhya is intended; and in II 84 it treats *yuṣmad* as the base form of all pronouns of the 2nd person and regards *tvam te*, etc. as substitutes *(ādeśa)* following closely Pāṇini's procedure. The sūtra-s 195–218 of the Ṛktantra-vyākaraṇa are nearly identical with Pāṇini's VI 1 135–157.

In marked contrast with these two are the Taittirīya Pr. and the Ṛgveda Pr. which strictly avoid grammatical expressions. The Taittirīya Pr. went to the limit; it explained forms like *rakṣāṃsi* 'protections' or *jyotīṃṣi* 'lights' by prescribing the insertion of a nasal after /ā/, /ī/ and /ū/ whenever followed by /si/ or /ṣi/, and then removing the verbal forms *dadāsi* 'you give,' *dadhāsi* 'you put,' etc. as exceptions in a following rule (XVI 14 + 18): all that in order to avoid the grammatical classification in 'nouns' and 'verbs'! It is unbelievable that its author was ignorant of this ancient division and, therefore, his attitude reveals rather a sophisticated restraint[6] than primitive clumsiness. His phonetic knowledge is greater than that found in other Prātiśākhya-s, e.g., in the remark on the degree of nasality in nasal consonants (chapter XVII) and the remarkable formulation *nāsikā-vivaraṇād ānunāsikyam* "Nasal quality is given by the unclosing of the nose" (II 52). 'Continuous speech,' which Pāṇini I 4 109 had defined as 'closest contiguity' *(paraḥ saṃnikarṣaḥ saṃhitā)*, is explained as 'that which is within the compass of a single breath' *eka-prāṇa-bhāve* (V 1).

One can classify the Prātiśākhya-s by the degree in which they show the influence of grammar: Ṛgveda Pr. and Taittirīya Pr., the least; Vājasaneyi Pr., more; Caturādhyāyikā, Ṛktantra and perhaps Atharvaveda Pr., the most. But does this allow any inference on their relative chronology or their relation to Pāṇini? How little the use of popular terms counts as an argument is proven by the occurrence of the popular expressions *svara* 'vowel,' *saṃdhy-akṣara*

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[5] For more examples see B. LIEBICH, Einführung in die indische einheimische Sprachwissenschaft (Heidelberg, 1919), II, p. 47.

[6] A Prātiśākhya should deal only with the formal phonetic aspects of the text; it is not quite fitting that chapter XIII of the Taitt. Pr. deals with retroflection effected inside a word.

'diphthong,' *ghoṣavat* 'voiced,' etc. in a late grammatical work such as the Kātantra. Rather than comparing intellectual levels or styles we must look for improvements of detail, either formal or material.

The starting point for such investigations must be the Vājasaneyi Pr. because it has the greatest affinity to Pāṇini. A few of its sūtra-s are identical with Pāṇini's; but they allow hardly any inference about the direction of borrowing. Many others are so similar that they invite comparison. The appearance is often that of a concise rule of Pāṇini's corresponding to a longer ('loose' or 'diffuse') rule in the Vājasaneyi Pr.; but the picture changes when we look behind the appearance. Pāṇini I 1 9 defined *tulyâsya-prayatnaṃ sa-varṇam* "'Of the same group' is what is of equal effort in the mouth:" thus /a/ and /ā/ belong to the same group, and likewise /t, th, d, dh, n/ belong to one group because their peculiarities are caused by factors outside the mouth—duration in the first case; aspiration, voice and nasalization (or their absence) in the other. The Vājasaneyi Pr. I 43 is less brief: *samāna-sthāna-karaṇâsya-prayatnaḥ sa-varṇaḥ* "'of the same group' is [a sound that is] of the same place of articulation, the same organ of articulation, and the same effort in the mouth." If this definition is longer, it is also more precise. One could be misled by Pāṇini's definition to call /t/ and /k/ *sa-varṇa* 'of the same group' because both are produced by an occlusion, viz. a contact of the tongue, though their places of articulation are different: /k/ at the base of the tongue, /t/ at the alveolae. This concern for a misapplication is not contrived—we find it voiced in the first vārttika on Pāṇini I 1 9 by Kātyāyana, the oldest author of the Pāṇinian school whose work we have. The investigation of other parallel rules confirms that the Vājasaneyi Pr. improves on Pāṇini's formulations but does not achieve or aim for the same intellectual level; after all, this manual addresses itself to ordinary Veda reciters and not to scholars. If this line of reasoning needed any support it can be found by a study of Pāṇini's source material: his grammar ignores the language of the White Yajurveda (which includes the Vājasaneyi Saṃhitā to which the Prātiśākhya is an auxiliary). This is primarily due to geographical reasons, Pāṇini living in the extreme northwest of India and the White Yajurveda at home in the Eastern provinces. Pāṇini could hardly use the manual of a school he did not know, but the author of the Prātiśākhya could draw on a scholarly work that had gained wide acceptance.

The posterity of the Vājasaneyi Pr. to Pāṇini is the one safe point of Prāti-śākhya chronology. Its author Kātyāyana is almost certainly identical with the author of the vārttika-s on Pāṇini's grammar who lived around 250 B.C.[7] If the other Prātiśākhya-s (with the possible exception of the Ṛgveda Pr.) are later than the Vājasaneyi Pr., the whole genre is much later than earlier esti-mates assumed: not forerunners of grammar in a 'Vedic age' but works of Veda pandits in the age of the Maurya-s and Śuṅga-s. And who knows how much of

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[7] Below p. 138.

the so-called Vedic literature may be late, defying the simplistic concept of a definite and closed 'Vedic period'? The lower limit for the Prātiśākhya-s would be approximately the time of Patañjali (c. 150 B.C.) who quotes and explains in his Mahābhāṣya I 207, 5–10 two sūtra-s of the Taittirīya Pr. (XXII, 9–10) and possibly in Mahābhāṣya I 64, 7–9 four sūtra-s of the Caturādhyāyikā (I 29–32). The great number of authorities cited in the Prātiśākhya-s suggests that many treatises have been lost, even if we may doubt that each Vedic 'branch' *(śākhā)* actually had its own Prātiśākhya.

The object of a Prātiśākhya is stated succinctly in Caturādhyāyikā I 1: "Of the four kinds of words—viz. noun, verb, preposition and particle—the qualities exhibited in the combined and in the word-for-word state are here made the subject of treatment."[8] The Veda reciter had to learn how to constitute the continuous text from the word-for-word text, observing the rules of vowel and consonant sandhi as well as those of accentuation; that included also a correct pronunciation of sounds. The Prātiśākhya rules correspond more or less to the sandhi rules in Pāṇini's grammar, while Pāṇini does not deal with pronunciation per se. The sandhi rules of the Prātiśākhya-s are narrower but more precise than Pāṇini's because they concentrate on a special text; in fact many rules with their references to specific verses deal with a text in its continuous and its word-for-word form rather than with language.[9] While Pāṇini in his quest for generalities could legitimately employ abbreviations like *sarvâdīni 'sarva*, etc.,' the Veda reciter required every item spelled out; only the two Prātiśākhya-s of the Atharvaveda and the Ṛktantra make extensive use of abbreviated rules, obviously under the influence of grammar.[10]

The Prātiśākhya-s have not adopted Pāṇini's theory of substitution ("/y/ instead of /i/ before . . .") but follow the popular notion of 'change' *(vikāra)* ("/i/ becomes /y/ before . . ."); the original sound is generally given in the nominative case, the result of the change in the accusative, e.g. Taittirīya Pr. V 20 *nakāraḥ śakāram* . . . "/n/ . . . becomes /ś/" in accordance with the meta-rule *tam iti vikāraḥ* "The accusative denotes the change" Vājasaneyi Pr. I 133.[11] The technical genitive à la Pāṇini is found occasionally under the influence of grammar. The Prātiśākhya-s follow Pāṇini in the use of technical ablatives ('after . . .') and locatives ('before . . .'). The attempt of the Vājasaneyi Pr. to introduce a technical instrumental for an 'insertion' *(āgama*; in I 137) remained

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[8] *caturṇāṃ pada-jātānāṃ nāmâkhyātôpasarga-nipātānāṃ saṃdhya-padyau guṇau prātijñam.*

[9] This explains why there are hardly any optional rules in the Prātiśākhya-s: the Vedic texts were fixed.

[10] This influence is evident in the derivation of the 2. sg. imper. *edhi* 'be!' from the root √*as* vs. *ihi* 'go!' from √*i* (Atharvaveda Pr. 68f.), which falls outside the proper task of a Prātiśākhya.

[11] Cf. Ṛgveda Pr. I 14 (56) *asāv amum iti tad-bhāvam uktaṃ yathântaram* "(One should understand that) the expression 'this to that' means becoming that, with reference to the sound which (in its relation) stands nearest to it."

without followers, just as his short terms *sim* 'simple vowels,' *mud* 'sibilants', etc.

The main interest of the Prātiśākhya-s lies for us in their descriptions of the contemporary pronunciation; also, they serve as a check on the tradition of our manuscripts of the Vedic *saṃhitā*-s. Their phonetic observations were far more to the point than anything achieved in Europe before the last quarter of the 19th century when—largely under the influence of these same Prātiśākhya-s —modern phonetics emerged as a science. The places of articulations (i. e. palate, teeth, lips, etc.), the organs (root of the tongue, tip of the tongue, etc.) and accompanying features were clearly separated: those inside the mouth (opening, closure, constriction) contrasted with those outside it (aspiration, voicing, nasalization) even though the role of the vocal cords was not recognized. And yet I hesitate to accept their phonetic description as a true image of old Vedic pronunciation because the main thrust is to meet popular trends as we find them in the Middle Indo-Aryan (MIA) dialects.[12] The Ṛgveda Pr. devotes a whole chapter (ch. XIV) to faulty pronunciations with rules such as 5 (14) *sântasthānām ādi-lopânta-lopau* "In the case of those [consonants] which appear with a semivowel the first or the last [sound] is dropped" or 5 (16/17) *anyonyena vyañjanānāṃ virāgo leśena vā vacanaṃ piḷanaṃ vā* "Mutual colouring of consonants or partial pronunciation or suppression [of consonants]." The Middle-Indic sound law *r > i* led to uncertainty when to pronounce an original /r̥/: in the last syllable of *candra-nirṇik* we might hear a hypercorrect /r̥/ instead of an /i/, in *śr̥ṅga* a popular **śiṅga* [17 (45/46)].

The Prātiśākhya-s devote several sūtra-s to 'vowel fractions' *(svara-bhakti)* which are inserted between an /r/ or /l/ and a following consonant, especially a fricative: *varṣa* will be pronounced *varǝṣa*, *arhati* will sound like *arǝhati*. As these are the forms we commonly find in the MIA dialects (e. g. *varisa*, *arahanta*) it is likely that the Prātiśākhya-s describe a popular pronunciation of Sanskrit; if this pronunciation should be old, we have so far no way of proving it.

The aspirate pronunciation of stops before sibilants (e. g. *vathsa* for *vatsa*, *viraphsin* for *virapsin*) is taught in Ṛgveda Pr. VI 15 (54); Taittirīya Pr. XIV 12; Caturādhyāyikā II 6 (and Kātyāyana's vārttika 3 on Pāṇini VIII 4 48). This too is probably popular pronunciation.[13] In groups of stops the first is often incompletely pronounced: the /d/ in *marudbhiḥ* is not exploded [e. g. Ṛgveda Pr. VI 5 (17)];[14] but Vyāḍi severely restricted this rule to certain situations [Ṛgveda Pr. VI 12 (43/44)]. Such incomplete articulation or implosion was a necessary stage in the development towards the consonant assimilations which we find in the MIA dialects. Again it is not possible to make any state-

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[12] H. JACOBI, KZ 25.603–609.

[13] J. WACKERNAGEL, Altindische Grammatik, 2nd ed. (Göttingen, 1957), I § 113 with Nachträge. Cf. also below p. 144f.

[14] The same holds for stops in final position [Ṛgveda Pr. VI 5 (18)].

ments about when this incomplete articulation came into use. The explosion of the first stop in certain clusters[15] is called *sphoṭana* 'bursting' (Caturādhyā-yikā I 103 and II 38).

Besides the rules on incomplete articulation, and with no attempt to contrast or harmonize these doctrines, we find rules on doubling applicable in the same cases: the first member of a consonant group should be pronounced double *(sapta: sappta)*, likewise a consonant in final position *(marut: marutt)*. The earliest reference to doubling is Pāṇini VIII 4 47 where optional doubling of the first consonant in a group is accepted; Pāṇini cites Śākaṭāyana's opinion that no such doubling takes place in original groups of three or more consonants (VIII 4 50; i. e. in words like *Indraḥ* or *rāṣṭram*). Kātyāyana added in his vārttika 3 on VIII 4 47 the optional doubling of a final consonant. Doubling of the final consonant is not admitted by Vājasaneyi Pr. IV 114,[16] Ṛgveda Pr. VI 2 (7) and Taittirīya Pr. XIV 15, and was apparently limited to certain schools or areas. As I see it, this doubling is an attempt to speak correct academic Sanskrit. Against the common tendency to articulate a final stop incompletely which led to its disappearance in the MIA dialects, the 'correct' pronunciation would stress the explosion and give the impression of a double consonant. The same applies to the initial stop in a consonant cluster: the tendency towards assimilation was checked with a heavy articulation of the first stop.

Comparison with Pāṇini's grammar reveals another peculiarity of the Prāti-śākhya-s. Pāṇini composed his work for oral transmission from teacher to pupil; it had to be memorized and all technical implications had to be mastered before it could be used. When his grammar was finally put down in writing, the technical accents and nasalizations were lost because they could not be expressed in the script of the time. The user of a Prātiśākhya on the other hand, would know his Vedic *saṃhitā* by heart, but he needed no unusual mastery of the Prātiśākhya—certainly nothing that was not contained in the written text. The use of accents is avoided even where clarity and verbal economy would have demanded it: referring to the adverb *antáḥ* 'within' (in contrast to the noun *ántaḥ* 'end') the Vājasaneyi Pr. I 162 says *antar an-ādy-udāttam* 'the *antaḥ* that is not accented on the first syllable'— Pāṇini would simply have read the adverb with its accent. For the authors of the Prātiśākhya-s, pitch accents were no longer a fact of spoken Sanskrit but limited to Vedic recitation.

The Ṛgveda Prātiśākhya is attributed to Śaunaka; it is the only Prātiśākhya completely made up of verses: a medley of *triṣṭubh*-s, *jagatī*-s, *śloka*-s and a few other metres. It is organized in 18 chapters or *paṭala*-s over which a mechanical division into three *adhyāya*-s (with six *paṭala*-s each) and *varga*-s (consisting ge-

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[15] According to Caturādhyāyikā II 38 whenever a stop is followed by another of a more back series.

[16] I should note that this does not speak against Kātyāyana's authorship of both the Vājasaneyi Pr. and the vārttika-s: the grammarian had to be more catholic than the Vājasaneyin who need not and should not teach procedures not followed in his tradition.

nerally of five stanzas each) is superimposed. The ten introductory stanzas are
a late addition and have not been commented on by Uvaṭa in his commentary
to the Prātiśākhya. Closer study of the text shows that it was not cast in one
mold. The chapters XVI to XVIII constitute virtually an independent manual
of metrics; separate authorship has also been assumed with some hesitation
for chapters XIII to XV, and perhaps for chapters XI and XII. The frequently
voiced assumption, however, of old pre-Pāṇinian kernels in this Prātiśākhya
as well as in others lacks solid proof.

The metrical form led to a larger use of synonyms, finite verb forms and
connecting particles but the style is not verbose. The verses can be dissolved
into strings of sūtra-like sentences with frequent use of dittoing.[17] This Prāti-
śākhya has shunned arbitrarily created terms but employs more common
words in a defined technical meaning than any other. Almost every phenomenon
of sandhi is called by a special name which is introduced by definition and then
never used again in the text: the loss of /r/ in *abravi[r] Rāmam* is called '*a-kāma*,'
in *nṛpati[r] rājate* with lengthening of the preceding vowel (*> nṛpati rājate*)
'*niyata*' [IV 9 (30)].[18] The technical use of the accusative is taught[19] but the
abbreviated expression made possible by it is sometimes set aside in favour of
a non-technical formulation.[20] The commentator Uvaṭa (11th c. A.D., from
Gujerat; he wrote commentaries also on the Vājasaneyi Saṃhitā and the
Vājasaneyi Pr.) quotes an older commentary *(vṛtti)* and in fact his remarks
seem to be, with the exception of the more independent remarks on the first
four or five *paṭala*-s, largely identical with an anonymous Pārṣada-vṛtti or (in
other manuscripts) Pārṣada-vyākhyā. On the ten introductory stanzas we have
a brief commentary Varga-dvaya-vṛtti by Viṣṇumitra who seems to refer to
Uvaṭa's work and hence should be younger. It is remarkable how rarely Sāyaṇa
in his commentary on the Ṛgveda has made use of the Prātiśākhya.

The Ṛktantra-vyākaraṇa, the Prātiśākhya of the Sāmaveda, is perhaps the
youngest of the true Prātiśākhya-s[21] for it shows the strongest influence of
grammar including extensive use of *gaṇa*-s ('. . . etc.') instead of lists. It is also
the shortest with only 287 brief sūtra-s.

The Kṛṣṇa-yajuḥ-prātiśākhya 'Prātiśākhya of the Black Yajurveda' (as-
cribed in one manuscript to Kārtikeya) has been labeled the Taittirīya-prāti-
śākhya by W.D. Whitney at a time when little was known of other branches of
this Veda. Actually references to different views held by the Taittirīya-s in

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[17] The text is quoted by *paṭala* and stanza with the sūtra number eventually
added in parentheses.

[18] Cf. MANGAL DEVA SHASTRI's edition, vol. I (Benares, 1959), introduction, p. 56
and 66f.; vol. III (Lahore, 1937), p. 322–327.

[19] I 14 (56), see above p. 130 fn. 11.

[20] II 4 (10) *tatra prathamās tṛtīya-bhāvaṃ pratilomeṣu niyanti* "In the so-called
pratiloma anvakṣara-saṃdhi-s the first class consonants (i.e. tenues) become the
third class consonants (i.e. mediae)."

[21] We can leave aside here three texts also called Prātiśākhya-s of the Sāmaveda
but dealing with chanting: Akṣara-tantra, Puṣpa-sūtra and Sāma-tantra.

XXIII 15 and 16 led Whitney to assume that the work originated in another
school, but the inference is weak because chapters XXII to XXIV are probably
later additions to the text.[22] Perhaps the rule XIV 9 points to Central India as
the home of this Prātiśākhya; at least the insertion of a stop between a fricative
and a nasal (e.g. *Kṛṣ[t]ṇa*, *griṣ[p]ma*) is common in many later dialects of that
area.[23] The commentary on this Prātiśākhya, called Tribhāṣyaratna, is based—
as its name indicates—on the work of three predecessors, i.e. Vararuci, Ātreya
and Māhiṣeya; nothing is known about its author or his time.

The Śukla-yajuḥ-prātiśākhya 'Prātiśākhya of the White Yajurveda' or Kāt-
yāyanīya-prātiśākhya is commonly quoted as the Vājasaneyi-prātiśākhya; its
author Kātyāyana is almost certainly identical with the author of the Vārttika-s
on Pāṇini's grammar.[24] Each of the eight chapters of the Prātiśākhya is closed with
the auspicious words *vṛddhaṃ vṛddhir* just as the word *siddham* concludes every
last vārttika in every one of the eight *adhyāya-s*. Uvaṭa's commentary on this
Prātiśākhya seems to be later than that on the Ṛgveda Pr. because his explana-
tions of certain theoretical points have become more sophisticated.[25] While
Uvaṭa comments on the Prātiśākhya from the standpoint of a student of the
Mādhyaṃdina branch, the commentator Anantabhaṭṭa reinterprets it as a
manual of his own Kaṇva recension of the White Yajurveda.

Of the two Prātiśākhya-s of the Atharvaveda, the one connected with our
vulgate text of this Veda, by some twist of fate, remained virtually unknown
until a few decades ago. First a shorter and mutilated version was discovered,
and subsequently more complete manuscripts of it became known. The
Caturādhyāyikā, published from a single manuscript more than a century ago
by W. D. Whitney as the Atharvaveda-prātiśākhya, belongs to a lost branch of
the Atharvaveda. Because of its last colophon it has also been accepted as the
Śaunakīya Caturādhyāyikā even though in rule I 8 the opinion of Śaunaka is
first mentioned and then rejected. A newly found manuscript of this text[26] with
better readings calls it instead in the colophons *Atharvavede Kautsa-vyākaraṇe
Caturādhyāyikā* 'The [work] in four chapters in Kautsa's grammar on the Atharva-
veda.' It is hard to say whether Patañjali's sentence *upasedivān Kautsaḥ
Pāṇinim* "Kautsa came to Pāṇini as a student" (Mahābhāṣya II 115, 17) refers
to the same person or rather to another member of that *gotra*. Both Prāti-
śākhya-s of the Atharvaveda show strong influence of the techniques of gram-
mar.

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[22] Cf. also H. Lüders, Die Vyāsa-Çikshā (Kiel, 1895), p. 57–59.

[23] S. Varma, Critical studies in the phonetic observations of Indian grammarians,
2nd ed. (Delhi, 1961), p. 121–125.

[24] See below p. 139–141.

[25] E.g. the discussion on the use of technical terms found in the commentary on
Ṛgveda Pr. II 26 and on Vājasaneyi Pr. I 54.

[26] Sadāshiva L. Kātre, NIA 1.383–396.

KĀTYĀYANA

Kātyāyana[1] was not the first to comment on Pāṇini's Aṣṭādhyāyī but his *vārttika-s* ['remarks on the [teaching] procedure *(vṛtti)'* (?)][2] are the first such work that is preserved in its entirety. Their preservation is owed to Patañjali who included them in his 'great work in colloquial language' *(mahābhāṣya)* and discussed their pros and cons. We have reason to believe that no vārttika has been left out: in the sometimes lengthy discussions (there are 59 vārttika-s on Pāṇini I 2 64 and 33 on II 1 1!) we see a logical development of the argument. When Kātyāyana refers about a hundred times to another vārttika with *uktam* "It has been said"[3] this reference can be found (e.g. vārttika 8 on Pāṇini I 1 4 refers back to vārttika 4 on the same sūtra); all eight *adhyāya-s* conclude with the auspicious word *siddham* "it is correct." In isolated cases there may be some doubt as to whether a sentence found in the Mahābhāṣya-text is a vārttika of Kātyāyana or a statement of Patañjali, but in the overwhelming majority of cases we can recognize the vārttika-s with the help of the criteria developed by F. Kielhorn: the vārttika-s are generally followed by a paraphrase of Patañjali; their nominal sūtra-like style differs from the conversational style of the Mahābhāṣya. Their total number is approximately 4293[4]—attached to 1245 of Pāṇini's circa 4000 rules. There are manuscripts that contain the vārttika-s alone but these are secondarily derived from the Mahā-

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[1] The differentiation between an older *mahāvārttikakāra* Kātya and a later (and minor) *vārttikakāra* Kātyāyana made by K. G. SUBRAMANIAM, JOR 2.25–33 and V. RAGHAVAN, Bhoja's Śṛṅgāra Prakāśa (Madras, 1963), p. 746, is not convincing. There is no support for the later identification of Kātyāyana with Vararuci.

[2] Patañjali, Mahābhāṣya I 371, 18, contrasts Pāṇini's *vṛtti-sūtra-s* 'concise rules of procedure' with Kātyāyana's *vārttika-s* 'remarks on the procedure.' To judge from the expression *vārttika-sūtrika* 'student of *vārttika*' (Mahābhāṣya II 284, 3f.; not 'student of *vārttika* and *sūtra*' MW)—if it refers to students of the same text— the full name would have been *vārttika-sūtra* 'concise statements relating to procedure.' Cf. P. THIEME, GGA 212.23f.

[3] Frequently this reference is to a vārttika that comes later in the text, e.g. vārttika 9 on Pāṇini I 1 3 *aṭi côktam* refers to vārttika 5 on Pāṇini VI 1 13 and vārttika 6 on I 1 12 refers to vārttika 9 +10 on VIII 2 6. This shows that the whole text of the vārttika-s is supposed to be present in the mind of the student.

[4] K. MADHAVA KRISHNA SARMA, Pāṇini Kātyāyana and Patañjali (Delhi, 1968), p. 53f.

bhāṣya text. The combined edition of Pāṇini's sūtra-s with Kātyāyana's vārttika-s[5] gives an impression of the tradition as it might have appeared to Kātyāyana's successors, but it is likewise secondarily derived.

The careful separation of the vārttika-s from the surrounding text of the Mahābhāṣya and their stylistic characterization was the work of F. Kielhorn[6] whose investigation generally confirmed the Indian grammatical tradition about the separate identity of Kātyāyana's vārttika-s. A vārttika (or the first of several vārttika-s) on a sūtra of Pāṇini[7] often carries as a mark of reference the full quotation of Pāṇini's sūtra (131 instances) or the quotation changed only insofar as to allow its being construed with the other words of the vārttika. Otherwise the vārttika contains at least the first word(s) of a sūtra or the special term taught in it. The absence of any such references in a few vārttika-s or other inconsistencies in a few others raise doubts about their status, but the small number of such cases does not justify a general skepticism[8] against the establishment of Kātyāyana as an author with a separate identity.

More specific was E. Frauwallner's[9] attempt to prove that at least in one instance a large group of supposed vārttika-s were really inserted by Patañjali from another source into the argumentation of Kātyāyana. In his vārttika-s on Pāṇini I 2 64, Kātyāyana discusses Pāṇini's peculiar way of generating dual and plural forms: in the case of two trees (spelled out *vṛkṣaś ca vṛkṣaś ca* 'a tree and a tree') the dual suffix *au* is used according to Pāṇini I 4 22[10] and I 4 103;[11] before this suffix only one word *vṛkṣa* remains (Pāṇini I 2 64[12])—*vṛkṣau*. In his lengthy discussion of the feasibility of this rule I 2 64, Kātyāyana introduces the opposing arguments brought forward by two other scholars, Vājapyāyana and Vyāḍi (above p. 124–126): the former held that words denote first the universal, the latter on the contrary that they denote single things. Pāṇini's procedure would obviously imply that he took words to denote single things first—but probably Pāṇini had taken no principled stand on this question which may

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[5] Contained in: Word Index to Pāṇini-sūtra-pāṭha and Pariśiṣṭas, compiled by S. PATHAK and S. CHITRAO (Poona, 1935), p. 461–648.

[6] F. KIELHORN, Kātyāyana and Patañjali (Bombay, 1876; several reprints), IA 15.203–211, and above all, his edition of the Mahābhāṣya (Bombay, 1880–1885; 2nd revised ed., 1892–1909).

[7] Some vārttika-s refer to several sūtra-s conjointly, e.g. under I 2 29–30, I 2 68–71, I 4 105–108; the two vārttika-s on V 4 113–115 are one sentence.

[8] Such skepticism was voiced by R. ROCHER, JAOS 91.315, in whose article one misses a reference to KIELHORN's Kātyāyana and Patañjali.

[9] E. FRAUWALLNER, WZKSOA 4.92–106.

[10] I 4 22 *dvy-ekayor dvivacanaîkavacane* "Referring to two or one, dual or singular, respectively."

[11] The second suffix in each of the triplets given in IV 1 2 is called dual.

[12] I 2 64 *sa-rūpāṇām eka-śeṣa eka-vibhaktau* "Only one of the identical [words] remains if followed by the same case suffix."

have arisen well after his time.[13] Kātyāyana sides with Vājapyāyana and his belief in the role of universals; he gives in the vārttika-s 35–44 the basic arguments of Vājapyāyana,[14] in vārttika-s 45–52 one by one Vyāḍi's counter-arguments and finally, in vārttika-s 53–59 his own opinion which is similar to Vājapyāyana's: a word denotes the universal which manifests itself in individuals (Mahābhāṣya I 242.10–247.16). Frauwallner, who regards the whole discussion on the role of universals as an insertion made by Patañjali, assumed that the original text excerpted by Patañjali proceded not in three but in two steps: first the theory of Vyāḍi, then Vājapyāyana's theory of universals. His main argument is an apparently senseless repetition of vārttika 40 (in vārttika 56): *asti caikam anekâdhikaraṇa-sthaṃ yugapad—itîndravad viṣayaḥ* "It happens that one thing is simultaneously in several places: the range is like [that of] Indra."[15]

Vārttika 40 is embedded in the Mahābhāṣya text and its two parts are separated by Patañjali's paraphrase and discussion of the first part.

> "It happens also that one thing is perceived simultaneously as being in several places, e.g. the sun: the one sun is seen simultaneously in several places.—This analogy is not correct because not one and the same viewer sees the sun simultaneously as being in several places.—Then: 'The range is like [that of] Indra' . . ."

This is repeated, said Frauwallner, in vārttika 56 with accompanying commentary:

> *na caikam anekâdhikaraṇa-sthaṃ yugapad ity ādityavad viṣayaḥ* "[Regarding your statement that] one cannot be simultaneously in several places [I say:] the range (of application) is like the sun."

Patañjali paraphrases the vārttika and continues:

> "E.g. the one sun is seen simultaneously as being in several places.—The analogy is not correct because not one and the same viewer sees the sun as being in several places.—Then: The range is like [that of] Indra,[16] viz. the one Indra who is called at hundreds of rituals is at all [these places] simultaneously. Thus the form (universal) will be at all places simultaneously."

Frauwallner objected to the idea that an example (viz. the god Indra) which is offered in vārttika 40 but replaced by another (viz. the sun) in vārttika 56

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[13] As Patañjali, Mahābhāṣya I 6, 8–11 points out, Pāṇini's rule I 2 58 would imply that he saw the universals as the meaning of the word and I 2 64, conversely, the individuals.

[14] It must be remembered that the formulation of these vārttika-s is Kātyāyana's and that they are probably not literal quotations of Vājapyāyana's and Vyāḍi's works.

[15] God Indra attends many rituals at the same time. Nāgojībhaṭṭa (18th c. A.D., in his Uddyota on vārttika 40) assumes that it is the w o r d Indra that is invoked at several rituals simultaneously and becomes part of them, a late rationalistic interpretation which he tries to read into the text of the Mahābhāṣya.

[16] The edition of JOSHI, KUḌĀLA and RAGHUNĀTHA-ŚĀSTRIN prints the phrase *itîndravad viṣayaḥ* as a separate vārttika in both occurrences.

should again be preferred in Patañjali's commentary on both vārttika-s. The problem disappears when we recognize that the editors erred in regarding *itîndravad viṣayaḥ* as a vārttika or part of a vārttika.[17] Vājapyāyana's postulate *asti caikam anekâdhikaraṇa-sthaṃ yugapad* (vārttika 40) was answered by Vyāḍi's counterclaim *na caikam anekâdhikaraṇa-sthaṃ yugapad* (vārttika 48)—both equally unsupported by an example. The latter is then refuted by Kātyāyana in his definite opinion (vārttika 56):

> '*na caikam anekâdhikaraṇa-sthaṃ yugapad*' *ity ādityavad viṣayaḥ* "[Regarding your statement that] one cannot be simultaneously in several places [I say:] the range (of application) is like the sun."

That was the end of the argument for Kātyāyana just as it was for the author of Mīmāṃsā-sūtra I 1, 15 *yaugapadyam ādityavad* "Simultaneousness like [in the case of] the sun." Only Patañjali was not satisfied; if the sun is seen simultaneously in several places this is due to several different viewers, which makes the statement relational and worthless. Instead of *ity ādityavad viṣayaḥ* "[I say:] the range is like the sun," the vārttika 56 should end *itîndravad viṣayaḥ* "[I say:] the range is like Indra." This use of the particle *iti* ('regarding your statement that ... I say ...') is so typical of Kātyāyana's style that only vārttika 56 can be the original place of the example. With *iti* Kātyāyana refers back to vārttika 48 just as he so often refers with *iti* to Pāṇini's sūtra-s (e.g. on Pāṇini I 1 47; I 1 52, etc.) or with *iti ced* 'If you say ... then I say ...'[18] to a hypothetical reasoning. Patañjali was free to mention the examples that were to be introduced later and no further inferences can be drawn from this fact. Thus, a clear understanding of the Mahābhāṣya is only possible after a correct separation of Kātyāyana's and Patañjali's contributions.

To determine when and where Kātyāyana lived we depend on incidental references. On Pāṇini VI 3 21 *ṣaṣṭhyā ākrośe* "[Before the second word of a compound there is non-disappearance] of the genitive ending if [the compound] expresses an insult" Kātyāyana's vārttika 3 demands an exception—*devānāṃpriya*, the title of the Maurya kings. The elliptical expression *śāka-pārthiva* 'vegetable [eating] king,' i.e. 'vegetarian king' in vārttika 8 on Pāṇini II 1 69, can hardly refer to anybody but Priyadarśin Aśoka and suggests thus a date after 250 B.C.[19] On the other hand, Kātyāyana cannot have lived much later than that because of the large derived literature (variant readings of the vārttika-s, polemics against them, etc.) quoted by Patañjali (c. 150 B.C.) in his Mahābhāṣya.

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[17] H. JACOBI, Indian Studies [Fs. CH. R. LANMAN] (Cambridge, 1929), p. 151. Note that *itîndravad viṣayaḥ* is not repeated or 'paraphrased' in Patañjali's discussion as the authentic vārttika-s are.

[18] In the traditional interpretation no justice is done to the use of *iti*, and the mirror image relationship between vārttika-s 40 and 48 is lost.

[19] H. SCHARFE, KZ 85.211–225.

Scholars have long assumed that Kātyāyana lived in the South, i.e. the Dekkhan, because of a statement of Patañjali. At the end of his very first vārttika Kātyāyana offers a parallel: *yathā laukika-vaidikeṣu* ". . . as in secular and Vedic [affairs]." On the question why Kātyāyana did not simply say: *yathā loke vede ca* ". . . as in the world[ly life] and in the Veda," Patañjali suggests a) that Southerners are overly fond of secondary suffixes or b) that perhaps there is a special meaning to the longer formulation. Patañjali's suggestion has been taken by modern scholars as a statement that Kātyāyana was a Southerner but no such statement is implied; all we may conclude is that Patañjali thought it possible that Kātyāyana was a Southerner and that this may explain the unusual formulation. That Kātyāyana indeed lived in the South becomes likely through his vārttika on Pāṇini VI 3 73 *nalopo nañ.aḥ* "The negation *na* looses its /n/ [in the beginning of a compound]" (e.g. *a-putra* 'not a son; sonless') which demands similar negated forms from the verb if an insult is intended:

> *nañ.o na-lope 'vakṣepe tiñ.y upasaṃkhyānam* "In addition to Pāṇini VI 3 73 it must also be taught that the /n/ of the negation *na* is dropped before a verb form if an insult is intended."

Patañjali gives the examples *apacasi vai tvaṃ jālma* "You don't cook [right], you fool!" and *akaroṣi vai tvaṃ jālma* "You don't do it [right], you fool!" Negated verb forms are strange to Sanskrit and the Indo-European languages in general,[20] but are a common feature of the Dravidian languages.[21] And if we look at the few examples of such negative forms in Sanskrit texts,[22] it is striking that two of these texts are definitely from South India: Śaṅkara[23] hailed from Kerala and the Bhāgavata-purāṇa (*a-spṛhayanti* III 25, 37) comes from the Tamil country. Besides, it is noticeable that forms like *a-sakkoti* 'cannot' are frequent in the later Pāli texts.[24] One thing is certain: Kātyāyana neither belongs to the West nor to the North of India because of his links with the White Yajurveda[25] which was not represented in these areas; nor was he an Easterner because in his vārttika 8 on Pāṇini VII 3 45, he postulates the bird name *vartaka* 'quail' for the 'eastern' dialect while he apparently used *vartika*—as does the Vājasaneyi Saṃhitā XXIV 30.

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[20] From the Greek, E. SCHWYZER, Griechische Grammatik (München, 1939; reprinted, 1959), I, p. 432 and 644, fn. 3 adduces a solitary ἀτίει 'he does not honour' (Theognis 621) which he explains as an *ad hoc* creation.

[21] J. BLOCH, Structure grammaticale des langues dravidiennes (Paris, 1946), p. 51.

[22] L. RENOU, Grammaire Sanscrite (Paris, 1961), p. 174.

[23] G. THIBAUT, ZDMG 48.540, has disputed the correctness of these readings in Śaṅkara manuscripts. Māgha's Śiśupālavadha XV 33 *jālma . . . a-ghaṭate* shows its dependence on the Mahābhāṣya.

[24] D. ANDERSON, Pāli reader, Glossary (London, 1907), p. 2.

[25] B.A. VAN NOOTEN, IL 29.43–46.

It is virtually certain that Kātyāyana the Vārttika-kāra is identical with Kātyāyana the author of the Vājasaneyi Prātiśākhya of the White Yajurveda.[26] We have seen above (p. 129) how the Vājasaneyi Pr. I 43 improved on Pāṇini's definition I 1 9:

> tulyâsya-prayatnaṃ sa-varṇam "'Of the same group' is what is of equal effort in the mouth" becomes a cumbersome samāna-sthāna-karaṇâsya-prayatnaḥ sa-varṇaḥ "'Of the same group' is [a sound that is] of the same place of articulation, the same organ of articulation and the same effort in the mouth."

The motive for this alteration is voiced in Kātyāyana's first vārttika on Pāṇini I 1 9: Pāṇini's definition is too wide as it would extend to stops such as /k/ and /t/ which are produced through identical (samāna) efforts though at different places. But in his solution he stays as close to Pāṇini's formulation as possible while removing its shortcomings. He retains the adjective tulya against samāna of the Prātiśākhya and proposes in vārttika 2 to read: āsye tulya-deśa-prayatnaṃ sa-varṇam "'Of the same group' is what is of equal location and effort in the mouth." The vārttika-s indicate familiarity with the Vājasaneyi Pr. I 43 and must therefore be later; the solution proposed by the vārttika is superior.

Pāṇini I 1 9 tulyâsya-prayatnaṃ sa-varṇam: concise but not precise

Vājasaneyi Pr. I 43 samāna-sthāna-karaṇâsya-prayatnaḥ sa-varṇaḥ: not concise but precise

vārttika 2 on I 1 9 āsye tulya-deśa-prayatnaṃ sa-varṇam: both concise and precise

In the writing of his vārttika-s, Kātyāyana has not been able to free himself completely from the terminology and the attitudes of the Prātiśākhya-s. He uses occasionally svara for 'vowel'[27] instead of a^c, sparśâghoṣa for 'voiceless stop'[28] instead of kha^y, etc.; we even find śvastanī '2nd future suffix'[29] instead of Luṭ and bhavantī 'present tense suffix'[30] instead of Laṭ. Instead of Pāṇinian 'substitution' (ādeśa) of sounds he speaks occasionally of 'change' (vikāra)[31]

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[26] P. Thieme, IC 4.189–209; L. Renou, JA 230.169–176; P. Thieme, GGA 212.42f. K.M.K. Sarma, Pāṇini Kātyāyana and Patañjali, p. 108f., raises the objection that according to Vājasaneyi Pr. I 73 the two components of the diphthongs /ai/ and /au/ are equally one measure (mātrā) long, while according to vārttika 4 on I 1 48 the diphthongs are made up from 1/2 measure /a/ and 1 1/2 measures /i/ and /u/. This interpretation reads more into the texts than they intend to state. The Prātiśākhya merely speaks of the measure of /a/ being guttural, that of /i/ and /u/ palatal and labial, respectively. The vārttika only says that the latter part of the diphthong is greater, which Patañjali, Mahābhāṣya I 118, 2f., explains by saying that "the measure of /i/ and /u/ is greater, the [measure] of /a/ lighter:" the term 'measure' is not used here with the precise time value.

[27] E.g. vārttika 5 on I 1 7.

[28] E.g. vārttika 7 on I 4 109.

[29] Vārttika 1 on III 3 15.

[30] Vārttika 11 on II 3 1.

[31] E.g. vārttika 15 on Śiva-sūtra 5.

and even uses a technical accusative to denote such a 'change'[32] instead of Pāṇini's genitive of substitution. But Kātyāyana's obligation to Prātiśākhya techniques goes still deeper and touches on the basic difference between grammar and Prātiśākhya. Grammar strives for scientific generalization, for the essence of things; the Prātiśākhya-s look for practical rules to aid the priestly practitioner, with every detail spelled out.

Pāṇini's rules I 2 37–38 give rise to a discussion in which Kātyāyana displays his dual approach. The subject is a Vedic *mantra* of over twenty words, the so-called *Subrahmaṇyā*.[33] Pāṇini had succinctly defined the peculiar way in which it is recited: all vowels with (normally) falling tone are chanted in high pitch with the exception of the two words *dévāḥ* and *bráhmàṇaḥ* at the end of the formula where these vowels are chanted in a low pitch instead. Pāṇini's description is marred by a technical oversight: several of the falling tones are only secondarily established in one of the very last rules of his grammar (VIII 4 66[34]), in that final section of strictly linear rules called the *tripādi*—hence these falling tones are not available for substitution in I 2 37–38. All would be faultless if the rules I 2 37–38 would be put after VIII 4 66; but—and that is Kātyāyana's final opinion in his vārttika 5 on I 2 32—such transfer of the rules I 2 37–38 is not necessary because Pāṇini's procedure indicates that he himself regarded the rules I 2 37–38 as if they followed VIII 4 66. Kātyāyana argues that it would make no sense otherwise to say that the falling tones of *dévāḥ* and *bráhmàṇaḥ* are chanted not in the high but in the low pitch because these falling tones are established only secondarily by VIII 4 66. This discussion of Kātyāyana, in which he points out a technical flaw, suggests a way to remedy it and finally decides that Pāṇini himself had already taken care of the problem, is a fine specimen of Pāṇinīya scholasticism. Under the rule I 2 37 itself Kātyāyana follows a different course by actually rewriting the whole rule. "In the *Subrahmaṇyā* the vowel /o/ is [always] high pitched" (vārttika 1); "The vowel /ā/ is [always] high pitched before a verb form; also the first of the following [syllables]" (vārttika 2), etc. This is the technique of the Prātiśākhya-s: a mechanical enumeration of instances instead of a statement of the salient feature—not a word on the elimination of the falling tone *(svarita)*!

Kātyāyana's attitude towards Pāṇini shows great respect; he not only closes every last vārttika of an *adhyāya* with the auspicious word *siddham* 'it is correct'—but the whole opus closes with the deferential clause . . . *bhagavataḥ Pāṇineḥ siddham* "[This formulation] . . . of the venerable Pāṇini is correct." The definition of a vārttika is in Nāgojībhaṭṭa's words "The critique of what

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[32] Vārttika 3 on I 2 39.

[33] P. THIEME, IC 4. 203–208. A specimen of modern recitation of the Subrahmaṇyā is found on the LP record album 'The four Vedas' by J. LEVY and J.F. STAAL (Asch Mankind Series, New York, 1969).

[34] VIII 4 66 *udāttād anudāttasya svaritaḥ* "After a high pitched [vowel], for a low pitched [vowel] one with falling tone is substituted" (e.g. *bráhmāṇaḥ > bráhmàṇaḥ*).

has not been said or said badly,"[35] i. e. an investigation into the correctness of
Pāṇini's rules. If found wanting, emendations or additions are proposed; if
found superfluous, their elimination is recommended. In the majority of cases
the rules are found to be correct as they stand; in fact, Kātyāyana goes to great
lengths to save the original formulation of Pāṇini. I find the earliest suggestion
of a bias against Kātyāyana in Śabarasvāmin's commentary on Mīmāṃsā-sūtra
X 8 4. Śabarasvāmin, who does not accept vārttika 2 on Pāṇini II 1 1, rebukes
the 'venerable Kātyāyana' for not telling the truth *(a-sad-vādin)* due to igno-
rance. Th. Goldstücker went still further in his criticism in his book 'Pāṇini:
his place in Sanskrit literature.' He saw in Kātyāyana a vicious enemy of
Pāṇini and in Patañjali a loyal defender. Such views are not tenable.

The Aṣṭādhyāyī can be compared to a code of law which is subject to legal
interpretation[36] when cases arise that were not or could not be foreseen by the
lawmaker. The courts need a consistent and workable application even in such
cases. Lawyers are used to obtaining this application by extrapolating princi-
ples embodied in the code which is presumed to be comprehensive and consist-
ent to the minute technical details; seemingly redundant features must have
their significance. If these extrapolations lead to opposing conclusions,[37] this
contradiction must be resolved. As a last recourse, the law may be amended.
The Pāṇinīya-s are like such lawyers and we miss the point when we castigate
them for reading later theories into the original texts.[38] But the philologist's
objective is different. He wants to know what Pāṇini meant when he formulated
his rule, comparable to the historian of law who is interested in the original
intent of the lawmaker and the meaning his work had in his time. Instead of
being flustered by contradictions that appear in the extrapolations he sees in
them the sign of a lively scholarly tradition, an indication of problems that
surfaced only after the author's time.

The problem of maintaining consistency in such a large and complex struc-
ture as the Aṣṭādhyāyī must have been staggering, much more so than it would
have been in a paradigmatic kind of grammar. Add to this the irregularities of
a natural language and it was inevitable that there should be contradictions if
we attempt to extrapolate the underlying principles. Furthermore, it is in the

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[35] Uddyota I 125, 19 (vārttika 1 on I 1 1) *sūtre 'nukta-durukta-cintākaratvaṃ
vārttikatvam.*

[36] P. THIEME, JAOS 76.23. It is consistent with this view that interpreting gram-
marians apply in any difficulty the weakest argument first, escalating the debate
to stronger and more basic principles only when forced to do so: B. A. VAN NOO-
TEN FoL 7. 598 f. with reference to Mbhāṣ I 286, 1–15.

[37] M. DESHPANDE, KZ 86.229, points out how the rules III 4 103 and VI 4 71
lead in consequence to opposing principles: does I 1 69 apply to a long /ā/ or not?
His paper makes it clear that the Aṣṭādhyāyī was not constructed with the absolute
consistency claimed by the interpreters. Whichever way one understands I 1 69–70,
there remain some loose ends (see especially p. 245 of said paper).

[38] E.g. S.D. JOSHI, Vyākaraṇa Mahābhāṣya, Avyayībhāva-tatpuruṣāhnika
(Poona, 1969), p. x.

nature of unformulated subconscious principles that they are not quite applied with the same consistency as expressed metarules. I might add that our task in interpreting Pāṇini is not to further embroider the intricate scholastic patterns by new sophisms *(phakkikā-s[39])* but to cut through to the original material: not a faultless weave as the Pāṇiniya-s would have it and not quite the automatic device they pretend it to be—it is but a 'thread' and after the loss of the oral instruction that once went with it we must know the results (i. e. Sanskrit) to check our procedure and to avoid wrong forms.[40]

Seven references in the vārttika-s to emendations proposed by 'some' *(eke)* show that Kātyāyana was not the first to investigate the Aṣṭādhyāyī in this fashion.[41] The *śloka* quoted in Mahābhāṣya II 398, 4 + 13 might well be older than Kātyāyana. To express possession, Pāṇini V 2 115 teaches the suffixes *-in* and *-ika* for noun stems ending in /a/ (e.g. *daṇḍa: daṇḍin, daṇḍika*); the next rules adds the nouns *vrīhi*, etc. *(vrīhi: vrīhin, vrīhika; śikhā: śikhin).* The verse demands a restriction: *śikhādibhya in'r vācya ika^n yavakhadādiṣu* "*-in* must be taught [exclusively] for *śikhā*, etc., *-ika* [exclusively] for *yavakhada*, etc." Kātyāyana (vārttika 1 on V 2 116) regards the restriction as unnecessary, an apparent polemic against the *śloka*.

Kātyāyana attached his vārttika-s to Pāṇini's sūtra-s in their natural sequence in the Aṣṭādhyāyī; as the authoritative form of the sūtra-s was their continuous recitation he had considerable leeway in dividing sūtra-s into two:[42] e. g. he proposes to read the sūtra I 1 17/18 *u^n.a ūṁ* as two: I 1 17 *u^n.aḥ* and 18 *ūṁ*—an emendation that has been adopted in the vulgate text. In other instances Kātyāyana found a sūtra unnecessary. Pāṇini I 1 48 *e^c.a i^g ghrasvādeśe* teaches that /i/ and /u/ are substituted for /e,ai/ and /o,au/, respectively, when the substitution of a short vowel is decreed for the latter sounds: *citra + go > citra-gu* (I 2 48). The correct substitution can in Kātyāyana's opinion however be effected without the rule I 1 48 because there is no short /e,ai/ or /o,au/ and because /i/ and /u/ belong to the same group and are therefore the natural substitutes. In this case Kātyāyana's suggestion (in spite of Patañjali's silent consent!) did not prevail in the tradition and the vulgate still contains the sūtra I 1 48.

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[39] This word is derived by a transposition of the aspiration from Middle Indo-Aryan *pakkhika* (to Sanskrit *pākṣika* 'siding with one party') as it typically reasserts the refuted *pūrva-pakṣa* [MW; Ādarś Hindī Koś (Benares, 1964)], short for *pūrva-pākṣika*.

[40] Cf. Nāgojībhaṭṭa, Paribhāṣendu-śekhara on Paribhāṣā 9: *atra lakṣyānusāri vyākhyānam eva śaraṇam* "Concerning this we can have recourse only to the interpretation guided by the particular forms."

[41] F. KIELHORN, IA 16.103.

[42] Note that there are but a few suggestions (by Patañjali only) that a word at the beginning of a sūtra may instead belong at the end of the previous rule (KIEL-HORN, IA 16.247) which reveals a basic consensus on the division of the sūtra-s.

Proposed changes in the formulation of sūtra-s are motivated either by logical-technical problems or by additional language material that needed to be covered. An example of the logical problems we have seen in the definition of *sa-varṇa* (p. 140); but they are not limited to definition rules. While we easily get *vṛkṣau* 'two trees' from *vṛkṣaś ca vṛkṣaś ca* 'a tree and a tree' (above p. 136), Kātyāyana sees the need for a special injunction regarding synonyms. We should be able to combine *vakra-daṇḍa* 'someone with a bent staff' and *kuṭila-daṇḍa* 'someone with a crooked staff' in a single dual form, either *vakra-daṇḍau* or *kuṭila-daṇḍau* 'two people with bent/crooked staves' (vārttika 23 on I 2 64). Technical simplification is the aim of a vārttika on Pāṇini I 1 34: the listing of the seven direction adjectives can be shortened by a reference to the *gaṇa* 'word list' attached to I 1 27.[43]

Regarding the additional language material, we must try to differentiate between additional old Vedic forms and new or regional forms. Pāṇini's presentation of the Vedic material was highly selective, possibly restricted to forms that occurred in commonly used liturgical texts; for reasons that so far elude us, Kātyāyana included further Vedic material. Pāṇini VI 3 21 allows the retention of the genitive suffix for the first member of a compound only when an insult was intended (type *dāsyāḥ-putra* '[illegitimate] son-of-a-maid')—Kātyāyana postulates also a non-abusive *Divo-dāsa* (a name found in the Ṛgveda) and *Devānāṃ-priya* (the very recent title of the Maurya kings). Frequently the words or forms postulated by Kātyāyana[44] are not attested to in any text which makes it virtually impossible to decide between the two kinds of language material. Furthermore, it is possible that Pāṇini has overlooked certain words or forms or has not thought it necessary to teach them. Forms postulated by Kātyāyana do not, therefore, necessarily indicate linguistic development.

A major morphological development reflected in the vārttika-s is the formation of the periphrastic perfect with $\sqrt{kṛ}$, $\sqrt{as}$ and $\sqrt{bhū}$, whereas this perfect in the language of the Brāhmaṇa-s (and Pāṇini) could only be formed with $\sqrt{kṛ}$ (Pāṇini III 1 40 with vārttika 3): *pācayāṃ cakāra/āsa/babhūva*. Another example: in agreement with older usage Pāṇini I 1 11 teaches *ī^d-ū^d-e^d dvi-vacanaṃ pragṛhyam* "/ī, ū, e/ expressing duality are *pragṛhya*," i. e. must be 'separated' from an eventually following vowel without any sandhi effects. Kātyāyana takes the sūtra to mean that dual suffixes ending in /ī, ū, e/ are *pragṛhya* so as to include the verbal dual forms in *-āthe*, etc. which were not treated as *pragṛhya* in the older language.[45] The aspiration of stops before sibilants (*vatsa* > *vathsa*, etc.) mentioned in vārttika 3 on VIII 4 48 as the doctrine of Pauṣkara-sādi probably reflects a recent popular pronunciation and corresponds to state-

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[43] H. Scharfe, Pāṇini's metalanguage (Philadelphia, 1971), p. 49 f.

[44] Kātyāyana introduces new *gaṇa*-s like *Coḍādi-* (vārttika 1 on IV 1 175) for which Patañjali, Mahābhāṣya II 270.3 f., gives the full list: *Coḍa, Kaḍera, Kerala*.

[45] Surprisingly, these verbal forms are not *pragṛhya* in the Kātantra (H. Lüders, SPAW 1930.521 = Ph. Ind., p. 701).

ments in three Prātiśākhya-s (above p. 131).[46] The word *āścarya* which Pāṇini VI 1 147 and Yāska II 24 have only in the value of 'rare' has, by Kātyāyana's time, assumed the meaning 'wonderful' (vārttika 1 on VI 1 147; cf. classical Sanskrit *āścarya* n. 'marvel').[47]

Kātyāyana, who in his Vājasaneyi Pr. used artificial terms extensively, also developed Pāṇini's metalanguage. The elements *-i* and *-ti* used often by Pāṇini to denote roots (e. g. *ruc-i* III 2 136; *as-ti* II 4 52) are taught in vārttika 2 on III 3 108 as i^k and $^śti^p$. And in the vārttika-s 5 to 8 on I 1 68 he proposes four new determinatives[48] to mark those nouns in Pāṇini's rules that denote a) also their synonyms, b) only their synonyms, c) only the subspecies or d) both the word itself and its subspecies.[49]

Many of Kātyāyana's vārttika-s deal with the principles of interpretation or construction. Some of these principles have been laid down by Pāṇini himself, e. g. I 4 2 *vipratiṣedhe paraṃ kāryam* "When there is conflict, the subsequent[ly formulated] rule [takes precedence over the operation provided by a previous rule]" which is valid in the definition section I 4 1 to II 2 38: each item in this section is allowed only one technical name. Kātyāyana extends the application of this principle through the whole grammar with the exception of the last three *pāda*-s (the so-called *tripādi*, cf. above, p. 101), as a convenient mechanical device: whenever two conflicting rules[50] tend to apply to a form, the rule given later in Pāṇini's grammar prevails. The arbitrariness of this extension is shown by the great number of exceptions that call for the contrary principle when 'the conflict is in favour of the former rule' *(pūrva-vipratiṣiddham)*.[51] The extension is in fact quite unnecessary for the proper interpretation of Pāṇini's rules if one admits the validity of several principles of a general logical nature.[52]

The most important of these is this: a special rule that falls completely within the sphere of a general rule supersedes the general rule in its limited area. If this were not so, it could not apply at all and its very existence would be point-less (*apavāda* overrules *utsarga*). Another principle refers to the gradual build-up of words from a root and a number of suffixes: the operation within a stem (*aṅga*) takes precedence over an operation caused by a further suffix being

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[46] According to vārttika 12 on I 3 1, the root list serves the purpose of eliminating faulty, i. e. colloquial, forms like *āṇapayati* (v. l. *āṇavayati*).

[47] P. THIEME, KZ 78.110.

[48] The term *anubandha* 'tie on' is first found in the vārttika-s, possibly after the analogy of the *anubandhya paśu*, the animal which is tied to the sacrificial post and subsequently slaughtered.

[49] H. SCHARFE, Pāṇini's metalanguage, p. 42 f.

[50] In vārttika 12 on VI 1 158 Kātyāyana suggests even the prevalence of a word taught later in the s a m e r u l e when there is a conflict.

[51] Patañjali, Mahābhāṣya I 306, 9 f., avoids this oddity by reinterpreting the word *param* in Pāṇini's rule I 4 2: not 'subsequent' but 'desired' *(iṣṭa)* so that the rule states "Where there is a conflict that which is desired [takes place]." That implies that one knows the correct forms beforehand and is guided by this knowledge in the correct application of the grammar.

[52] G. CARDONA, JIPh 1.40–74.

attached to the stem *(antar-aṅga* overrules *bahir-aṅga,* e.g. in the instr. sing. fem. *paṭvyā* from [*paṭu* + *i*] + *ā* instead of **paṭuyā).*[53] These principles are based on sound reasoning and yet their consequent application leads to certain difficulties which Patañjali meets with additional interpretation rules. The relative strength of these basic principles is tested wherever they come into conflict with each other:

> "Of (these five kinds of rules, viz.) a preceding (rule), a subsequent (rule), a constant (rule), an intra-stem (rule), and a special rule, each following (rule) possesses greater force (than any one of, or all, the rules which in this metarule are mentioned before it)."[54]

The loss of the original oral explanation attached to Pāṇini's sūtra-s led to an intensive search for the principles underlying the grammar so that its rules could be properly applied. This search proceeded on the assumption that Pāṇini formulated his rules with absolute consistency and parsimony; any apparent deviation from these ideals was meant to indicate the validity of another guiding principle whose usefulness was shown by a number of further applications.[55] But the assumption of Pāṇini's absolute consistency (cf. above p. 142f.) and parsimony is not correct;[56] he states occasionally a general principle even though this could be derived from logic or from a textual 'indication,'[57] as e.g. Pāṇini I 1 56 *sthānivad ādeśaḥ* . . . "The substitute is like the original . . ." The recent Pāṇinīya Nāgojībhaṭṭa (18th c. A.D.) believes, following a suggestion of Patañjali, that this seemingly unnecessary assertion is in itself an 'indication:' that principles established by logic or by textual indications are not universally valid *(jñāpaka-siddhaṃ na sarvatra)*[58]—by which admission of course the basis for this whole investigation has been severely weakened.

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[53] The same is true for operations within a word vs. operations in a sentence. The replacement /i/ > /u/ in the generation of the 3rd. sing. imperative takes precedence over /i/ > /y/ in external sandhi: *pacat*[*i* > *u*] +*atra* > *pacatv atra.* That led to a re-interpretation of the terms *antaraṅga* and *bahiraṅga;* 'whose conditions are internal and external' (Nāgojībhaṭṭa, Paribhāṣendu-śekhara on Paribhāṣā 50 beginning); the original term must have contained *aṅga* in the only meaning found in the Aṣṭādhyāyī and the vārttika-s: 'that to which something is suffixed' (Pāṇini I 4 13). Kātyāyana, vārttika 5 on III 4 77, applies the *antaraṅga* principle only to the above-mentioned case only as an alternative; in vārttika 4 he proposed to see here a 'conflict in favour of the former rule.' In the verse quoted by Patañjali (Mahābhāṣya I 91, 20) from Gonardīya, *pratyaṅga* is used instead of *antaraṅga;* cf. Nāgojībhaṭṭa, Uddyota IV 659 (on VI 3 138).

[54] Paribhāṣā 38 in Nāgojībhaṭṭa's Paribhāṣendu-śekhara; cf. also the verse quoted in Haradatta's Padamañjarī on the Kāśikā on I 4 2.

[55] Cf. the statement *naikaṃ prayojanaṃ yogārambhaṃ prayojayati* "A single application does not motivate the introduction of a [definition] rule," Mahābhāṣya I 68, 16.

[56] Cf. L. Renou, EVP 1.104: "L'Aṣṭādhyāyī est le siège d'un conflict tacite de doctrines et de méthodes."

[57] The term *jñāpaka* for these occurs first in Kātyāyana's vārttika-s, e.g. vārttika 5 on I 1 11.

[58] Paribhāṣā 116 in Nāgojībhaṭṭa's collection.

Of Kātyāyana's achievements as a grammarian the addition of new language material has already been mentioned (p. 144 f.). He also tried to further Pāṇini's grammatical analysis.[59] Irregular formations are given at times in the Aṣṭā-dhyāyī as ready-made words without grammatical build-up, e.g. *mātāmaha* and *pitāmaha* 'maternal and paternal grandfather' (IV 2 36) which, besides the words *mātṛ* 'mother' (nom. sing. *mātā*) and *pitṛ* 'father' (nom. sing. *pitā*), evidently contain the adjective *maha* 'great.' Kātyāyana sees instead in the second element a suffix *ⁱāmaha^c* (vārttika 2 on IV 2 36)—a rather mechanical way to account for the admittedly unusual formation. In rule V 3 22, Pāṇini lists isolated time adverbs *sadyas* 'today,' *parut* 'last year,' *pūrvedyus* 'yester-day,' etc. Kātyāyana's analysis of *sadyas* as *sa*- with a 'suffix' *dya(s)* (vārttika 1) may still be regarded as reasonable in spite of the obvious connection with the root $\sqrt{dyu}$ and the words for 'day.'[60] But the analysis of *pūrvedyus* in *pūrva* and a suffix *edyusu^c* (vārttika 6) is very artificial: the vowel /e/ certainly belongs to the first element of the word *(pūrve-dyus)*. *repha* 'burr, r-sound' is not *ra* + (suffix) *ipha* (vārttika 4 on III 3 108) but is derived from the root $\sqrt{riph}$ 'snarl' attested to in the Veda. These mechanical divisions fall short of the standards of Pāṇini's functional analysis and remind one of Yāska's procedure and—carried to an extreme—the analyses found in the Uṇādi-sūtra-s. Kātyāyana makes frequent use of the disappearance *(lopa)* of words in secondary word formations. Already Pāṇini V 3 82 teaches 'loss of the latter word' *(uttara-pada-lopa)* when the latter word of *vyāghrājina* 'tiger skin' (viz. *ajina* 'skin') is dropped before the secondary suffix *ka^n*: *vyāghraka* 'man in tiger skin.' Kātyāyana adds the types *śāka-pārthiva* 'vegetarian king' from *śāka-bhojī pārthivaḥ* 'vegetable-eating king,'[61] *uṣṭra-mukha* 'camel face' from *uṣṭra-mukham iva mukhaṃ yasya* 'whose face is like the face of a camel.'[62] While Kātyāyana saw here the ellipsis of the latter member of a lower level compound that existed before the final composi-tion, later commentators[63] start with a hypothetical compound **śākabhoji-pārthiva* and assume the ellipsis of the middle member.[64]

In his vārttika 1 on II 3 19, Kātyāyana states that the case relation of a noun with the verb takes precedence over that with a nominal supplement to the verb: though *namas* 'homage' would require the dative of its object (*namo devebhyaḥ* by Pāṇini II 3 16), we use the accusative in *namaskaroti devān* 'he reverences the gods'—the construction of $\sqrt{kṛ}$ 'do' with accusative prevails over the construction of *namas* with dative. In the vārttika-s 1 and 2 on II 3 28 Kātyāyana assumes ellipsis of a gerund: in *prāsādāt prekṣate* 'he looks down from the terrace,' he takes 'terrace' as the object of a lost gerund in a hypos-

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[59] E.g. the term *āgama* for morphemes that do not alter meaning or function of a word or suffix (I 1 20, vārttika 5).

[60] W. SCHULZE, Kleine Schriften, 2nd ed. (Göttingen, 1966), p. 806–828.

[61] II 1 69, vārttika 8.

[62] II 2 24, vārttika 12.

[63] Bhāṣāvṛtti, Durghaṭavṛtti, Durgasiṃha (on Kātantra).

[64] H. SCHARFE, KZ 85.219–223.

tasized sentence *prāsādam āruhya prekṣate* 'after climbing the terrace he looks' (the example is Patañjali's). Of grammatical interest is also Kātyāyana's definition of a sentence as 'having one verb' (*eka-ti^n*; vārttika 10 on II 1 1); in nominal clauses the verb 'is/are' is supplied (vārttika 11 on II 3 1).

Kātyāyana[65] first formulated for us the basic principles of grammatical analysis which allow us to isolate abstract units like roots, suffixes, etc. even though these never occur alone in ordinary language. By a two way reasoning of *anvaya* 'concurrent presence, agreement' and *vyatireka* 'concurrent absence, difference' we can isolate and coordinate word elements and their meanings. Patañjali explains what is meant: the word *vṛkṣas* 'tree' suggests a certain physical object with roots, branches, fruit and leaves; the word *vṛkṣau* 'two trees' suggests likewise roots, branches, etc., but in two specimens. We conclude that the constant meaning 'tree' is carried by the element *vṛkṣa-*, the notions 'one' and 'two' by the sounds /s/ and /au/, respectively. An attempt to prove by the same method that the single sounds carry meaning is abandoned: sounds in themselves are meaningless (vārttika-s 9–15 on Śiva-sūtra 5). In his remarks on vārttika 15 Patañjali points out that otherwise the similarity of *kūpa* 'well,' *sūpa* 'sauce' and *yūpa* 'sacrificial post' would force us either to assume that the three words and the objects denoted by them have more common than separate properties or that their special meanings are totally expressed by their first sounds alone—which would leave a meaningless *-ūpa*.[66]

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[65] I 2 45, vārttika 9 = I 3 1, vārttika 6; cf. G. CARDONA, ALB 31/32.313–352.
[66] Mahābhāṣya I 32.2–10.

FRAGMENTS PRESERVED IN THE MAHĀBHĀṢYA

While the first purpose of Patañjali's Mahābhāṣya is a discusssion of Kātyā-yana's vārttika-s, in the process of these discussions he frequently refers to other authors, quoting metrical lines (and a few prose sentences) from their works.[1] The later commentators uniformly call these fragments śloka-vārttika-s or merely vārttika-s; sometimes they ascribe these verses to Kātyāyana, author of the vārttika-s, other times they contrast the author of the śloka-vārttika-s with the author of the vārttika-s. The great variety of metres, ranging from śloka-s (165 verses) and āryā-s (about 40 verses) to classical metres like vaṃśastha and dodhaka, suggests a number of authors. Kaiyaṭa (11th c. A.D.) reports a tradition that the dodhaka stanza found in Mahābhāṣya I 484, 17f. was compos-ed by Vyāghrabhūti, and the śloka in Mahābhāṣya III 199, 19 is quoted by Patañjali as the tradition of the Bhāradvājīya-s. The other verses remain anonymous for us.

Some of the verses are devoted to the same kind of critical investigation as Kātyāyana's vārttika-s, and at times Patañjali's discussion is no more than a prose paraphrase of the verses with illustrations added (e.g. on Pāṇini I 1 19); the verses are often repeated without interruption after Patañjali's elabora-tions. In other instances they are quoted beside the prose vārttika-s of Kātyā-yana; the stanza Mahābhāṣya II 121, 7f. even refers to Kātyāyana by name and quotes his vārttika on Pāṇini III 2 118.[2]

Independent critique of the Aṣṭādhyāyī seems to have been the objective of the prose annotations attributed to the Saunāga-s ('followers of Sunāga'?) who are quoted seven times in the Mahābhāṣya for their remarks; once their state-ment is repeated without attribution, which shows that Patañjali, even where he seems to speak for himself, may actually quote earlier authors.[3]

Patañjali's short discussion of Pāṇini VIII 2 58 gives an idea of the rich grammatical activity in the centuries between the two authors. The Indo-European root √vid has differentiated in Sanskrit into several homonyms follow-

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[1] F. KIELHORN, IA 15.228–233. The metrical quotations are conveniently gath-ered at the end of vol. 2–5 of the Rohtak edition of the Mahābhāṣya.

[2] There can be little doubt that bhagavān Kātyaḥ 'the venerable Kātya' in the stanza Mahābhāṣya II 97, 26f. refers to the same Kātyāyana. The reference to vārttika 3 on Pāṇini III 4 37 in the line quoted in Mahābhāṣya II 176, 12 contains the earliest use of the word vārttika for Kātyāyana's annotations.

[3] Mahābhāṣya II 209, 8 (anonymous) = II 105, 8 and 238, 11 (Saunāgāḥ).

ing different inflectional patterns; their part. perf. pass. are *vit-ta, vin-na* and *vid-ita*. Patañjali quotes three anonymous stanzas which were attempts to arrange this material. The first is a *dodhaka* (the first quarter is defective) which distinguishes four roots √*vid*: after the root √*vid* that follows the 6th verbal class the suffix is retained, after √*vid* of the 7th class /t/ is optionally replaced by /n/, √*vid* of the 4th class is treated like √*chid* and that of the 2nd class has an /i/ inserted between root and suffix. The peculiar feature in this stanza is that it gives the character of the 6th class as *śaᵏ* while Pāṇini calls it *śa*; that seems to indicate that the reference is not to Pāṇini's grammar but to one very close to it. The second stanza is a *śloka* which repeats the statement in strictly Pāṇinian terminology and with greater concision. The third stanza, also a *śloka*, finally takes the popular approach of pairing finite verb forms with their part. perf. pass.: from *vetti* the p.p.p. is *vidita*, from *vidyate vinna*, from *vintte* both *vitta* and *vinna*, and from *vindati vitta*.

Even Kātyāyana's vārttika-s had become the object of interpretation and critique before Patañjali. The school of the Bhāradvājīya-s ('followers of Bhāradvāja') is quoted ten times for contributions on the vārttika-s.[4] In most cases, the vārttika has been enlarged to cover additional items, and in a few instances there are alterations or even a different solution; once the remark is addressed directly to Pāṇini's rule. Other remarks on the vārttika-s are quoted anonymously. Vārttika 4 on Pāṇini III 2 171 postulates the words *sāsahi*, *vāvahi, cācali* and *pāpati*; here Kātyāyana obviously has been caught napping[5] because there is no need to list these as ready-made words as their analysis is so clear: the suffix -*i* is used after the intensive of the roots √*sah*, √*vah*, √*cal* and √*pat*.[6]

Occasionally the dispute involves the tradition of the vārttika-s themselves. In the very involved discussion on Pāṇini I 1 69 (vowels of the sound table denote also the other vowels of their respective classes, i.e. /a/ denotes also /ā/, etc.), Kātyāyana says that this is unnecessary because the 'form' of the vowel grasps the other vowels (vārttika 7) and because these are not different from each other (vārttika 8). With a slight variation in the text of vārttika 8, the other tradition quoted by Patañjali takes these two arguments as one: ". . . are not different because the 'form' is grasped"—an easier reading but hardly in Kātyāyana's style.[7]

In his discussion of why Pāṇini used two determinatives *k* and *ṅ* when the functions of the two are almost identical, Kātyāyana supports the existence of both with the reference to the root √*jāgṛ* which shows the base vowel in some

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[4] While most of these quotations are in vārttika-like prose, one (Mahābhāṣya III 199, 19) is a half-*śloka*.

[5] If he had a good reason for his proposal, it has been lost.

[6] Mahābhāṣya II 135, 11.

[7] Mahābhāṣya I 179, 22. We expect the reason in an ablative, not in an independent nominal clause.

forms (e. g. *jāgṛtaḥ*) and *guṇa* in others (e. g. *jāgaritaḥ*): *jāgro 'guṇa-vidhiḥ* "[The purpose is] establishing non-*guṇa* for $\sqrt{jāgṛ}$." The variant reading quoted by Patañjali, Mahābhāṣya I 193, 1, states conversely *jāgro guṇa-vidhiḥ* "[The purpose is] establishing *guṇa* for $\sqrt{jāgṛ}$." Factually speaking, both readings amount to the same thing. One cannot even properly speak of two readings because, with the negation elided, both sound exactly the same. But it is my impression that the authors of sūtra-s have always avoided formulations where controversial negations would be completely obliterated by sandhi; had Kātyā-yana indeed intended the negated form, he would have found a way to tell us so more clearly.[8]

In another class are the lines quoted in Mahābhāṣya II 284, 1[9] +14f.; 310, 9–311, 6; 398, 13, which do not discuss Pāṇini's formulations but teach grammar.[10] The dependence on Pāṇini is obvious[11] but there are also characteristic differences. Pāṇini reduces several *taddhita* suffixes through the use of heterophones *(TH = ik, CH = iy,* etc.) which results in metalinguistic forms like *THa^k*, *THa^n*, *^sTHa^n*, etc. Our metrical grammar makes no use of these heterophones and teaches the suffixes as *ika^k*, *ika^n*, *^sika^n*, etc., otherwise retaining Pāṇini's determinatives.[12]

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[8] How commentators take advantage of such alleged ambiguities shows in the traditional interpretation of Sāṃkhya-kārikā 41c *tadvad vinā* [']*viśeṣaiḥ*.

[9] To obtain a correct line, the unnecessary word *vidyā* must be omitted (F. KIEL-HORN, IA 15.233).

[10] Note the familiar verse fillers *smṛtaḥ* and *iṣyate* (twice).

[11] The metrical form makes it very unlikely that this grammar was older than Pāṇini because the general tendency was to shift from sūtra-like manuals to metrical ones.

[12] The suffixes *^ṭrat (styai +^ṭrat +ī > strī)* and *^sa^p* (?) mentioned in a verse quoted in Mahābhāṣya I 245, 26 are not Pāṇinian either. On *^ṭāvat^u* (Mahābhāṣya II 378, 21), *ghu* (Mahābhāṣya III 229, 2) and *la* (Mahābhāṣya II 284, 11) cf. G. CARDONA, TPAS 1969.30 and 35a.

PATAÑJALI

"Either read the Mahābhāṣya or rule a large kingdom" *(Mahābhāṣyaṃ vā pāṭhanīyaṃ mahārājyaṃ vā pālanīyam)*—this saying among the pandits shows the high regard in which they hold Patañjali's work. Modern critics have joined them in their praise of Patañjali's simple yet vigorous style and his sound reasoning as well as his vast learning that presents us with the quintessence of generations of grammatical-philological research.[1] For him, Sanskrit is still the spoken language of daily conversation, if only for some classes of 'good society,' and he handles it with evident authority—maybe the last grammarian to do so. Correct use of Sanskrit could no longer be defined geographically or sociologically in his time. That gave Patañjali an extra motive for studying Pāṇini's grammar: as a standard, a device to identify good native speakers of Sanskrit.[1a] Of the three sages of grammar, viz. Pāṇini, Kātyāyana and Patañjali, according to a common tradition (e.g. Kaiyaṭa on Pāṇini I 1 29) the later author overrules the earlier one in case of a conflict of opinion, yet three Buddhist commentators attached greater value to the words of Pāṇini.[2]

In cross references to his own words, Patañjali calls his work simply *bhāṣya* '[work composed] in colloquial language' and indeed it is stylized as a series of shorter or longer debates. A student may ask a question which is answered by the teacher or his younger assistant; often the answers of the assistant are not satisfactory and are set aside by the final opinion *(siddhānta)* of the teacher to whom both student and assistant turn for help. These labels 'student,' 'teaching assistant,'[3] and 'teacher' which the later tradition supplies are useful in our understanding of these debates; they reflect the common school practice as observed by D. Ingalls.[4] But we must keep in mind that they are superimposed on the *bhāṣya* text (which has nothing of this kind), and that often the commen-

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[1] SIDDESHWAR VARMA, VIJ 1. 1–36.

[1a] Mbhāṣ. III 174, 6–15; cf. P. THIEME [Felicitation Volume S.K. BELVALKAR], p. 60–62. Even now there are native speakers of Sanskrit found in Benares as PT. NAGARAJA RAO (Seattle, Wash.) informs me.

[2] L. RENOU, La Durghaṭavṛtti de Śaraṇadeva (Paris, 1940), p. 78, fn. 2: Nyāsa, Bhāṣā-vṛtti, Durghaṭa-vṛtti.

[3] *ācārya-deśīya* 'one who is almost like a teacher, a not-yet-accomplished teacher,' cf. Pāṇini V 3 67.

[4] In: M. SINGER, Traditional India (Philadelphia, 1959), p. 5.

tators' very definite opinions as to which is Patañjali's final view are based only on their judgement of the merit of the arguments and not on a formal indication of Patañjali.[5]

Patañjali must have composed his work sometime around 150 B.C. because of several references to historical events of his time.[6] Kātyāyana, vārttika 2 on III 2 111, had postulated the use of the imperfect suffixes for something the speaker did not witness though he could perhaps have done so and which is commonly known. Patañjali, Mbhāṣ. II 119, 4f., illustrates this amendment with two sentences: *aruṇad Yavanaḥ Sāketam* "The Greek besieged Sāketa (= Ayodhyā/Oudh)" and *aruṇad Yavano Madhyamikām* "The Greek besieged Madhyamikā (Chittor)." This is a reference to the raids by the powerful Greek kings of Baktria (Afghanistan), though the exact year of these incidents remains unknown. The use of present tense suffixes for a work already begun but not completed is illustrated with the sentence *iha Puṣyamitraṃ yājayāmaḥ* "Here we conduct a ritual for Puṣyamitra" (Mbhāṣ. II 123, 3f.). This Puṣyamitra was the founder of the Śuṅga dynasty that replaced the Maurya-s in 189 B.C. It is reported that Puṣyamitra twice performed the horse sacrifice ritual *(aśvamedha)*,[7] and Patañjali's illustration should refer to one of these performances. It is not clear what value should be attached to the reference to Śaka-s in Northwest India outside Āryāvarta (Mbhāṣ. I 475, 4): when did Śaka-s first come into India?[8]

Patañjali's home may have been Mathurā, which figures prominently in his examples, or a place nearby because one travels, he says, to Pāṭaliputra via Sāketa (Mbhāṣ. II 162, 6f.).[9] The popular dialect forms which he quotes (Mbhāṣ. I 259, 6–14) correspond, with their retention of /ś/ and /s/ and the development /ṣ/ > /s/, to the dialect of the gambler Māthura in the drama Mṛcchakaṭika (Act II). This deduction is preferable to that of K. V. Abhyankar[10] who concluded from astronomical data contained in the text that Patañjali lived north of Taxila and west of Shrinagar. Not being an astronomer himself, Patañjali would have taken this information from other works, and his praise of the speech and the customs of the people in Āryāvarta would be inconsistent with his residence outside this hallowed province.

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[5] R. G. BHANDARKAR, IA 5.345–350; F. KIELHORN, Kātyāyana and Patañjali, p. 52 fn. and IA 15.80f.

[6] D. C. SIRCAR, IHQ 15.633–638, discounts these references and proposes the 2nd c. A. D. as a likely date for the Mahābhāṣya.

[7] Epigraphia Indica 20.55–57 (Ayodhyā inscription of Dhana[deva]) and Kālidāsa's Mālavikâgnimitra, Act V.

[8] E. FRAUWALLNER, WZKSO 4.108–111 and S. CHATTOPADHYAYA, The Sakas in India, 2nd ed. (Santiniketan, 1967), p. 11–20.

[9] H. SCHARFE, JAOS 96.274.

[10] Select Critical Notes in his 3rd edition of KIELHORN's Mahābhāṣya text, vol. I (Poona, 1962), v. 571f.

Later traditions (e.g. Rāmabhadra Dīkṣita's Patañjali-carita[11]) identify this Patañjali[12] with the supposed author of the Yoga-sūtra and also ascribe to him a lost work on medicine. But the same name, admittedly rare, is not sufficient reason for this identification; we even hear of two more Patañjali-s in Sanskrit literature. The language of both works is quite different[13] and the philosophical background of the Yoga-sūtra (a compilation which has probably more than one author anyway) shows no more similarities with that of the Mahābhāṣya than can be expected in texts of this period. Modern scholars are divided on this question.[14] Tradition regards Patañjali as an incarnation of the mythical snake Śeṣa and depicts him as a snake from the waist down.[15]

The concluding verses of the second book of Bhartṛhari's Vākyapadīya give us some idea of the vicissitudes the tradition of the Mahābhāṣya had to undergo. After a period of sophistry, the oral tradition in South India was interrupted until it was revived by the Buddhist scholar Candragomin (5th c. A.D.?) who relied on the North Indian tradition (probably of Citrakūṭa/Rāmagiri).[16] The text itself has come down to us in excellent condition. Its principal division into 8 chapters with 4 pāda-s each follows Pāṇini's grammar, whereas the division into 85 'daily lessons' (āhnika) of about equal length (never crossing pāda lines) is nowhere mentioned in the text itself and may be a later addition. According to the Chinese pilgrim I-tsing, advanced scholars learned the Mahābhāṣya in three years.[17]

The Mahābhāṣya is, in the first instance, a commentary on Kātyāyana's vārttika-s. But Patañjali did not stop at this and investigated Pāṇini's formulations on his own. Altogether his investigation covers 1713 sūtra-s of Pāṇini not counting those mentioned incidentally in the course of these investigations. A complete explanation consists of a separation of the words, example, counter-example and supplementation of the sentence (Mbhāṣ. I 11, 22 f.). But such an explanation of the vārttika-s (e.g. Mbhāṣ. I 30, 2–6) is often only the beginning of Patañjali's own investigation. This may take the form of a simple addition as in his comment on Pāṇini III 3 130 (according to Pāṇini's rule, the suffix

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[11] Edited by PANDIT ŚIVADATTA and KĀSINĀTH PANDURANG PARAB (Kāvya-mālā 51; Bombay, 1895), verse V 25.

[12] The assumption is wrong that Goṇikā-putra and Goṇardīya, two authors quoted in the Mahābhāṣya, are Patañjali himself [F. KIELHORN, IA 15.81–84 and P.S. SUBRAHMANYA SASTRI, Lectures on Patañjali's Mahābhāṣya, I, 2nd ed. (Thiruvaiyaru, 1960), p. xl-xliii]. Not refuted by S. LÉVI [Fs. As. MOOKERJEE] II.198 = Mémorial S. Lévi, p. 307.

[13] L. RENOU, IHQ 16.586–591.

[14] M. ELIADE, Yoga (New York, 1958), p. 370f.; B.N. PURI, India in the time of Patañjali, 2nd ed. (Bombay, 1968), p. 15–18; B.K. MATILAL, Epistemology, logic, and grammar in Indian philosophical analysis (The Hague, 1971), p. 104, fn. 10.

[15] B.N. PURI, India, p. 2, fn. 3; J.F. STAAL, A reader on the Sanskrit grammarians (Cambridge, Mass., 1972), p. xvif.

[16] H. SCHARFE, JAOS 96.276.

[17] J.F. STAAL, A reader, p. 15.

-*ana* found after certain roots with *iṣad, dus* or *su* "is found also after others"). A vārttika specifies: the suffix -*ana* is added to the roots √*śās*, √*yudh*, √*dṛś* and √*dhṛṣ*, in colloquial language only. Patañjali spells out the resulting words: *Duḥśāsana, Duryodhana, durdarśana, durdharṣaṇa*. Then he adds: "'Also after the root √*mṛṣ*' must be added [to this list to account for the word]: *durmarṣaṇa*" (Mbhāṣ. II 157, 9–12).

The following discussion goes much deeper. Pāṇini III 1 67 teaches the suffix -*ya* to denote the object or the existence of the action (personal and impersonal passive in our terminology). Patañjali asks why the dual or plural forms may only be used when the verb denotes objects (e. g. *pacyante odanāḥ* 'rice paps are being cooked') but not when it denotes the existence of the action (*āsyate bhavatā/bhavadbhyām* 'sitting is being done by thou/you two'). The answer is that the objects may be many but the action is only one; if action nouns like *pāka* 'cooking' appear occasionally in the dual or plural (*pākau* 'two acts of cooking') this is due to different material substrata. Thus the problem remains, viz., that the same logic should apply to actions expressed by passive verbs, and Patañjali tries another approach. When we consider different acts of cooking, he says, e. g. the cooking of rice pap, the cooking of molasses and the cooking of sesame, the three words 'cooking' are the same and can be summed up in a plural noun form;[18] the same occurs (but only rarely) with verb forms (e. g. *hataśāyikāḥ śayyante* "The slain men lie in different postures," lit. 'lyings of the slain take place'). If we however consider time differences, the nouns (e. g. 'yesterday's cooking,' 'today's cooking') each are still identical and can be contracted into a single dual or plural form, while the verb forms (lies, lay, will lie) are different and hence not eligible for comprehensive plural forms. Patañjali concludes this argument by listing the differences between an action expressed by a nominal suffix and that expressed by a verbal suffix. The former becomes like a thing which means that another action can inhere in it or (grammatically speaking) that the noun can be construed with a verb ('cooking happens'); it also can be a factor in another action ('rice is prepared by cooking'). The opposite is true for an action expressed by a verbal suffix: no action can inhere in another action. Furthermore, an action expressed by a verb shows time, person and voice, and it calls for an expression of the agent; not so an action expressed by a nominal suffix. The use of gender and number is at least partially different.

Now Patañjali turns his attention to Kātyāyana's first vārttika. Shall we assume that in a verb existence, object and agent of an action are expressed by the personal endings or by the stem-forming suffixes?[19] Pāṇini's rules could be taken either way. If the personal endings are taught to express existence,

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[18] Following Pāṇini I 2 64 *sa-rūpāṇām eka-śeṣa eka-vibhaktau* "Only one of the identical [words] remains if followed by the same case suffix:" *pākaś ca pākaś ca > pākau*, etc.

[19] E.g. in *bhav-a-ti* 'becomes' -*a*- is the stem-forming suffix, -*ti* the personal ending.

object, etc. it is feared that the rule may no more be a restriction on the use of singular, dual and plural forms (vārttika 1). But if the stem-forming suffixes should express these notions it is feared that these suffixes may in some cases not even come into existence because their role has already been pre-empted by a nominal suffix (e.g. *dhāraya* 'holding' formed from a causative stem with a suffix -*a* denoting the agent; vārttika 2).[20] Besides, several verb forms have no stem-forming suffix at all (e.g. in the perfect tense) or lose it in the grammatical process (e.g. the verbs of the 2nd class). Patañjali concludes that it is the personal endings that denote existence/object/agent of the action and he settles the objection raised in the first vārttika with a quoted stanza: just as the nominal case suffixes denote both action references (such as object, instrument, etc.) and number, a single rule can teach the personal endings to denote existence/object/agent of the action and at the same time impose a restriction on the use of singular, dual and plural forms.[21]

With great stylistic art Patañjali has created the impression of a freely progressing debate with new disputants butting in now and then in which all possibilities of an interpretation are scrutinized. Clearly not every argument made (a few were omitted in the preceding summary) carries Patañjali's conviction; even the end of a debate may not necessarily indicate his preference.[22] The metarule *nirdiśyamānasyādeśā bhavanti*[23] says that substitutes can only be applied to forms that are actually enounced in a rule, and Patañjali makes frequent use of it (e.g. Mbhāṣ. I 29, 23; 116, 19; III 50, 18). And yet he has refuted it in two detailed discussions (on Pāṇini I 1 49 and VI 4 130) because it would render Pāṇini's own given metarule I 1 49 *ṣaṣṭhī sthāne-yogā* "The genitive is to be construed with a supplied 'in place of...'" redundant.

Patañjali's statements reflect a further development of the Sanskrit language. To give but one example, singular dvandva compounds which were formerly limited to types like *pāṇi-pādam* 'hand and foot' can now be formed from any kind of constituents (Mbhāṣ. I 232, 4 f.).[24] The exemplary speech area is no longer the North but Āryāvarta, the 'hub of the Ārya-s,' i.e. the central portion of the North Indian plain. The Ārya-s are contrasted with the residents of Afghanistan (Kamboja; cf. Nirukta II 2) and such Indian provinces as Surāṣṭra and the *prācya-madhya* 'eastern central' (Mbhāṣ. I 9, 25–27). The colloquial Eastern forms with /r/ > /l/ (*he 'layaḥ* for correct *he 'rayaḥ* 'hey strangers!') are

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[20] Being on a lower hierarchical level, the stem-forming suffixes cannot compete with *kṛt* suffixes.

[21] Mbhāṣ. II 58.16–23.

[22] Cf. B. GEIGER, SAWW 160 (1909), fasc. 8, p. 6 f. and P. THIEME JAOS 76.12.

[23] The 12th metarule in Nāgojībhaṭṭa's collection; first attested to by Kātyāyana in vārttika 3 on VI 4 130 (cf. vārttika 4 on VI 1 13).

[24] Other new forms may only be school jokes: *puputrīyiṣati, putitrīyiṣati, putrī-yiyiṣati* (III 8, 21 f.), all meaning 'he desires to wish a son;' Candravṛtti V 1 8 *putrīyiṣiṣati*, Kāśikā VI 1 3 *puputitrīyiyiṣati* and Mugdhabodha XXI 18 *puputitrī-yiyiṣiṣati* carry it even further.

'barbarian' (*mleccha*; Mbhāṣ. I 2, 8). Even in the exemplary area, good speech[25] is not universal; a Brahmin's wife or daughter may use colloquial popular forms (*Ḷtaka* for correct *Ṛtaka*, Mbhāṣ. I 19, 21 f.). Only the virtuous educated Brahmins of Āryāvarta are authoritative native speakers of Sanskrit and the study of Pāṇini's grammar makes it possible to identify such men (Mbhāṣ. III 174, 6–15). The superiority of the educated native speaker over a mechanical studied grammarian is illustrated by an anecdote told by Patañjali, Mbhāṣ. I 488, 18–22:

> "For thus spoke some grammarian: 'Who is the urger-on *(pravetṛ)* of this chariot?' The charioteer-cum-bard *(sūta)*[26] said: 'Sir, I am the driver *(prājitṛ)*.' The grammarian said: 'Wrong word!' The charioteer said: 'Your Excellency[27] knows [only] what should result [from a mechanical application of the rules of grammar] but not what is desired [by good speech usage]: such-and-such a form is desired.' The grammarian said: 'Hey, are we obstructed by this ill-woven *(dur-uta)* one?' The charioteer said: '*sūta* is not formed from the root *veñ* ('weave:' *su + uta > sūta* 'well woven') but from the root *sū* ('drive'). [Therefore:] If one wants to scold the driving one must say: *duḥsūta* 'bad *sūta*'."

With Patañjali the interpretation of Pāṇini's rules reaches a new level of sophistication.[28] Often he can maintain Pāṇini's formulation where Kātyāyana had to resort to alterations, and much more than Kātyāyana he has us rely on our knowledge of the Sanskrit forms when we must choose between alternative interpretations of grammatical rules.[29] His basic assumption is that "it is impossible that [in Pāṇini's work] even a [single] sound should be without [specific] purpose"; for Pāṇini (no ordinary teacher but an authority) took great pains with his composition (Mbhāṣ. I 39, 10–12; cf. the quoted verse III 54, 4). Though Patañjali never calls Pāṇini a *ṛṣi* 'seer' as the later tradition does, even according to him Pāṇini 'saw' the grammatical relations (e.g. Mbhāṣ. I 43, 9). The same is said about Kātyāyana when Patañjali explains why this author composed two separate vārttika-s 9 and 10 on Pāṇini VIII 2 6 when he could have achieved his purpose with a single vārttika:

> "First the teacher saw this: . . . [vārttika 9] . . .; that was recited. At a later time this was seen: . . . [vārttika 10] . . .; that was also recited. And teachers do not in such cases retract rules after they have given them" (Mbhāṣ. III 393, 1–3).

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[25] Note that Patañjali does not yet use *saṃskṛta* 'properly prepared, fit for ritual use' to denote this speech. The word is first used so in the Rāmāyaṇa V 28, 18 *(vācam . . . saṃskṛtām)*.

[26] A king's charioteer was often his friend and bard (cf. Kṛṣṇa and Arjuna). The Kauṭalīya Arthaśāstra III 7 29 classifies the *sūta* as a special class of brahmin.

[27] While the first address *(āyuṣmant)* was appropriate for a charioteer toward the rider of the chariot (cf. Bhāratīya Nāṭya-śāstra XIX 11), the second *(devānāṃpriya*, the title of the Mauryan kings) is ironical (H. SCHARFE, KZ 85.212). [*āyuṣmant* also Mbhār. III 19, 9.]

[28] This was not always appreciated by outsiders who even called grammar a 'fatal disease' (K.C. CHATTERJI in: J.F. STAAL, A reader, p. 297).

[29] F. KIELHORN, IA 16.246–247; L. RENOU, La Durghaṭavṛtti, Introduction, p. 129–135.

The authoritative teacher can no more retract his 'true vision' than Durvāsas his curse. From this authoritative character of Pāṇini's and Kātyāyana's work follows the first rule of interpretation (and indirectly all others):

> "The specific sense [of an expression in a *śāstra*] is obtained from interpretation; for there cannot be [assumed to be given a definition which is a] non-definition [just] because there is a doubt [as to its specific sense]" (Mbhāṣ. I 35, 16f.).

Patañjali's interpretation rules are either applications of a generally accepted principle or they are technical explications indicated and necessitated by the wording of Pāṇini's rules. But even general principles and Pāṇini's own indications are subject to critical discussion. It seems that according to Kātyāyana a special rule supersedes a general rule only when there is no possibility of both taking effect together, but according to Patañjali a special rule sets aside the general rule in all cases by the popular maxim:

> "When it is said: 'Let curds be given to Brahmins, buttermilk to [the Brahmin] Kauṇḍinya'; Kauṇḍinya is given only buttermilk although it would be possible to give him both" (Mbhāṣ. I 115, 1–4).[30]

Attempts to see in the wording of Pāṇini's rules 'indications' for further interpretation rules were even more open to challenge. Many are only forced manoeuvres to maintain Pāṇini's formulation in the face of proposed changes. The metarule that intra-stem *(antar-aṅga)* operations prevail over such as are dictated by outside *(bahir-aṅga)* forces is both linguistically sound[31] and indicated by Pāṇini's procedure. But a difficulty arises in the formation of the gerund where the root substitution *dhā > hi* (in *hitvā* 'having put') is voided when the suffix *-tvā* is replaced by *-ya* due to an outside force (viz. the prefix): *pra-dhāya*. Pāṇini's silence on this point could be an oversight (which is unacceptable to Patañjali) or it could imply that in his opinion the *antaraṅga* metarule is set aside when a gerund substitution *tvā > ya* is concerned. Patañjali sees proof for the correctness of the latter assumption in the formulation of Pāṇini II 4 36 where the root substitution *ad > jagdh*[32] is taught before both gerund suffixes (hence *jagdhvā* and *prajagdhya*): if the gerund substitution would not normally set aside the *antaraṅga* root substitution it would have been unnecessary to expressly mention *-ya* here, but if it does its mentioning becomes necessary.

Discussions of this kind constitute a major portion of the Mahābhāṣya. A sound principle of interpretation, the presumption that the author's words should make sense, is vitiated often by a belief in the near infallibility of this author (if we take an historic view) or a preference for ad hoc created metarules[33] over amendments to the basic text (if we take the more appropriate syste-

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[30] H. Scharfe, Die Logik im Mahābhāṣya (Berlin, 1961), p. 53f.; K.M.K. Sarma, Pāṇini Kātyāyana and Patañjali (Delhi, 1968), p. 170f.

[31] Cf. the modern concept of 'immediate constituent analysis' (R. Wells, Lg. 23. 81–117, and S.D. Joshi, JUP 27.165–173).

[32] Both roots meaning 'eat' supplement each other in the verbal paradigm.

[33] A recent study on such metarules is A. Wezler, Paribhāṣā IV, V und XV (Bad Homburg, 1969).

matic view). Patañjali's practice inaugurated a dubious hunt for further meta-rules and their indicators in the text of Pāṇini's grammar until Nāgojībhaṭṭa pruned this exuberant growth back to the level of the Mahābhāṣya. Patañjali's conservative interpretation has not prevented him from designing numerous alterations and the proposed elimination of whole rules and "in many cases his criticism is more thorough-going and destructive than Kātyāyana's and . . . Pāṇini has suffered more at *his* hands than at those of the Vārttikakāra."[34] Several of Pāṇini's own metarules are declared redundant (e.g. Pāṇini I 1 56 "A substitute is like the original . . ."; Mbhāṣ. I 133, 17–134, 9) because they are nothing but applications of universal principles. But twice (Mbhāṣ. I 14, 7 and 39, 8) Patañjali declines to revamp the whole system of metalinguistic markers (determinatives) with the words: *sidhyaty evam a-Pāṇinīyaṃ tu bhavati* "It works this way but it becomes un-Pāṇinian."

Another prominent portion of the discussions deals with the dittoing process inherent in the sūtra-style. When an expression is dittoed through a string of consecutive rules, a problem arises in case its absence in one of the intervening rules is essential. All remedies suffer from the arbitrariness involved: the dittoed expression may 'leapfrog' or the whole rule in which it is enunciated may be dittoed to serve as a neutralizing vehicle. I shall illustrate both procedures with the proposed emendation of Pāṇini I 1 3 $i^k.o$ $guṇa$-$vṛddhī$ which Patañjali proposes to reduce to $i^k.aḥ$ (Mbhāṣ. I 44, 3–8):

I 1 1	$vṛddhir$ $ā^d$ ai^c		$vṛddhir$ $ā^d$ ai^c
2	a^d $e^ṅ$ $guṇaḥ$	($vṛddhir$ leapfrogs)	a^d $e^ṅ$ $guṇaḥ$ [$vṛddhir$ $ā^d$ ai^c]
3	$i^k.aḥ$ [$guṇaḥ$] [$vṛddhir$]		$i^k.aḥ$ [$guṇaḥ$] [$vṛddhir$]

In his discussions Patañjali shows an unusual resourcefulness[35] and displays his familiarity with the methods and doctrines of the Mīmāṃsā, Sāṃkhya and early Nyāya-Vaiśeṣika.[36] There are also frequent references to law and custom. Illustrations and sample sentences are carefully chosen and represent characteristic situations. He demonstrates the transformation of cases in a sequence of sentences:

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[34] F. KIELHORN, Kātyāyana and Patañjali, p. 52.

[35] Sometimes a less sympathetic reviewer is tempted to speak of 'tricks,' e.g. when Patañjali proposes to interpret Pāṇini I 1 5 k-$ṅ$-$it.i$ ca as *k-k-$ṅ$-$it.i$ ca standing for *g-k-$ṅ$-$it.i$ ca to meet a technical difficulty (Mbhāṣ. I 269, 10–12). Certainly that was not Pāṇini's intention; a more serious objection would be that the interpretation depends on information not contained in the Aṣṭādhyāyī.

[36] One should not ascribe to Patañjali the authorship of all or most of such doctrines; cf. P.V. KANE, History of Dharmaśāstra, vol. V (Poona, 1962), p. 1156–1158. The two types of negation (nominally bound and verbally bound) have recently attracted much attention: L. RENOU, La Durghaṭavṛtti, introduction, p. 114f.; H. SCHARFE, Die Logik, p. 63f.; J.F. STAAL, BSOAS 25. 58–61 and JAOS 83.255; G. CARDONA, Lg. 43.34–56; B.K. MATILAL, The navya-nyāya doctrine of negation (Cambridge, Mass., 1968), p. 156f. and Epistemology, logic, p. 163. For the peculiar reasoning 'the aorist marker $^ci^ṅ$ replaces ^cLi if it does not replace ^cLi' see H. SCHARFE, Die Logik, p. 85f.

"The cattle, the horses, the gold are Devadatta's (genitive); the son of a widow (nominative) is rich. It is understood: Devadatta (nominative)" (Mbhāṣ. I 264, 15f.).

The use of the rare word *vaidhaveya* 'son of a widow' is pointless if it should refer to any man who has lost his father, or an illegitimate child of his widowed mother (or the offspring by *niyoga* 'levirate') as it is hard to see why he should be typically rich. But if Patañjali refers to a man whom a widow has adopted, everything falls into place: "Indeed, especially in Western India it is notorious that when widows adopt, their most common motive is to take property out of the hands of their late husbands' relations."[37] We learn from Patañjali's words that this custom was known already 2000 years ago. From similar casual references we can infer (to mention only two more items of interest[38]) that Patañjali knew the chess game[39] and silk reeling.[40] Regarding literature, many references point to the existence of *kāvya*-style poetry and the shadow play;[41] Vedic quotations abound.[42]

Patañjali's grammatical terminology shows a marked return to Pāṇinian terms compared to Kātyāyana's more frequent use of non-Pāṇinian terms.[43] In his explanation of vārttika 15 on Śivasūtra 5, Patañjali replaces Kātyāyana's *apāya* with *lopa*, his *upajana* with *āgama* and his *vikāra* with *ādeśa* (Mbhāṣ. I 31, 14–18; cf. I 202, 21f.). To account for the word *bhiruka* 'afraid' Patañjali teaches a new suffix with determinatives: $^k ruka^n$ (Mbhāṣ. II 135, 14), in analogy to $^k luka^n$ in Pāṇini III 2 174.

Patañjali's contributions as a grammarian are both technical and philosophical. An example of his technical contribution is the discussion of the object in the sentence *grāmaṃ gantum icchati* "He wishes to go to the village" (Mbhāṣ. II 15, 8–11). If both 'going' and 'village' are objects of 'wishing,' we cannot apply Pāṇini II 3 12 which allows for objects of 'going' alternatively the dative: *grāmāya gantum icchati*. If 'village' is the object of 'going' and 'going' in turn the object of 'wishing' we cannot properly construe the passive sentence *iṣyate grāmo gantum* "The village is the object of a desire to go there." The solution is that 'village' is the object of 'going' and both 'village' and 'going' are the objects of 'wishing.'

[37] J.D.M. DERRETT, Hindu law, past and present (Calcutta, 1957), p. 149.

[38] From the many illustrations with Devadatta, the Indian John Doe, SUKUMAR SEN, IL 12.189–196, has drawn a social portrait.

[39] P. THIEME, Indological studies [Fs. W.N. BROWN] (New Haven, 1962), p. 204–210.

[40] H. SCHARFE, Untersuchungen zur Staatsrechtslehre des Kauṭalya (Wiesbaden, 1968), p. 330–332.

[41] H. LÜDERS, SPAW 1916.698–737 = Ph. Ind., p. 391–428.

[42] J. WACKERNAGEL and A. DEBRUNNER, KZ 67.178–182; L. RENOU, JA 241. 427–464.

[43] We have to keep in mind that Patañjali incorporated in his work material from many sources which may explain some terminological inconsistencies.

When somebody, Patañjali says, told a weaver: "Weave a cloth from this yarn!" the weaver demurred facetiously: "If it is a cloth it need not be woven, and if it must be woven it is no cloth—the words 'cloth' and 'to be woven' are contradictory." Patañjali's solution to this problem is that the speaker intended a 'potential name' *(bhāvini saṃjñā)*, i.e. a name that will be realized at a later time: weave that which when woven will be called 'cloth!' (Mbhāṣ. I 112, 10–13). Patañjali here wrongly limits the use of the word 'cloth' to a representation of an existing object and neglects its representation of a mental image.[44] Unsatisfactory also is Patañjali's explanation for the use of the plural 'we' by a single speaker who sees himself as representing a class (Pāṇini I 2 59): "Sometimes one wants to express these sense organs as independent entities . . . In that case there will be [a] plural [form]" (Mbhāṣ. I 230, 23–231, 2).[45]

Already Kātyāyana had stressed that the study of grammar is a sacred obligation; even correct speech usage is meritorious only if it is also theoretically understood. Patañjali supplies, apparently from traditional sources, two lists with special motivations for the study of grammar. The first (Mbhāṣ. I 1 14) is short and abstract: protection of the Veda-s, adaption of formulas, traditional duty, convenient grasp of facts and removal of doubts. The second list (Mbhāṣ. I 2, 3–6) contains 13 points built almost exclusively on quotations from Vedic texts and referred to by the first words of each quotation.

The benefits of such grammar study are said to be substantial. Patañjali insists that the list of sound abstracts at the beginning

> "must be recognized as a mass of *brahman*, full of blossoms and fruit and adorned as long as there are the moon and the stars; and in their knowledge lies the attainment of the fruit of the merit [obtainable by the study] of all Veda-s, and his parents thrive in the heavenly world" (Mbhāṣ. I 36, 16–18).

The 'blossoms' and 'fruits' (explained by Bhartṛhari in his Mahābhāṣya-dīpikā, p. 92, as visible prosperity and invisible beatitude) go all the way back to Ṛgveda X 71, 5 where, for certain people, Speech is said to be lacking in blossom and fruit (cf. also Nirukta I 20).

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[44] On these mental images cf. **Vākyapadīya III 3 39; 7, 2–7 and 105** (below, p. 172 f.).

[45] P. Thieme, KZ 79.10.

THE BUDDHIST SANSKRIT GRAMMARIANS

The need for a new grammar first arose among the Buddhists after some sects had adopted more prestigious Sanskrit versions of their canonical texts. While the Buddhists were familiar with most of the nouns in their vernacular garb, they lacked the Brahmins' command of the Sanskrit morphology and morphophonemics. They required a simple practical grammar for these topics; scientific interest in Sanskrit developed only later.

The first practical grammar we know of was the Kaumāralāta (so named after its author the littérateur Kumāralāta) of which manuscript fragments dating from about A. D. 325 have been found in Turkestan.[1] Its terminology strives for brevity and shows the influence of writing (*bindu* 'drop' for the *anusvāra*, *bindū* 'two drops' for the *visarga*, reflecting the shape of the letters). Just as Pāṇini has special rules for Vedic forms, Kumāralāta makes allowances for peculiar forms of the Buddhist scriptures that resulted from their transposition into Sanskrit from Middle Indo-Aryan dialects (e. g. *bhāveti* for *bhāvayati*, *bheṣyati* for *bhaviṣyati* and elisions of final *-aṃ/-iṃ*). The name used for these forms, *ārṣa* 'belonging to the *ṛṣi*-s, archaic,' suggests a reasonable timespan between the establishment of the Sanskrit canon and the composition of the Kaumāralāta.

Probably a recast of the Kaumāralāta is Sarvavarman's Kātantra 'Small Manual' (oldest manuscript fragments from Turkestan c. A. D. 400),[2] also called Kaumāra or Kalāpa.[3] It consisted originally of four books with four chapters each;[4] but later the simple grammar was developed into a full-fledged system—the third and fourth books were merged and another author (variously identified as Kātyāyana, Vararuci or Śākaṭāyana) added a new fourth book (on primary noun suffixes). More additions, some of them in *śloka* form, were inserted into

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[1] H. Lüders, SPAW 1930. 502–532 = Ph. Ind., p. 681–714.

[2] H. Lüders, SPAW 1930. 482–538 = Ph. Ind., p. 659–721. Even these fragments already show insertions.

[3] According to the Tibetan tradition of Tāranātha, the author was a South Indian Brahmin called Saptavarman.

[4] The original text has been constituted and translated by B. Liebich, Zur Einführung in die indische einheimische Sprachwissenschaft, vol. I (Heidelberg, 1919).

the other books to cover secondary noun suffixes, composition and feminine suffixes. In this enlarged form (which by A. D. 800 had found its way into the Tibetan Tanjur) the Kātantra was the model for the topical arrangement of many later grammars. Much later additions are a Dhātu-pāṭha (modelled by Durgasiṃha on that of Candragomin; another spurious Dhātu-pāṭha is found in Tibetan translation),[5] a Liṅgânuśāsana and an Uṇādipāṭha, not to mention a large scholastic literature. In its terminology, the Kātantra often returns to Pāṇinian expressions but makes much less use of metalinguistic determinatives (most of them not even expressly defined) and there are no contractions. It lacks the generative tendency of Pāṇini's rules and appears more like a contrastive tabulation. The 180 verbal endings which Pāṇini derives from 18 base forms through substitution rules are here given in full (III 1 24–33). Sarvavarman was followed in this by the Pāli grammarians, and by Vopadeva and Anubhūtisvarūpācārya. Type-names like *agni* 'stems ending in -*i*/-*u*,' *śraddhā* 'feminine nouns ending in -*ā*,' *dā* '$\sqrt{dā}$ and $\sqrt{dhā}$' come close to a paradigmatic structure.[6] The ablaut scheme is simpler if less correct: guṇa *ar*/*e*/*o*, vṛddhi *ār*/*ai*/*au* (IV 4 34 f.).[7] The formulation of several rules shows the author's knowledge of the Mahābhāṣya.[8] The influence of the Prātiśākhya-s is visible not only in the phonetic terms but also in the frequent notion of morphophonemic 'change' (expressed by the accusative); the lack of a fixed word order is curious: besides the dominant type *ṭā nā* "*ṭā* becomes *nā*" (II 1 53) there is the type *ān śas* "*śas* becomes *ān*" (II 3 9).

An old commentary probably by Sarvavarman himself (of which we still have reflexes in the fragments from Turkestan) was used by the Buddhist author Durgasiṃha (between the sixth and eighth cent.) for his vṛtti; this vṛtti contains also vārttika-like annotations which try to expand the grasp of the sūtra-s by addition or interpretation. Durgasiṃha is also the author of a sub-commentary *(ṭīkā)*. The once very popular Kātantra has left its traces on many later grammatical systems (Kāccāyana's Pāli grammar, Hemacandra, et al.) but retained its popularity only in Kashmir, Nepal and parts of Bengal, with a large volume of secondary literature.

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[5] P. THIEME, OLZ 35.239f.; G.B. PALSULE, The Sanskrit Dhātupāṭhas (Poona, 1961), p. 36–41; 49–53. Not much different is the Kāśakṛtsna Dhātu-pāṭha recently discovered together with a Canarese commentary; in fact the whole Kāśakṛtsna grammar was just a version of the Kātantra (PALSULE, Sanskrit Dhātupāṭhas, p. 44–49 and 17th AIOC, 1953, p. 349–355).

[6] The source of this development is Pāṇini I 4 3 *yū stry-ākhyau nadī* "Feminine nouns ending in *ī*/-*ū* are called *nadī*."

[7] Cf. above, p. 111, fn. 102. Of little value are simplified *kāraka* definitions like II 4 14 *yaḥ karoti sa kartā* "Who acts is an agent."

[8] P. THIEME, OLZ 35.239.

In a different class is the Cāndra-vyākaraṇa of the Buddhist litterature Candragomin who lived probably c. A. D. 450.[9] The influence of the Mahābhāṣya is evident in his work at every step. Candragomin's promise in his opening stanza to produce an easy, clear and complete grammar seems to contrast it with Pāṇini's complicated and Śarvavarman's eclectic creations; the format of eight books with four chapters each is meant to rival Pāṇini's work. The seventh book (on Vedic rules?) and the eighth (on accents[10]), however, are missing in our manuscripts even though an occasional rule survives as a quotation in the author's own vṛtti.[11] Evidently the Buddhists were less interested in these rules that had no application to Sanskrit as the Buddhists used it.[12]

Besides the sūtra-s (c. 3100 in the six surviving books) the grammar consists of a Vṛtti, a Dhātu-pāṭha with ten root classes, Uṇādi-sūtra-s (arranged alphabetically by the last sound), śikṣā-like Varṇa-sūtra-s (phonetic statements) and 86 Paribhāṣā-sūtra-s (metarules).[13] The grammar was widely believed lost and its recovery towards the end of the 19th century is owed largely to the labours of B. Liebich. The manuscripts (almost exclusively from Nepal, a fragment from Kashmir) have remained precariously few for the constitution of a reliable text;[14] Tibetan translations have been of some help. The main problem is the attribution of the vṛtti to Candragomin himself, which seems indicated by the lack of any separate introduction or colophon (which merely refer to book and chapter of the Cāndra-vyākaraṇa), and by the use of the first person in nine cross-references to sūtra-s. On the other hand, K. C. Chatterji (in the notes to his edition) has drawn attention to five cross-references in the third person[15] and other small inconsistencies: the vṛtti sometimes (e. g. on II 3 21 and V 3 18)

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[9] He must be older than Bhartṛhari, who refers to him in Vākyapadīya II 483, and should have been alive when the Huns invaded India because of the example *ajayaj Jarto Hūṇān* (Cv I 2 81) "Jarta defeated [during the speaker's lifetime] the Huns" [B. Liebich, Kṣīrataraṅgiṇī (Breslau, 1930), p. 264–272]; cf. above, p. 153.

[10] Cv I 1 145 *svara-viśeṣam aṣṭame vakṣyāmaḥ*.

[11] A Vedic rule is quoted in Cv I 1 6, accent rules in Cv I 3 45 and V 1 81; Candragomin's root list contains Vedic roots.

[12] The use of the old pitch accents was, however, not unknown in the oldest Buddhist traditions (S. Lévi, JA XIe serie, tome V. 401–447). The separate placement of Vedic and accent rules at the end of the grammar had its impact on later grammars: Vedic and accent rules are placed in two appendices in the Siddhānta Kaumudī, and Hemacandra and Kramadīśvara who had no use for them gave transfer rules for the derivation of the Prakrits instead.

[13] Of the once large secondary literature, we have remainders in Nepalese manuscripts and in Tibetan translations (B. Liebich, GGN 1895.317f., summarized in IA 25.103–105).

[14] W. Rau, ZDMG 113.521–529. Its onetime popularity did not save the grammar when Buddhism vanished in India. In Ceylon it was replaced by a derived popular version called Bālāvabodhana, composed by the monk Kāśyapa c. A. D. 1200.

[15] References in the third person are in themselves not uncommon in autocommentaries, e. g. Viśvanātha's Sāhityadarpaṇa I 1.

refers to sūtra-s of Pāṇini rather than to Candragomin's parallel sūtra[16] and derives words with uṇādi-suffixes (e. g. on V 1 9) which are not found in Candragomin's Uṇādi-sūtra-s. R. Birwé[17] proposes that the author of the vṛtti on the books I to IV should be Candragomin, of the vṛtti on the books V and VI Dharmadāsa, whose name appears in a note at the end of the only complete manuscript in the hand of another scribe: "This is the work of the venerable teacher Dharmadāsa." This is not a likely solution. The note with Dharmadāsa's name has no separate bearing on the vṛtti alone and Birwé's division of the vṛtti (for the reason that all nine cross-references in the first person occur in the books I to IV, most of those in the third person in books V and VI) is arbitrary. One can as well point out that seven out of nine first person forms refer to the accent rules of book VIII, while only one out of five third person forms refers to the accent rules, but three to closely following rules—the difference may be due to stages in Candragomin's composition of the vṛtti. Chatterji's assumption that the vṛtti is not only written by another later author (Dharmadāsa) but is even later than the Kāśikā is hardly tenable. The Kāśikā on III 3 175 argues against Candravṛtti I 3 4 and it is unbelievable that the Candravṛtti on I 3 106 had to look for the Kāśikā on III 3 131 to find the reason why Candragomin had no rule corresponding to Pāṇini III 3 131–138, especially when the Kāśikā teaches these rules and merely refers to the possibility that they could be omitted. The dependence of the Kāśikā on Candragomin's sūtra-s is a long established fact.[18]

Candragomin's grammar is the first great remake of Pāṇini's grammar (assuring us incidentally of the reliability of our Pāṇini text) and has had a lasting effect on the later Jain revisions of it. Its main claim to originality is staked out in the author's own words (Cv II 2 68) *Candrôpajñam asaṃjñakaṃ vyākaraṇam* "The termless grammar is the work of Candra." To an astonishing degree he has succeeded in using only enumerations, contractions or descriptive expressions and in avoiding defined terms. Wherever Pāṇini would use the term *vṛddhi* for vowels of the highest ablaut grade (*ā* [*ār*, *āl*] *ai, au*) Candragomin uses the contraction *āᵈ-aiᶜ* (e. g. V 1 83: augment plus initial root vowel > vṛddhi). While Pāṇini called a word with a vṛddhi vowel in its first syllable *vṛddha* (Pāṇini I 1 73), Candragomin's formulation remains descriptive: II 4 98 *āᵈ-aiᶜ-ādy-aᶜ.o ⁿyaⁿ* "Suffix *-ya* after [a word] which has {*ā . . . ai, au*} as the first {*a . . . au*} (i. e. vowel)." The most striking application of this principle is in the syntax of cases where Pāṇini's three levels (above, p. 94–96) have been reduced to two: objects and case forms. The expressions Candragomin uses

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[16] It is also curious that Candragomin, who replaced in several sūtra-s Pāṇini's *samjñāyām* 'when it is a term' with *nāmni* 'when it is a name' (e. g. I 2 30; 3 77; II 2 14), paraphrases it in his vṛtti with this same *samjñāyām*.

[17] R. BIRWÉ in Mélanges d'Indianisme [Fs. L. RENOU] (Paris, 1968), p. 127–142.

[18] F. KIELHORN, IA 15.183–185: the Kāśikā never openly acknowledges this debt by more than a 'some say . . .'

correspond either to Pāṇini's objective relations (*ādhāra* 'locus' or *kriyâpya* 'attainable by action,' i.e. object) or his semantic concepts (*kartṛ* 'agent,' *sampradāna* 'recipient')—all of them used descriptively. The semantic concepts whose introduction W. D. Whitney deplored ("the vastly more difficult and dangerous method")[19] have disappeared between the two levels.[20] Only the Pāli grammar of Moggallāna has followed Candragomin in this reduction. The case suffixes including their replacements are taught in II 1 1–42 followed by the rules on their syntactic use (II 1 43–98). There is no rule corresponding to Pāṇini's II 3 1 *anabhihite* "When [the semantic relation] is not already expressed [otherwise]" prefixed to the section. The generative strings which we have in Candragomin's substitution rules for nominal and verbal suffixes do not seem to extend to the more fundamental concepts.

Candragomin's material contributions to grammatical description are few: the wider use of the genitive case (II 1 95), the use of the negation *mā* with the imperative and future (I 3 4: *mā karotu* 'he shall not do'; condemned by Kāśikā III 3 175), the alternative construction of *ṛte* 'without' with the accusative as well as the ablative (II 1 84), etc. Most of these additions have been subsequently introduced into the Pāṇinian system by the Kāśikā. On the formal side, Candragomin's formulations are often shorter than Pāṇini's. Of the three synonymous expressions *vā, vibhāṣā, anyatarasyām* used by Pāṇini, Candragomin only uses *vā* because it is the shortest. Often words are dropped or replaced by new, shorter expressions. Against Pāṇini's I 4 2 *vipratiṣedhe paraṃ kāryam* "When there is conflict, the subsequent[ly formulated] rule [takes precedence]," Candragomin dittoes *paraḥ* from I 1 14 into I 1 16 *vipratiṣedhe* though here a neuter *param* is needed, and omits *kāryam*. The solution was not ideal but the idea caught on; the Jainendra-vyākaraṇa uses a shorter synonym: I 2 90 *sparddhe param* "When there is rivalry, the subsequent [prevails]" and Śākaṭāyana-vyākaraṇa I 1 46 *sparddhe* with *paraḥ* dittoed from I 1 44.

Candragomin adheres to Pāṇini's metalanguage and develops it in some detail (e.g. a verbalizing zero suffix VI^p I 1 27[21] and a primary suffix ^ksa as in *tādṛk-ṣa* I 2 51). This adherence is the reason for his peculiar remodelling of the sound table (merging 4 *ha ya va raṭ* and 5 *laṇ* into one sūtra *ha ya va ra laṇ*) which did not remove the double use of *ṇ* as an end marker (1 *a i uṇ* is the other occurrence). K. C. Chatterji wonders in his note on I 1 5: "It is a thousand pities Candra did not remove the most glaring defect . . ." Such a switch of end markers however would have meant a change in the metalinguistic formulae while the elimination of the end marker *ṭ* amounts only to non-usage of an already unnecessary term (*aṭ* occurs four times in the Aṣṭādhyāyī but is not needed by Candragomin).

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[19] W.D. Whitney, AJPh 14.171.
[20] Or shall we assume that Candragomin dropped the objective relations under the influence of Buddhist mentalistic philosophy?
[21] Cf. Mahābhāṣya II 21, 16f.

The topical arrangement of the grammar (primary noun suffixes, conjugation, declination, secondary noun suffixes, morphophonemic rules) stays closer to Pāṇini's arrangement than we find it in other grammars with topical arrangements.[22]

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[22] The two Tibetan grammars (before the 10th cent. A.D.) which tradition ascribes to Thonmi Sambhoṭa [Les ślokas grammaticaux de Thonmi Sambhoṭa, ed. J. Bacot (Paris, 1928)] show a very general influence of Sanskrit grammar; cf. S. Inaba, JIBS 3.432–440 and R.A. Miller, JAOS 83.485–502 and ZDMG 115. 327–340. In China Sanskrit grammar was not studied seriously; for a summary description of the Sanskrit language, see the reports of the pilgrims Hsüan-tsang, I-tsing and Fa-tsang in J.F. Staal, A reader, p. 7–19. It must be regarded as an unusual achievement that the Japanese monk Jiun Sonja Onkō inductively abstracted (sometime between A.D. 1751 and 1771) the rules of Sanskrit grammar from Buddhist texts that were available in manuscripts; his work exists in manuscript form in the Kōkiji temple, only a part of it is published [R.H. van Gulik, Siddham (Nagpur, 1956), p. 133–135 and Watanabe Shoko, Japanese Buddhism (Tokyo, 1970), p. 24].

THE JAIN SANSKRIT GRAMMARIANS

In time the Jains too adopted Sanskrit as a vehicle of thought and wrote grammars to suit their needs. Rules teaching purely Vedic forms and the old pitch accents were dropped, but neither the Jain grammarians nor any other Indian grammarians have replaced the latter with rules on the often-assumed stress accents in Sanskrit or other Indian languages. The reason for this omission is possibly that the stress accents, if they exist, are not strong.[1]

The oldest work is the Jainendra-vyākaraṇa of Devanandin called also Pūjyapāda. While some scholars place Devanandin before even Candragomin (5th cent. A. D.), others put him later than the authors of the Kāśikā (early 7th cent. A. D.).[2] The grammar follows strictly Pāṇini's order of rules and retains their generative character. It seeks to make its contribution in the refinement of details,[3] especially in the further economy of expression. From the word *vibhakti* 'case' Devanandin forms a variant *v-i-bh-a-k-t-i* to denote the seven cases by adding *ā* to the consonants and *p* to the vowels (I 2 158): *vā* = nom., *ip* = acc., etc.[4] The legion of invented short terms taxes the memory of the student. Devanandin follows the suggestion of Kātyāyana that the 'single remainder' process (above, p. 136) is not necessary to account for the dual and plural forms, and his commentators Abhayanandin[5] and Somadeva[6] refer to the work as the 'grammar without single remainder'—even though in Somadeva's recension the single remainder process has been reinstated. This would be an unhappy characterization if Devanandin lived after Candragomin who has also eliminated the single remainder process. Devanandin stays so close to Pāṇini's formulations that some additions proposed by Kātyāyana or Patañjali

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[1] Cf. SUNITI KUMAR CHATTERJI, IL 21.81 f.

[2] R. BIRWÉ's Introduction, p. 40 f., to ŚAMBHUNĀTH TRIPĀṬHI's edition of the Śākaṭāyana-vyākaraṇa (Benares, 1971).

[3] A happy formulation is I 4 54 *miṅ.atkārthe vāḥ* "nominative suffix for that in congruence with the verbal ending" against Pāṇini's II 3 46 (above, p. 95 f.). Note, however, the reservations voiced by Kātyāyana II 3 46 vārtt. 6.

[4] Alone of all Indian grammarians Devanandin begins the list of verbal personal suffixes with the first person followed by the second and third. The reason is expediency which allows him to contract Pāṇini's rules I 4 105 through 108 into a single rule I 2 152; now the three verbal suffixes are used parallel to 'we,' 'you' and 'the rest.'

[5] In his Mahāvṛtti on I 4 97 and III 3 84.

[6] In his Śabdārṇava-candrikā on I 4 114 and III 3 98.

appear only in Abhayanandin's commentary. Against the 3063 sūtra-s of the northern (and original) recension, the southern recension as commented on by Somadeva has—due to numerous alterations and additions—3708 sūtra-s.

In the ninth century A.D., a Jain monk, whose real name was perhaps Pālyakīrti, composed his Śākaṭāyana-vyākaraṇa (using the pen name Śākaṭā-yana after the famed forerunner of Pāṇini) and a commentary on it named Amogha-vṛtti, after his patron the Rāṣṭrakūṭa king Amoghavarṣa I. He uses all preceding grammars, especially the southern recension of the Jainendra-vyākaraṇa, though without its excessive use of artificial terms. The topical arrangement of the rules reminds one of the Kātantra; the generative character is lost and the *kāraka*-s have a mere shadowy existence. The instruction on gender (in 69 *āryā* verses) is included in the commentary on I 2 1, and the roots are (with the unexplained exception of those belonging to the first class) listed in the commentary to several sūtra-s of the fourth book where the sūtra refers to a certain root class.

The Jain polymath Hemacandra Sūri (1089–1172)[7] composed his Siddhahai-macandra at the request of his patron, the Cālukya king Jayasiṃha-Sid-dharāja of Gujerat, to rival King Bhoja's Sarasvatī-kaṇṭhābharaṇa, mainly on the basis of the Śākaṭāyana-vyākaraṇa.[8] Its c. 4500 sūtra-s are organized in eight books of four chapters each; but nearly a quarter of them belong to the eighth book dealing with the Prakrit dialects which are derived from Sanskrit by means of transfer rules. Hemacandra also wrote an extensive commentary on his work, the Bṛhadvṛtti (with a subcommentary, the Bṛhannyāsa, valuable for its identification of sources), and an abbreviated version of it, the Laghuvṛtti. The Bṛhadvṛtti includes not only the *gaṇa*-s but also the irregular formations *(uṇ-ādi)*, the gender rules (after sūtra I 1 29, in verses) and a collection of me-tarules (called *nyāya*, at the end). In comparison to Bhoja's grammar where these lists are incorporated in the sūtra-s, Hemacandra's grammar is conserva-tive.[9] It eclipsed, due to its clear design, the grammars of Devanandin and Śākaṭāyana within the Jain communities and had, like these, its share of com-mentaries and recasts. But Pāṇini's grammar and the Mahābhāṣya were ob-viously well studied by all Jain grammarians[10] and were never replaced as the classical authors on the subject.

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[7] G. Bühler, Über das Leben des Jaina Mönches Hemachandra (Wien, 1889; DAWW 37).

[8] Still, he claims some originality when he calls his work in the colophons *svô-pajña* 'self-devised.'

[9] Curious peculiarities are the replacement of *eva* by *iva* in unstressed positions *(iha + eva > ihêva* instead of *ihaîva;* I 2 16) and the optional pronominal forms *asabhyam* and *yuṣabhyam,* besides *asmabhyam* and *yuṣmabhyam* (II 1 9).

[10] Malayagiri's Śabdânuśāsana (ed. B.J. Doshi; Ahmedabad, 1967) is an un-inspired compilation written in the late 12th cent., based on Śākaṭāyana and Hema-candra. The grammar of Buddhisāgara Sūri, called Buddhisāgara-vyākaraṇa or Pañcagranthī (written in A.D. 1027) is still to be edited (B.J. Doshi, Introduction, p. 2, fn. 2).

THE LATER PĀṆINI SCHOOL

The first author after Patañjali whose work we still have is Bhartṛhari (a disciple of Vasurāta, the adversary of Vasubandhu), who is now believed to have lived c. A. D. 450–510.[1] The information of the Chinese pilgrim I-tsing that Bhartṛhari had died 40 years before his arrival in India (A. D. 671/672), i. e. in A. D. 631/632, must be wrong because Dignāga (c. A. D. 480–540) and other Buddhist authors of his time quote and use Bhartṛhari's Vākyapadīya.[2] Besides this meagre biographical information there are numerous legends, most of them based on his supposed identity with the poet Bhartṛhari.

Bhartṛhari's commentary on the Mahābhāṣya has survived in a single manuscript, incomplete and corrupt.[3] The very beginning is missing and the fragment ends with the comment on Pāṇini I 1 55 though the work is known to have covered at least the first three *pāda*-s.[4] The colophons call it either Bhartṛhari's Mahābhāṣya-ṭīkā[5] or Bhartṛhari's Mahābhāṣya-dīpikā;[6] the parallel with the Trikāṇḍī suggested further the name Tripādī 'The Three Chapters.'[7] It is a very learned commentary that records Vedic usage and various opinions of other authorities.

Bhartṛhari's fame mainly rests on his Vākyapadīya 'Work Dealing with Sentences and Words,' the major part of which has survived precariously to this day. The first two books *(kāṇḍa)* with 138[8] and 487 *śloka*-s, together with

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[1] E. FRAUWALLNER, WZKSOA 5.134f.

[2] H. NAKAMURA, Studies in Indology and Buddhology, [Fs. SUSUMU YAMAGUCHI] (Kyoto, 1955), p. 122–136; E. FRAUWALLNER, WZKSOA 3.107–114.

[3] This commentary was still known to Nāgojībhaṭṭa and his disciple Pāyaguṇḍe (18th cent.) who both quote from it. Largely inspired by it is the Mahābhāṣya-pradīpa of the Kashmiri Kaiyaṭa (probably 11th cent. A.D., certainly before 1150: V. RAGHAVAN, JOR 19.223).

[4] In the vṛtti on VP I 82, Bhartṛhari refers to his (?) commentary on the Mahā-bhāṣya on Pāṇini I 4 109: that could suggest that he commented on more than the three *pāda*-s.

[5] This earned Bhartṛhari the name *ṭīkā-kāra* (Kumārila, Tantra-vārttika ed. Chowkhamba Sanskrit Series, p. 207).

[6] V. SWAMINATHAN, ALB 27.60

[7] A. AKLUJKAR, ALB 35. 159–171 argues that this was the original title.

[8] The number is slightly higher in some editions depending on the recognition of some verses that may really be quotations in the author's own commentary taken from earlier works (A. AKLUJKAR, JAOS 91.510–513).

the author's own commentary *(vrtti)*[9] are properly called Vākyapadīya; the third book called Prakīrṇaka 'Miscellany' (with 1320 *śloka*-s in 14 sections; at least two more sections are known to be lost[10]) treats special points that were only outlined in the first two books. Together the three books could be called Trikāṇḍī 'Three Books' but often the name Vākyapadīya was extended to cover the whole work.[11]

. The relative chronology of these works (not to mention the lost Śabda-dhātu-samīkṣā) is not yet settled, except that the Mahābhāṣya-dīpikā (ABORI ed., p. 46,1f.) quotes Vākyapadīya II 464. There are many correspondences in the formulations of these works, though the vṛtti with its long, involved sentences (reasons and qualifications piled one upon the other, their attributes trailing) is especially hard to understand.[12] The Dīpikā (p. 32, 24 *vyākaraṇa-granthesu likhitāḥ* 'written in the grammar books'; 33, 17 *granthesu cālikhitatvāt*) shares an interest in writing not otherwise found in Pāṇinīya works with VP I 20 (*yatra vāco nimittāni cihnānivākṣara-smṛteḥ* 'that in which the manifestors of speech like the signs of the alphabet appear . . .') and the vṛtti on I 23 (*akṣara-nimittākṣara-kalpanāvat* 'as the letters of the script are thought of as the phonemes of the alphabet . . .').

The Kashmiri Helārāja (10th cent. A.D.) wrote separate commentaries on the verses of all three books of the Vākyapadīya (called Śabda-prabhā, *Vākya-pradīpa? and Prakīrṇaka-prakāśa) of which the first is lost and the second wrongly attributed to Puṇyarāja[13] in most manuscripts;[14] two gaps in the Prakīrṇaka-prakāśa (III 7 34–49 and 65–69) have been filled with the comments of one Phullarāja. Vṛṣabhadeva (date unknown) further wrote a gloss *(paddhati)* on the first *kāṇḍa*, including the vṛtti.

Bhartṛhari asserts the value of traditional interpretation and criticizes (VP II 481) Baiji, Saubhava and Haryakṣa for following 'dry reason' *(śuṣka-tarka*[15]*)*, i.e. following factual observations of their own rather than the intimations in

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[9] The vṛtti is an integral part of the work. Several times a sentence combines portions of the commentary and a verse (e.g. I 65; 90). Often the verses are formulated so that the vṛtti can fill them with alternate interpretations to suit linguists of different persuasions (A. AKLUJKAR, WZKSA 16.181–198; esp. p. 186). Only the vṛtti has clear references to the illusionist concept of evolution which led M. BIAR-DEAU to contest Bhartṛhari's authorship of it [Bhartṛhari-Vākyapadīya-Brahma-kāṇḍa avec la Vṛtti de Harivṛṣabha (Paris, 1964), p. 5–21].

[10] Helārāja's (?) commentary on VP II 77.

[11] A. AKLUJKAR, JAOS 89.547–554. Sometimes the three books are referred to as Brahma-kāṇḍa, Vākya-kāṇḍa and Pada-kāṇḍa.

[12] Detailed characterization by K.A. SUBRAMANIA IYER, The Vākyapadīya of Bhartṛhari with the vṛtti, chapter I, English translation (Poona, 1965), p. xii–xvi.

[13] Puṇyarāja (probably later than Helārāja) is the author of a verse summary of Kāṇḍa II.

[14] A. AKLUJKAR in Charu Deva Shastri Felicitation Volume (Delhi, 1974), p. 165–188.

[15] Defined in the vṛtti on VP I 129.

works like the Mahābhāṣya. Agreeing with Patañjali (Mbhāṣ. I 1, 19), Bhartṛhari (VP I 11) regards grammar as the most important *vedāṅga*; for him, though, its value is not so much in its leading the adept to prosperity and to heaven (through conscious correct usage[16]) as in its revelation of *brahman* (through meditation exercises centered on language: *vāg-yoga* or *śabda-pūrva-yoga*).[17] Speech is *brahman*. This central role of speech goes back to early Vedic tradition and was stressed again in tantric systems with which Bhartṛhari shares a few key terms *(śakti, sādhana)*; it is not surprising that Abhinavagupta of the Kashmirian tantric school pays tribute to Bhartṛhari's work.[18] Speech and meaning coexist in an undifferentiated state, from which the diversity of objects unfolds due to ignorance *(avidyā)* through a wrongful attribution of differentiation by time and space. To convey such objects, comprehensive language signs develop, existent only in the mind and without inner sequence. To denote them, the ancient word *sphoṭa* 'burst' is pressed into service, which in Mbhāṣ. I 181, 21 denoted the permanent aspect of a phoneme.[19] On the phonetic level, a *sphoṭa* is then manifested by sequential sounds *(dhvani)*, forming a sentence.[20] From this sentence the listener realizes the *sphoṭa* within himself and understands the communication. For the grammarian to analyse the communication or the sentences, it becomes necessary to superimpose formal categories like words, morphemes and phonemes/sounds which he would even impute to the *sphoṭa*; thus we can speak secondarily not only of a sentence-*sphoṭa* but also of a word-*sphoṭa*, sound-*sphoṭa*, etc.

Already Kātyāyana recognized the importance of the 'desire to express' *(vivakṣā)* in language, but only Bhartṛhari has given it a philosophical foundation. Besides 'primary Being' (*mukhyā sattā* VP III 3 46), he recognizes 'metonymic Being' (*aupacāriki sattā* VP III 3 39), which is the meaning of words and exists in the mind. This new concept offers a better solution to an old problem: how can we say "Weave a cloth!" using the word 'cloth' for a thing that does not yet exist (if it already existed there would be no need to make it)? Patañjali

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[16] Incorrect forms may serve the secular purpose (below, p. 191) but no merit *(dharma)* accrues from their use.

[17] K.A. SUBRAMANIA IYER, ALB 28.112–131. In the Dīpikā, p. 33,24 – 34,1, Bhartṛhari argues that, due to the permanent connection of word and object, words like *apūrva* 'fate' let us infer the existence of their invisible objects. That may, however, not be his own conviction, for in VP III 3, 39–51 he recognizes that the object of a word is a mental image, not an external object.

[18] A. PADOUX, Recherches sur la symbolique et l'énergie de la parole dans certains textes tantriques (Paris, 1963), p. 16. Abhinavagupta wrote a commentary on the third *kāṇḍa* called Prakīrṇaka-vivaraṇa.

[19] Pāṇini VI 1 123 mentions a grammarian called Sphoṭāyana; any connection with the later *sphoṭa* theory is speculative. On Audumbarāyaṇa's theory, cf. above, p. 86.

[20] In VP 1 134/142 we hear of three levels of speech *(vāc)* which are given as *paśyantī* ('seeing:' undifferentiated), *madhyamā* ('middle:' sequential and mental) and *vaikharī* ('elaborated:' spoken language).

answered that 'cloth' is a 'potential term' *(bhāvinī saṃjñā)* denoting that which will be called a cloth once it is completed (Mbhāṣ. I 112, 9–13; above, p. 161). Bhartṛhari's concept of meaning as a mental image covers not only such instances of creation but also negated and absurd notions: the existence of a meaning does not imply reference to an external object.

Pāṇini's system of *kāraka*-s receives by the same device a proper philosophical underpinning. The naive impression that the *kāraka*-s are relations, that *karman* 'object' or *karaṇa* 'instrument' are things participating in an action, must give way to the insight that we deal on the semantic level not with things but only with the inherent powers of things to contribute to the action and that the mind exercises a great deal of freedom in the selection of the powers it wishes to express (VP III 7, 1–3). The simple fact that Devadatta cooks rice in a pot is most commonly visualized with Devadatta as the agent and the pot as the location *(Devadattaḥ sthālyāṃ odanaṃ pacati)*; if however the speaker wants to stress that due to the quality of the pot the rice cooks quicker he may denote the pot as the agent *(sthālī pacati* "The pot cooks"). Similarly the firewood (normally seen as an instrument) or the rice itself may be visualized as the agent, but usually not a 'recipient' *(saṃpradāna)* or a 'take-off' *(apādāna)*, i. e. there is no way to visualize *Rāma* in *Rāmāya dadāti* ("He gives to Rāma") or *vṛkṣa* in *vṛkṣāt patati* ("He falls from the tree") as an agent. *Rāmo dadāti* "Rāma gives" or *vṛkṣaḥ patati* "The tree falls" would describe totally different events.[21] Such changes of concept and expression are possible because each *kāraka* is an agent of its own contribution to the main action and assumes the role of instrument, etc. only in relation to the main agent (VP III 7, 20–23). Following the lead of Patañjali,[22] Bhartṛhari differentiates various services *(upakāra)* of the *kāraka*-s, e.g. three major and four minor ones for *karman* 'object' (III 7, 45) because 'object' may be the product *(mṛdā ghaṭaṃ karoti* "He makes a jar with clay") or a modification *(mṛdaṃ ghaṭaṃ karoti* "He makes the clay into a jar") or destination *(nagaram upasarpati* "He goes to the city"). The four minor classes extend the object notion from 'that most desired by the agent' to unintended things ('walking to the city he touches g r a s s'), disliked things ('he eats poison'), the residuals of Pāṇini I 4 51 (the double acc. with verbs meaning 'ask,' etc.) and those cases where an added preposition demands the replacement of another *kāraka*-and-case($\sqrt{krudh}$ with dative, but *abhi* $\sqrt{krudh}$ with accusative). This line of research must have been continued by later authors because the Tamil grammar Vīracōḷiyam refers to an elaborate system of *upakāraka*-s within the range of the *kāraka*-s (below, p. 182).

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[21] VP III 7 18 with Helārāja's commentary. Already Kātyāyana stated in his vārttika-s 7 through 14 on Pāṇini I 4 23 that 'instrument' *(karaṇa)* and 'location' *(adhikaraṇa)* can be visualized as 'agent' *(kartṛ)*, but 'take-off' *(apādāna)*, etc. can not.

[22] Mbhāṣ. III 51, 8f. "Location is of three kinds: pervasive, touching, topical." The formulation suggests that Patañjali quotes another source [H. SCHARFE, Die Logik im Mahābhāṣya (Berlin, 1961), p. 76].

The study of Bhartṛhari's thought is still in its infancy; critical editions and usable translations come forth only slowly. But the study should be well worth the while of the linguist.

Though Pāṇini's sūtra-s must have been accompanied by oral instruction that turned the sūtra-s into understandable sentences and supplied the student with sets of examples, no such old vṛtti has survived. The Kāśikā-vṛtti of Jayāditya and Vāmana (early 7th cent. A.D.),[23] in spite of its title 'Vṛtti from Benares,' wants to be more: a compendium of Pāṇinian grammar. Its pedagogical approach has made it one of the most popular grammatical works, but its simplicity is often deceptive[24] and the full meaning of its remarks becomes apparent only against the background of earlier discussions, notably in the Mahābhāṣya. The commentary follows a sūtra text that often adopts the alterations proposed in the Mahābhāṣya.[25] The Buddhist Jinendrabuddhi (8th or 9th cent. A.D.) wrote the voluminous commentary Kāśikā-vivaraṇa-pañjikā alias Nyāsa on it in which he demonstrates an interpretation of the Aṣṭādhyāyī that makes Kātyāyana's vārttika-s redundant; Haradatta's Padamañjarī (13th cent. A.D.?) summarizes the Kāśikā philology of his time. The Bhāṣā-vṛtti of the Buddhist Puruṣottama (early 12th cent. A.D.) further simplifies the presentation of Pāṇinian grammar and omits the rules concerning Vedic language.

Whereas the Aṣṭādhyāyī is a scientific analysis for the benefit of native Sanskrit speakers, classroom needs called for a more practical introduction into Sanskrit. It is hardly an accident that the first such work within the framework of the Pāṇinīya tradition was produced by a Buddhist author from Ceylon: Dharmakīrti's Rūpâvatāra (10th cent. A.D.?) teaches Sanskrit in the form of a catechism arranged by grammatical topics similar to the Kātantra and often illustrated by paradigms. Other such rearrangements of Pāṇini's sūtra-s are the Rūpa-mālā of Vimala-sarasvati (14th cent. A.D.), Prakriyā-kaumudī of Rāma-candra (14th or 15th cent. A.D.), Prakriyā-sarvasva of Nārāyaṇabhaṭṭa (A.D. 1616)[26] and the Siddhānta-kaumudī of Bhaṭṭoji-dīkṣita (early 17th cent. A.D.). The last work especially has become the basis of several commentaries (two by the author himself: the Bāla-manoramā for students and the Prauḍha-mano-ramā for scholars) and has all but replaced Pāṇini's work and the Mahābhāṣya

[23] Jayāditya is the author of books I to V, and after his death in A.D. 661 Vāmana completed the work. For an occasional difference of opinion between the two authors, cf. Prauḍha-manoramā on Pāṇini V 4 42 and Y. OJIHARA, JIBS 9. 749–753; 766–776; 845–847.

[24] The examples for the application of Pāṇini's rules are often taken from discussions in the Mahābhāṣya where they illustrate marginal applications. Many other examples are taken from Candragomin's vṛtti.

[25] F. KIELHORN, IA 16.178 and NGGW 1885.190.

[26] K. KUNJUNNI RAJA, The contribution of Kerala to Sanskrit literature (Madras, 1958), p. 129. In Kṛt-khaṇḍa p. 82 = VII 3 62 Nārāyaṇabhaṭṭa recognizes the usage of great authors like Murāri and Bhavabhūti as authoritative. He also wrote the Dhātu-kāvya which narrates the Kṛṣṇa legend using all 1948 roots found in Bhīma-sena's Dhātupāṭha—even in the same sequence!

for many students of Pāṇinīya Sanskrit grammar. The curious fact is that these sūtra-s, being identical with those of the Aṣṭādhyāyī except for their sequence, depend on a knowledge of Pāṇini's original work for their interpretation (e. g. the dittoing of words from a previous rule which the author supplies in his paraphrases).[27] The arrangement (developed by Śarvavarman, Dharmakīrti and Rāmacandra) proceeds from vowel and consonant sandhi to the inflection of masculine noun stems ending in vowels, etc., various compounds, secondary noun formation, verb inflection and primary noun formation.[28] It deserves to be studied from a linguistic point of view in contrast with the previous rearrangements and with Pāṇini's generative strings. Because so much in grammar is formal, it is not a meaningful critique of these works to say that "they differ only in the arrangement of the material."

It is not possible here even to mention the many authors that contributed through commentaries or monographs to the later Pāṇinīya tradition; many of their works still exist only in manuscripts. They are all put in the shade by the Mahratta Brahmin Nāgeśa or Nāgojībhaṭṭa Kāḷe[29] (died in 1755 in Benares), whose prolific writings cover not only grammar but also *dharma*, poetics and *yoga*. His Mahābhāṣya-pradīpoddyota is a subcommentary on Kaiyaṭa's commentary on the Mahābhāṣya; his Bṛhacchabdenduśekhara, a subcommentary on Bhaṭṭoji-dīkṣita's Prauḍhamanoramā. An independent work is his Vaiyākaraṇa-siddhānta-mañjūṣā (in three recensions of different length), a work of great depth in which he carries on the work of Bhartṛhari and the tantric philosophers.[30] One of his last works may have been the Paribhāṣenduśekhara 'Moon crest of metarules' in which he critically examines previous attempts to gather all metarules applicable to Pāṇini's grammar. He condemns the search for even more metarules beyond those recognized in the Mahābhāṣya and advocates strong reliance on Patañjali as the latest authoritative source.

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[27] Actually Bhaṭṭoji-dīkṣita and his followers led a strong revival of Pāṇinian studies at the expense of the non-Pāṇinian systems.

[28] A late echo is M. R. KALE's A Higher Sanskrit Grammar (Bombay, 1894).

[29] He was a disciple of Bhaṭṭoji-dīkṣita's grandson, Hari-dīkṣita.

[30] D. SEYFORT RUEGG, Contributions a l'histoire de la philosophie linguistique indienne (Paris, 1959), p. 5–14. The manuscript of the Bṛhanmañjūṣā, kept in the library of the Government Sanskrit College, Benares, is probably written in the author's own hand [GOPINATH KAVIRAJ in the foreword to PT. SABHAPATI's edition of the Laghumañjūṣā (Benares, 1963), p. 1, fn. 1]. The *śabda-bodha* philosophy of Naiyāyika-s, etc. has lately attracted the attention of some modern scholars. To mention only one point, action *(kriyā)* is thought to consist of operation *(vyāpāra)* and fruit *(phala)* of which the former resides in the agent, the latter in the object; if both coincide we have an intransitive verb [K. MADHAVA KRISHNA SARMA, Pāṇini Kātyāyana and Patañjali (Delhi, 1968), p. 160–164]. The contributions to linguistics contained in the works of the Mīmāṃsā and of poetics cannot, in this limited survey, receive the attention they deserve.

THE ŚIKṢĀ-S

The many works regarded as Śikṣā-s[1] cover a wide spectrum of Vedic studies. The dating of most of these texts is next to impossible; while some Śikṣā-s, e.g., the Nārada-śikṣā or the Āpiśali-śikṣā, may go back to the 5th century A.D., if not further,[2] others are much younger and must be assigned to the 11th to 15th centuries.[3] In spite of names like Āpiśali-śikṣā or Pāṇinīya-śikṣā, none of them preserve the doctrines of the pre-Pāṇinian or Pāṇinian era. In the Pāṇinīya-śikṣā both /ṛ/ and /r/ are called retroflex sounds; but according to the Prāti-śākhya-s /ṛ/ was pronounced at the root of the tongue and /r/ at the roots of the upper teeth. We would be mistaken if we accepted this Śikṣā as a witness for original Vedic pronunciation; it can only reflect the late tradition of a medieval school. The real thrust of the Śikṣā-s is more elementary; it is revealed for example by a little treatise called Svara-vyañjana-śikṣā which has only one purpose: to teach the student when he should regard an r sound found in a text as a vowel and when as a consonant. To understand the problem one has to remember that the vocalic /ṛ/ of Sanskrit did not survive as such in the successor languages, and its pronunciation in academic Sanskrit was more like /ri/: Rig-Veda, Saṃskrit, etc. It thus became indiscernible from original /ri/ sounds: riśādas, ripu, prātarindram (i.e. prātar Indram), and special rules became necessary to guide the student in his pronunciation and spelling.[4] This concern with orthography is also clear in a quotation found in the Gautamī-śikṣā which deals with the common doubling in consonant clusters: the Śikṣā quotes from another text the form yuṅṅkṣkṣva[5] (instead of the normal yuṅkṣva). The form looks bizarre until we consider the akṣara kṣ as a graphic unit—the proper transcription would be yuṅṅkkṣṣva.

Almost all Śikṣā-s are attached to a certain Veda; the Taittirīya school of the Black Yajurveda was the most prolific. It is noticeable that a great percentage of these manuals are products of South India; the Pāri-śikṣā by Cakra is even dedicated to the memory of Chief Pāri, praised in the Old Tamil literature.

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[1] SIDDHESHWAR VARMA, Critical studies in the phonetic observations of Indian grammarians (London 1929, repr. ed. Delhi, 1961), p. 29, knows of sixty-five.

[2] B.A. VAN NOOTEN, Oriental studies 2 (Tartu, 1973), p. 408–438, considers the possibility that the Āpiśali-śikṣā is even older than the Mahābhāṣya.

[3] SIDDHESHWAR VARMA, Critical studies, p. 28–52.

[4] SIDDHESHWAR VARMA, Critical studies, p. 58f.

[5] SIDDHESHWAR VARMA, Critical studies, p. 51.

When Vyāsa-śikṣā 317 defines the duration of one measure (i.e. the duration of a short vowel) by comparing it with the 'snapping of the fingers' *(aṅguli-sphoṭana)*, it is influenced by the Tamil grammarians (Tolkāppiyam I 7, Naṉṉūl 100: *noṭi*). The Vyāsa-śikṣā *(13th cent. A.D.) develops the phonetic observa-tions contained in the Prātiśākhya of its school, i.e. the Taittirīya-Prātiśākhya, especially the aspects of quantity. The duration of the nasal sounds in various contexts is stated minutely—not to speak of the different pauses in a hiatus, after a sentence, a verse or a half-verse, at the end of a section or a chapter. On the other hand, numerous sandhi rules raise it almost to the rank of a Prāti-śākhya. A curious feature of this and many other Śikṣā-s is the symbolic value attributed to sounds that somehow connects sounds with castes and certain tutelary deities. The Māṇḍavī-śikṣā of the White Yajurveda probably originated in Central or Northeastern India, where the distinction of /b/ and /v/ was lost, for it consists of an enumeration of the 641 words in the Yajurveda with 'true' /b/ sound; similarly, the Amoghānandinī-śikṣā gives a list of words with the initial /b/ and another with the initial /v/.[6]

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6 SIDDHESHWAR VARMA, Critical studies, p. 33f.; 130.

GRAMMARS OF THE DRAVIDIAN LANGUAGES

Of all the Dravidian tongues, Tamil has the oldest attested literature. More than 2000 poems, many of them from the 1st to the 3rd century A. D., are preserved in the Eight Anthologies that make up the Sangam literature, so called after the Tamil Academy or *cankam* supposedly held at Madurai.[1] Tamil also has the oldest grammatical-literary compendium, the Tolkāppiyam, which, in about 1610 verse-sūtra-s[2] (in 3 sections: *eluttu* 'sound/letter,' *col* 'word,' *porul* 'subject matter'), comprises all literary activity. It is still an unsolved problem whether the Tolkāppiyam is older or younger than the Anthologies. While literature must precede literary theory, the theories found here could refer to older, now lost works. Tolkāppiyam's classification of genres forms the basis for the arrangement of the Anthologies: was it an ancient tradition or was it derived from an observation of the poetry collected for the anthologies? There are minor grammatical discrepancies between the Tolkāppiyam and these poems: the initial /y/ (e.g. *yāṟu* 'river') is preserved in the Tolkāppiyam but lost in the poems *(āṟu)*; Tolkāppiyam II 221 prohibits the use of the first and second person optative—but such forms are found in the poems.[3] If *ōrai* (III 133) is the astrological 'hour' (from the Greek ὥρα cf. Sanskrit *hora*),[4] the earliest possible date for the Tolkāppiyam would be the 2nd century B. C.[5]

The original title of the work and the name of its author remain unknown. Following more recent fashion, the title Tolkāppiyam is formed from Tolkāppiyaṉ, which is given in Paṉampāraṉaṉ's preface (late Sangam period?) as the author's name or, rather, surname: *Tolkāppiyaṉ eṉa ttaṉ peyar tōṟṟi* "having shown his name to be Tolkāppiyaṉ ('One who [knows] old poetry')."[6] The same

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[1] K. ZVELEBIL, IIJ 15. 109–135; Tamil literature, in vol. X of this History, p. 7.

[2] The number varies very slightly with the commentaries. The meter is *nūrpā*. With the metrical form goes a certain prolixity and roundabout expression (II 205 'four fives plus three on top' instead of '23').

[3] C. and H. JESUDASAN, A history of Tamil literature (Calcutta, 1961), p. 3f.; T. P. MEENAKSHISUNDARAN, A history of Tamil language (Poona, 1965), p. 51.

[4] Disputed by S. ILAKKUVANAR, Tholkāppiyam (in English) with critical studies (Madurai, 1963), p. 10f.

[5] J. FILLIOZAT in L. RENOU and J. FILLIOZAT, L'Inde classique, vol. II (Paris, 1953), p. 193.

[6] The word *kāppiyam* (Sanskrit *kāvya*) is attested to by Maṇimēkalai 19, 80 etc. Much less convincing is the explanation as "Old Kāppiyaṉ" in spite of the occurrence of a family name Kāppiyaṉ and a potential parallel in *Tolkapilar* "Old Kapilar"; the context demands a descriptive name.

preface declares him to be full of *aintiram* which the commentators take as a reference to the Aindra-grammar. But, as the Aindra-grammar is only a late myth (10th cent. A.D.?), it is tempting to accept the proposal of K. Subramania Pillai;[7] namely, to amend the text to read *ain-tiram* 'the five sections' which fits the work well even if there are only three formal sections: metrics and poetics are treated in the section on subject matter. Paṇampāraṇar's statement that Tolkāppiyaṉ practiced *paḍimā* and Tolkāppiyaṉ's own classification of beings by the number of their sense organs (III 571–577) suggest that he was a Jain.[8] The popular association with Agastya, his supposed teacher, is first mentioned centuries later and deserves no credit.[9] Still, it is certain that Tolkāppiyaṉ had predecessors as his frequent statements "so they say" "so say the wise" indicate. Paṇampāraṇar says the work was presented at the court of the Pāṇṭiya king Nilantaru Tiruvil in the presence of the scholar Ataṅkōṭṭācāṉ 'the teacher from Ataṅkōṭu' (a village in southern Travancore).

It is not quite clear whether an apparent unevenness (gaps and duplications in the grammatical description,[10] unexpected placement of some rules[11]) should be blamed on the lax structure of the composition or on a faulty tradition of the text. Ignorance of a rule found in our text[12] by the author of Yāpparuṅkala (10th cent. A.D.?) may be due to a lapse of memory or to a later interpolation.[13] Older forms like *kaḷapu* appear in our manuscripts as *kaḷavu*, etc.[14] The oldest commentary is by Iḷampūraṇar (before 11th cent. A.D.?) who seems to have started a revival of Tolkāppiyam studies, followed by Teyvaccilaiyār (on 'word' only), Pērāciriyar, Cēṉāvaraiyar (on 'word' only) and finally Naccīṉārkiṉiyar (14th cent.). The Tolkāppiyam in recent times is regarded as the main authority on 'Good Tamil' *(ceṉṟamil)*, rivaled only by Naṉṉūl, and largely accounts for

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[7] Quoted by N. SUBRAHMANIAN, Pre-Pallavan Tamil Index (Madras, 1966), p. 176; /r/ and /ṛ/ have merged in some Tamil dialects. It is not clear how the above statement on the Aindra grammar would be affected by a quotation found in I-hsing's Chinese commentary on Mahāvairocana-sūtra, chapter I (early 8th c. A.D.), from a 'vyākaraṇa of Śakra'; after all, Śakra is Indra (WILHELM KUNO MÜLLER, Shingon-Mysticism; Subhākarasiṃha and I-hsing's commentary on the Mahāvairocana-sūtra, chapter one, Doctoral Dissertation, Los Angeles 1976, p. 9 with fn. 39 and 40).

[8] The term *ticai-ccol* 'dialectal word' (Pāli and Prakrits *disā*) could point to a Prakritic source of terminology, expected for a Jain.

[9] K. ZVELEBIL, IIJ 15.124, fn. 61, tentatively accepts as genuine the 53 lines quoted in later commentaries from 'Akattiyam.'

[10] T.P. MEENAKSHISUNDARAN, A history, p. 52f.

[11] G. VIJAYAVENUGOPAL, A modern evaluation of Nannul (Annamalainagar, 1968), p. 119f.

[12] G. VIJAYAVENUGOPAL, A modern evaluation, p. 18f., 119f.

[13] Generally suspect are attempts like those of ILAKKUVANAR, Tholkāppiyam, p. 15–20, to eliminate as interpolations all sūtra-s with traces of Sanskrit influence in order to claim a high antiquity (700 B.C.) for the Tolkāppiyam.

[14] G. VIJAYAVENUGOPAL, A modern evaluation, p. 155.

the surprising continuity of literary Tamil as used even now in novels or the news media.

The phonetic section shows the influence of the Prātiśākhya-s.[15] It is worth noting that the 'retroflex' consonants /ṭ/ and /ṇ/ are not retroflex in the Tolkāppiyam, though they are in later Tamil works (and in the Prātiśākhya-s). The sound system (mixed up with graphemic representation[16]) is phonemic; there are doubts concerning only some of the five *n* sounds. Also, there are three dependent sounds or allophones: shorter *i*, shorter *u* and *āytam*. The exact character of the last, whether it was a glottal stop/catch, a diacritical mark indicating voicing, or a fricative,[17] is still not clear despite a large body of literature on the subject. Tolkāppiyan has developed an inquiry, first put forth in the Prātiśākhya-s (Vājasaneyi Pr. I 85–89; Ṛgveda Pr. XII 1; Caturādhyā-yikā I 3–7), into which sounds may stand in initial or final position and into which combination of consonants may occur generally. He rightly exempts metalinguistic references from these rules (I 47 + 66). Tolkāppiyan does not refer to the non-phonemic voicing of intervocalic simple consonants in Tamil, but most scholars now assume that, despite the omission, this voicing is old and goes back to prehistoric times.[18]

The phonemic substitutions in sandhi and word formation are—in accordance with the Prātiśākhya-s and some grammars—seen as 'change' or 'becoming' (I 189 *ākum*, 259 *ākutal*). Occasionally, the arbitrary procedure calls to mind the cynical remark ascribed to Voltaire in which he refers to etymology as a study "where consonants count little and vowels nothing:" *toṇṇūṟu* '90' is obtained from *oṉpāṉ* '9' + *paḵtu* '10' and *toḷḷāyiram* '900' from *oṉpāṉ* '9' + *nūṟu* '100' by ad hoc sound for sound substitutions, although *toṇṇūṟu* obviously contains *nūṟu* '100' and *toḷḷāyiram āyiram* '1000' (I 445 + 463). Another phonemic tour de force instead of proper analysis is the explanation of *Cāttantai* 'Cāttaṉ's father' from *Cāttaṉ + tantai* '[his] father' (*Cātt[aṉ] + [t]antai*) where the occurrence of *entai* 'my father,' *nuntai* 'your father,' etc. should have suggested a bound form *tai* 'father' (I 348).[19]

The number of cases (seven, or eight if the vocative is counted), it seems, was established under the influence of Sanskrit. Instead of one Tamil instrumental

[15] J. FILLIOZAT, JA 229.516, fn. 1, sees the source of the division in *mey* 'body, consonant' and *uyir* 'life, vowel' in Aitareya Āraṇyaka II 2, 4 where body, self and breath are equated with consonant, voice and sibilants; but see H. SCHARFE in German scholars on India (Benares, 1973), p. 272.

[16] A. CHANDRA SEKHAR, IL 16.302–305, and H. SCHARFE in German Scholars, vol. I, p. 270–273. Hence *tū* can be called a 'one-letter word.'

[17] T.P. MEENAKSHISUNDARAM, A history, p. 73; F.B.J. KUIPER, IIJ 2.191–207 and K. ZVELEBIL, Comparative Dravidian phonology (The Hague, 1970), p. 161. C.R. SANKARAN, Phonemics of Old Tamil (Poona, 1951), attempts an explanation on the basis of the Alpha-phoneme theory.

[18] K. ZVELEBIL, Comparative, p. 79–84, with literature.

[19] M.B. EMENEAU, Lg. 29.339–341.

case one might postulate an instrumental ending in -*āṉ*/*āl* and a sociative ending in -*oṭu*/*ōṭu*, while the genitive in -*atu* may not be a case at all but a neuter adjectival form. The cases are named after their most common suffix (the end-ingless nominative is called *eḻuvāy* 'beginning, source') and are assigned standard values.[20] Basic notions like agent, instrument, etc. are mentioned (II 108; II 80 has even *karumam* 'object,' Sanskrit *karman*) but are not the basis of the case syntax. Frequently, one case suffix is said to stand for another and the Tolkāppiyam contains the beginnings of the theory that the case suffixes serve different cases and assume different meanings while they do so (*vērṟumai-mayakkam* 'confusion of case signs').[21] All nouns belong to one of two classes: *uyartiṇai* 'higher class' (for humans) and *aḵṟiṇai* 'non-class'; combining these classes with the grammatical number we get five *pāl* 'groups:' male sing., female sing., human plural, one object, objects. The verb must usually correspond to its coordinated nominative, but in exceptional cases a higher class noun is combined with a non-class verb (II 57). Verb forms are of two kinds: *viṉai* 'action' proper (later called *teriṉilai-viṉai* 'explicit action') and *kuṟippu* 'implied action' or 'nom pronominalisé' which is derived from nouns and has no tense marker.[22] Many verb forms are taught through prototypes using the root *cey* 'do' as a model, inspired no doubt by the use of $\sqrt{kṛ}$ in early Sanskrit grammar (above, p. 127); the same technique is also used for noun formation.[23]

The classification of nominal compounds shows the influence of Mahābhāṣya I 378,24 – 379,3 when Tolkāppiyam II 413 lists those with the stress on the first member, second member, both or neither, corresponding to avyayībhāva, tatpuruṣa, dvandva and bahuvrīhi.[24] More frequently there are six types: reflecting a case relation, reflecting a comparison, verbal compounds, qualifications, additive compounds, and possessive compounds.

Tolkāppiyaṉ does not recognize adjectives as a separate category and this has been used to support the contention that Old Tamil lacked adjectives altogether.[25] Whatever the validity of this claim, Sanskrit grammar has no separate category for adjectives either and the four word classes of Tolkāppiyaṉ (noun, verb, formative element, particle) are clearly inspired by the four classes found in Nirukta I 1, etc.

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[20] *itaṉat-ituv-eṉa* as value of the genitive (II 76) reminds one of Pāṇini V 1 16 *tad asya* . . .

[21] Explained by T. P. MEENAKSHISUNDARAN, A history, p. 101, as late specializations of case signs; he overlooks the same phenomenon in many other languages. K. ZVELEBIL, IJDL 1 (I), p. 110f., denies the equivalence of *avaṉukku pēru eṉṉa* "What is the name for him?" and *avā pēru eṉṉa* "What's his name?" *avaṉukku* here is n o t a genitive.

[22] On the adverbial participle cf. S. AGESTHIALINGOM, IL 29.1–15.

[23] H. SCHARFE in German scholars, p. 277f.

[24] S. VAIYAPURI PILLAI in C. Kunhan Raja Presentation Volume (Madras, 1946), p. 136–138.

[25] M. ANDRONOW, IJDL 1 (II), p. 1–9.

From the time immediately following the Tolkāppiyam we have only fragments of other grammars, notably Avinayam (pre-9th cent. A.D.) which has influenced the author of Naṉṉūl.[26]

In the 11th century the Buddhist petty king Puttamittiraṉ wrote a grammar named Vīracōḻiya-kkārikai in honour of his overlord Vīrarācentira Cōḻaṉ; it was commented upon very soon by Peruntēvaṉār, possibly a disciple of the author. The five sections of a proper compendium (sound/letter, word, subject matter, metrics, poetics[27]) are here independent chapters with 181 verses in *kaṭṭaḷai-kkali-tturai* metre; the first two sections, the grammar proper, have 83 verses. One can put Puttamittiraṉ's contribution under four headings: introduction of the terminology and theory of Sanskrit grammar, frequent references to the Sanskrit loan words in Tamil, observation of linguistic innovations and a greater conciseness of rules.

He introduced the six *kāraka*-s known from Pāṇini's grammar[28] (verse 29) to explain the use of the eight cases. The other case suffixes are added (except in the vocative) to the endingless nominative. The opposition of the unmarked singular versus the marked plural is explained with a 'zero suffix' *cu* (30; probably short for *cuḷi* or *cuṉṉam* 'zero'). The same 'zero suffix' is added in some present tense forms (66) and root nouns (62). The shifting relations of *kāraka*-s and case forms are defined with the help of 23 *upakāraka*-s 'accessories' (38–43): 'agent' has five, 'limit' two, 'instrument' two, 'recipient' three, 'object' seven and 'location' four.[29] The vocative goes with the 2nd person of the verb only, whereas all other cases can go with any person. *Tātu* (Sanskrit *dhātu*) is the verbal stem as seen in the 2nd sing. imperative rather than the root; the similarity with pre-Pāṇinian thought is accidental. From stems, e.g. *uṇ* 'eat,' we can form a causative *(kāritam) ūṭṭu* 'feed,' a second causative *(kārita-kkāritam) ūṭṭuvi* 'cause to feed' and a third causative *(kārita-kkārita-kkāritam) ūṭṭuvippi*. The Tamil infinite is called *tum-anta* in Sanskrit terminology. The implied verb is, if at all, mentioned only in passing (81). The sandhi section notes the forms of negation (*a-, an-, na-*) and guṇa/vṛddhi in Sanskrit words as they have become part of the Tamil language (10–12). The treatment of compounds is influenced by the Vararuci-kārikā-s.[30] The treatment of *tattita (taddhita)* suffixes, true to its synchronistic character, covers both original Tamil and Sanskrit suffixes: *-an* in *valai/y/aṉ* 'fisherman' and *-ēya* in *Vainatēya*

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[26] G. VIJAYAVENUGOPAL, A modern evaluation, p. 6–26; the fragments are collected in M.C. VĒṆKAṬACĀMĪ, Maṟaintu pōṉa tamiḻ nūlkaḷ, 2nd ed. (Madras, 1967), p. 243–256.

[27] *alaṅkāram*; there are references to Daṇḍin's work.

[28] *avati* (35) (Sanskrit *avadhi*) shows the influence of the Buddhist Candragomin (C II 1 81); the statement about the nominative denoting *poruṭmāttiram* (33) 'merely the subject matter' reminds one of Candragomin's II 1 93 *artha-mātre prathamā*.

[29] Cf. *upakāra* in Vākyapadīya III 7, 13f.; 149.

[30] P.S. SUBRAHMANYA SASTRI, JOR 2.105–110.

'son of Viṅatā' (52–54); the historical distinction educated Tamil Brahmins would make does not exist for a naive Tamil speaker.[31]

Puttamittiraṉ has observed phonetic change in local dialects (merger of *ḻ* and *ḷ*, of *ṟ* and *c*, intervocalic *ḻ* > *y*, intervocalic *y* > *c*) and the emergence of the present tense suffix -*kiṟa*-. The palatalization of the initial /n/ if the preceding word ended in *i/ī/ai* (15) is very special—such forms are actually found in the hymns of Appā Tēvāram. Puttamittiraṉ's rules are short and often omit the contexts that condition the application of rules.

At the beginning of the 13th century A.D., the Jain Kuṇavīra-paṇṭitar wrote his Nēminātam (named after the Jain tīrthaṃkara enshrined at Mylapore) as an easy grammar in 95 stanzas in the *veṇpā* meter. It has only two sections: sound/letter and word. In many ways it returns to the concepts of the Tolkāppiyam (the *kāraka* theory is abandoned) but it retains many of the Sanskrit terms and deals briefly with Sanskrit sandhi and ablaut (10f.). Modern forms are recognized along with the old forms *(pēr : peyar, pōtu : poḻutu, -ōṭu : -oṭu* [60]*)*.

This grammar was overshadowed by the Naṉṉūl 'Good Treatise' of another Jain from northwestern Tamilland, Pavaṇanti, who wrote at about the same time under the patronage of the Ganga king Cīyakaṅkaṉ. It has three sections (preface, sound/letter, word) with 462 verses in *nūṟpā* meter. The propaedeutic preface, with its 55 verses, is, in the opinion of U.V. Swaminatha Aiyar,[32] a later addition. The oldest commentator is Mayilainātar (14th cent.).

In his treatment of the linguistic development, Pavaṇanti is more conservative than Puttamittiraṉ and Kuṇavīrapaṇṭitar. While he recognizes the popular palatalizations (e.g. *aintu* > *añcu* '5'), he frequently returns to the Tolkāppiyam. The same generally holds for his terminology, although he does speak of *pakuti* 'base' (Sanskrit *prakṛti*) and *vikuti* 'modification' (Sanskrit *vikṛti*) and once even uses *accu* 'vowel' (Pāṇinian *a*c). Pavaṇanti uses the previous literature eclectically and makes his contribution with a lucid compilation. Among his well coined terms is *cārp-eḻuttu* 'dependent sound' for allophones.

Cuppiramaṇiya-tītcitar (17th cent.) went beyond Puttamittiraṉ in his application of Sanskrit terms and theories in his Pirayōka-vivēkam, and towards the end of the 17th century Vaittiyanāta Nāvalar wrote his Ilakkaṇa-viḷakkam based on the Tolkāppiyam, the Naṉṉūl and their commentaries. In the 18th century, the Italian Jesuit C.J. Beschi (who also wrote two grammars on literary and colloquial Tamil in Latin) composed his Toṉṉūl-viḷakkam in the traditional style based on the Naṉṉūl. He has also left a lasting imprint on the way Tamil is written today by his invention of modified letters for /ē/ and /ō/ to contrast them with /e/ and /o/.

The anonymous Līlātilakam from Kerala is a manual of a peculiar literary style called *maṇi-pravāḷam* 'jewel and coral,' consisting of 151 sūtra-s in San-

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[31] Cf. the treatment of Arabic elements in Persian by Kṛṣṇadāsa (below, p. 197).
[32] Quoted by G. VIJAYAVENUGOPAL, A modern evaluation, p. 4.

skrit and a vṛtti in Malayāḷam, probably by the same author;[33] historical references in the vṛtti point to the years A.D. 1375–1400. There can be little doubt that the term *maṇi-pravāḷam* originally alluded to a kind of traditional South Indian jewelry encrusted with pearls and corals. The Līlātilakam reinterprets the term as referring to a combination of '(red) rubies and (red) corals' to reflect his different notion of the *maṇi-pravāḷam* style as it had developed in Kerala: not a contrastive use of Sanskrit and Dravidian but an amalgamation.[34] The style has been called macaronic, but perhaps this is not correct. Its characteristic is not a supplementation of an author's Sanskrit vocabulary with vernacular stems[35] or a Sanskritized vernacular—it is a real 'hybrid' style with two separate grammatical systems; Sanskrit words (coral) and Tamil words (ruby),[36] with their respective endings, are blended in a sentence, with a preponderance of the vernacular *(bhāṣā)*.[37] The words of the *bhāṣā* are either regional,[38] derived from Sanskrit or identical with Sanskrit.

In its phonology Līlātilakam considers the sounds that are peculiar to Tamil and cannot be derived from either Sanskrit or other vernaculars (Kannaḍa, etc.). The phonemic distinction of *r* and *ṟ* (*uri* 'measure:' *uṟi* 'hoop') is recognized; similarly the distinction of *ñ* and *n* is phonemic in Tamil but not in Sanskrit (p. 79–82).[39] Phonemes typical for Sanskrit (aspirate stops, *ś*, *ṣ*, etc.) have entered the *bhāṣā* through the Sanskrit words introduced by the members of the three upper classes (p. 115f.).

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[33] P.N. ELAMKULAM PILLAI in the preface, p. 14, to his edition of the Līlātilakam (Kōṭṭayam, 1968). It is little noticed that in North India there was a similar mixed style that merged Sanskrit and a Prakrit dialect. Bhoja, in his literary manual Sarasvatī-kaṇṭhābharaṇa II 27, calls it *saṃkīrṇa [jāti]* and compares it to a mixture of sesame and rice grains. Old Javanese poetry, too, mixes the vernacular (Javanese) with Sanskrit (K.M. PANIKKAR in C. Kunhan Raja Presentation Volume, p. 65–69).

[34] In Vīracōḷiya-kkārikai 180 and 142 comm. *maṇi-ppiravāḷam* denotes instead a Sanskritized Tamil diction.

[35] Instances of macaronic style (which was permitted in certain genres) are *kēḻanti* 'crying' from *kēḻuka* 'cry' with a Sanskrit participle suffix *-anti* and *pupūkire* 'they entered' from *pūkuka* 'enter' with a 'Sanskrit reduplicated perfect' form (p. 75f. of P.N. ELAMKULAM PILLAI's ed.). Language switching and macaronic forms are presently characteristic of the conversational style among educated South Indians—only that English has taken the place of Sanskrit.

[36] The author regards his language (Old Malayāḷam; *Kērala-bhāṣā*) as a Drāviḍa language and hence also calls it *Tamiḻ (Tamiḻ* is an *apabhraṃśa* of *Drāviḍa)*; he uses *Drāviḍa* in a narrow sense, comprising only the language of the three kingdoms (Cōḷa, Pāṇṭiya and Kēraḷa) and excluding the languages of the Karṇṇāṭakar and Teluṅkar which other authors of his time would include (p. 34; cf. A. CHANDRA SEKHAR, XXth AIOC vol. II, p. 261–266 and K.M. GEORGE, Studies in Indian Linguistics [Fs. M.B. EMENEAU, Poona/Annamalai, 1968], p. 95–98).

[37] Līlātilakam, p. 32; 37; 57–63 (= sūtra-s 3–10).

[38] These again can be 'pure,' derived from another *bhāṣā* e.g. Kannaḍa) or identical with such a *bhāṣā* (p. 70f.; cf. K. KUNJUNNI RAJA, IL 30.70–72).

[39] C.R. SANKARAN and K.M.N. MENON, BhV 20/21.392–394; L.V. RAMASWAMI AIYAR, IL 25.270–274.

The presentation of case suffixes follows the pattern found in the Tolkāppi-yam and the Naṉṉūl with minor adjustments (genitive *nnu* and locative *il/vil* instead of *atu* and *kaṇ*). Tamil cases should be used according to Tamil syntax, Sanskrit cases according to Sanskrit syntax; the opposite is condemned: the instr. in *kānta-nōkkinōṭ-utsukam*, analogous to Sanskrit *kānta-darśanenôtsukam* 'eager to see the beloved,' is a Sanskritism just like the acc. in *divasatte niṉṟān* 'he stood a day long' (p. 87). Surprisingly, Līlātilakam denies that the *-e* in *avane-koṇṭu* 'with him,' lit. 'having taken him,' is an acc. suffix; it assumes instead a 'union vowel' *(saṃdhāyaka)* *-e-* (p. 88).[40]

A. R. Rājarājavarman (1863–1918)[41] combines in his Kēraḷa-pāṇinīyam[42] (written in modern Malayāḷam) Pāṇini-like description of his mother tongue with an historical insight into the Dravidian nature of the language. The influence of R. Caldwell's Comparative Grammar of the Dravidian Languages and H. Gundert's Malayāḷa-vyākaraṇa is evident, but he avoids simple adoption of Western terminology as much as he avoids a mechanical application of Pāṇinian categories. Rājarājavarman recognizes that the Malayāḷam cases do not correspond one by one to the Sanskrit cases. He separates the 'agency' case in *-āl* from the 'society' case in *-ōṭu* and correctly analyzes 'quasi-case formations' like *atil-ninnu* 'from it' as a loc. *atil* plus *ninnu* resulting in a pseudo-ablative. This grammar has influenced the course of modern Malayāḷam literature, steering a middle course between Sanskritizing and colloquial tendencies evident in the late 19th century writing.

The oldest Telugu[43] grammar would be the Āndhra-śabda-cintāmaṇi (82 to 90 āryā verses = 274 sūtra-s in Sanskrit) if it is correctly ascribed to the poet Nannaya[bhaṭṭu] (11th cent. A.D.); but that is disputed. It was commented on in Telugu prose by Elakūci Bālasarasvatī (c. 1550–1600), Appakavi, (c. 1600–1670) and Ahobalapati (c. 1700). Mulaghatika Ketana (1220–1300) wrote his Āndhra-bhāṣā-bhūṣaṇa in 192 Telugu verses, claiming this to be the first Telugu grammar. A few decades later, Atharvaṇācārya composed (besides a Telugu grammar in Sanskrit verses called the Vikṛti-viveka supplementing the Āndhra-śabda-cintāmaṇi) his Triliṅga-śabdānuśāsana, an essay on the origins of the Telugu language. In the 19th century, the Bāla-vyākaraṇamu by Paravastu Cinnayasūri, in Telugu sūtra-s and arranged topically like the Siddhānta-kaumudī, was so influential that its standards were even applied retroactively to

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[40] The author follows Kumārila (Tantravārttika on I 3, 9) in ridiculing such forced Sanskrit-Tamil etymologies as *cōr* 'rice' from *cora* 'robber' or *vayaṟu* 'stomach' from *vairin* 'enemy' (p. 72f.).

[41] Biographical details in K. KUNJUNNI RAJA, The contribution of Kerala to Sanskrit literature (Madras, 1958), p. 256f.

[42] The first edition appeared in 1871; the 2nd edition of 1892 replaces the sūtra-s with 194 stanzas. An extensive commentary by the author explains and illustrates the rules.

[43] SARVESWARA SHARMA PERI, ZDMG Supplement II, XVIII. Deutscher Orientalistentag, p. 384–389.

editions of Old Telugu poetry. B. Sītārāmācāryulu's Prauḍha-vyākaraṇamu, also called Triliṅga-lakṣaṇa-śeṣamu, supplements the Bāla-vyākaraṇamu and offers a wealth of illustrations. It was published in 1885.

Nāgavarma (c. A.D. 1150) wrote the two oldest grammatical treatises[44] on Kannaḍa (Canarese): the Śabda-smṛti (in Old Kannaḍa, 96 verses) is part of his literary manual Kāvyāvalokana, whereas his Karṇāṭaka-bhāṣā-bhūṣaṇa (280 sūtra-s with a vṛtti, both in Sanskrit) is an independent work; one of its ten sections deals with the *kāraka* concept of semantics. From the 13th century we have Keśirāja's Śabda-maṇi-darpaṇa in Old Kannaḍa (322 sūtra-s in *kanda* metre and a vṛtti); this comprehensive grammar of the Kannaḍa language forms the basis for F. Kittel's Grammar of the Kannaḍa Language.[45] The Karṇāṭaka-śabdānuśāsana by Bhaṭṭākalaṅka Deva is dated A.D 1604. Its concise 592 sūtra-s, the vṛtti and *vyākhyā* are all written in Sanskrit and the author frequently quotes the southern version of the Jainendra grammar.[46] Kṛṣṇamācārya from Śrīraṅgapaṭṭana wrote his Hosagannaḍa nuḍigannaḍi, also titled Grammar of the Modern Canarese Language,[47] at the urging of a British officer. After some years' delay, in 1838, the grammar was printed in Madras where the author lived for many years as a pleader at the courts. Its special merit is the study of the relation of Kannaḍa to Sanskrit and Tamil, which shows the influence of F.W. Ellis. Phonetic correspondences between Tamil and Kannaḍa words allow him to derive Kannaḍa words from Tamil. A weakness is the occasional neglect of Old Kannaḍa which lets him project developments within Kannaḍa into the prehistoric period. The division of the vocabulary into five classes: *tatsama* 'identical [with Sanskrit],' *tadbhava* 'derived [from Sanskrit],' *deśya* 'vernacular,' *anyadeśya* 'from another vernacular' and *grāmya* 'vulgar' shows, perhaps, the influence of Ketana's Telugu grammar.[48]

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[44] Nṛpatuṅga's Kavi-rāja-mārga (9th cent. A.D.), though it contains some grammatical observations, is primarily a manual of poetics.

[45] F. KITTEL, A Grammar of the Kannaḍa Language (Mangalore, 1903). On page 3 of his grammar, KITTEL summarizes the history of grammatical literature in Kannaḍa.

[46] K.B. PATHAK, ABORI 13.27.

[47] T.N. SREEKANTAIYA, Studies in Indian Linguistics [Fs. M.B. Emeneau] (Poona/Annamalai, 1968), p. 322–331.

[48] Cf. above fn. 43.

OTHER SYSTEMS OF SANSKRIT GRAMMAR

A strong case can be made for the importance of princely patronage of gram-
matical studies. We can see three spurts of activity: in the 5th century A.D.
(Candragomin, Bhartṛhari, Devanandin), the 11th to the 13th century A.D.
(Kaiyaṭa, Bhoja, Hemacandra, Kramadīśvara, Anubhūtisvarūpa, Vopadeva,
Puruṣottama, Trivikrama, Dāmodara) and in the 17th century A.D. (Bhaṭṭoji
Dīkṣita and his school, Mārkaṇḍeya, Mīrzā Khān), which coincide with the
Gupta dynasty, the prosperity of the Hindu kingdoms before the Muslim
conquest and the height of the Mughal rule. Both Sanskrit and Prakrit studies
profited from the favourable conditions. The political fragmentation of India
before the Muslim conquest may well explain the creation of several original
(i.e. non-Pāṇinian) systems of Sanskrit grammar. The renaissance of Pāṇinian
studies led by Bhaṭṭoji Dīkṣita (17th cent. A.D.) and his school coincided with
the rise of Mahratta power which eclipsed the traditional patrons of several
grammars; this renaissance swept these schools from the main part of India
into residual pockets in Bengal, Kashmir, etc.

The first of these grammars is the Sarasvatī-kaṇṭhābharaṇa written by
Bhoja, the King of Dhārā in western Madhya Pradesh.[1] As the author says in
his Rājamṛgāṅka, the grammar was composed in A.D. 1042. In eight books of
four chapters each (with more than 6000 rules altogether), he incorporates the
content of Kātyāyana's vārttika-s, the uṇādi-sūtra-s, the word lists, the Dhātu-
pāṭha and the metarules. The arrangement is topical, beginning with definitions
and metarules and ending with Vedic and accent rules. The other main topics
are: primary suffixes, nominal and verbal endings (in the same book!), composi-
tion, feminine formation, secondary suffixes, and sandhi. Occasionally Bhoja
recognizes forms or meanings that were condemned by earlier authorities but
had nevertheless gained acceptance from Sanskrit writers. To give only one
example: while Mahābhāṣya II 399, 21 f. teaches *himelu* in the meaning 'unable
to bear snow,' Sarasvatīkaṇṭhābharaṇa V 2 226 has for it the meaning 'able to
bear snow.' A commentary on this grammar, called Hṛdaya-hāriṇī, was written
by Nārāyaṇabhaṭṭa, possibly a courtier of the king.

The grammar Saṃkṣipta-sāra by Kramadīśvara (12th cent. A.D. or earlier)[2]

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[1] King Bhoja also wrote, under the same title, a manual of poetics.

[2] TH. ZACHARIAE, BB 5.22–63. Kramadīśvara was probably a native of Bengal
[L. NITTI-DOLCI, Les grammairiens prakrits (Paris, 1938), p. 130 and N.N. DAS-
GUPTA IC 5.358].

consists of c. 4000 sūtra-s in eight books. Jūmaranandin (13th cent. A.D.?) added a commentary, Rasavatī (or is it only the revision of an existing commentary?), and the school is often called Jaumara after him.[3] The arrangement is very original: after the sandhi rules the verb is dealt with first; then the nouns are built up from primary and secondary noun formations, through *kāraka* relations, to inflected case forms and finally compounds. The eighth book is set aside for the Prakrits (cf. Hemacandra!).

An unconventional grammar is the Ukti-vyakti-prakaraṇa of Paṇḍita Dāmodara who lived in Benares during the first half of the 12th century A.D. and tutored the sons of the Gāhaḍwāla king Govindacandra. Its 50 kārika-s in *āryā* meter deal in five chapters with verbs, the use of cases, the combination of semantic functions, letter writing in general and the writing of business letters in particular. About half of the appendix on transitive and intransitive verbs and the last two chapters of the author's own commentary are lost in the only existing manuscript. Dāmodara frequently refers to the Kātantra.

Dāmodara's idea is that the colloquial language *(ukti)* of his time, with all its deplorable deviation from Sanskrit, is but Sanskrit in disguise and can acquire dignity as the base for a renewed use of Sanskrit. This is possible because the noun and verb forms of Sanskrit have their correspondences in the colloquial and do not differ in meaning but only phonetically (*yāny eva saṃskṛta-bhāṣāyāṃ sup-tiṅ-antāni padāni tāny evâpabhraṃśe 'pi, na eârthe manāg api bhedaḥ, kevalam akṣareṣu viparyayaḥ*; stanzas 6/7 commentary). A problem arises when sometimes the colloquial, being simpler and more analytical than Sanskrit, offers only insufficient clues as to the correct Sanskrit form: in the distinction of genders, in case morphology and regarding the several past tenses of Sanskrit. The author's use of colloquial forms (e.g. *karaï* 'he shall do' > imperative/optative) as the point of departure for his transfer rules gives us virtually a grammar of the 12th century language of Benares, i.e. Old Kosalī or Eastern Hindī, a forerunner of Tulsīdās' Awadhī by four hundred years.[4] This testimony no doubt constitutes for us the book's greatest value. The two chapters on letter writing stand in an old tradition as the *śāsanâdhikāra* of the Arthaśāstra II 10 shows.[5]

Vopadeva (late 13th cent. A.D.), a member of a family of physicians in the service of the Yādava kings in Maharashtra, is the author of the Mugdhabodha

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[3] The subcommentary by Goyīcandra (on the books I to VII only) is renowned for its lucid treatment of syntax in its *kāraka* section.

[4] The Mugdhāvabodhamauktika (written in A.D. 1394) similarly supplies us indirectly with a sketch of Old Gujerati grammar (G.A. GRIERSON, JRAS 1902. 537–555); cf. Sādhusundara Gaṇi's Uktiratnākara (ed. JINAVIJAYA MUNI; Jaipur, 1957) written in the time of Akbar with material from Rajasthani and neighbouring dialects.

[5] Cf. the Lekha-paddhati, ed. C.D. DALAL and G.K. SHRIGONDEKAR (Baroda, 1925), and the remarks of O. STEIN, ZII 6.45–71 and H. SCHARFE, Untersuchungen zur Staatsrechtslehre des Kauṭalya (Wiesbaden, 1968), p. 68–75.

(1184 sūtra-s in 26 sections). Besides this grammar, a root dictionary, etc., he has to his credit works on medicine, *dharmaśāstra* and literature. The author's religious fervour is evident in the examples of his grammar that use the sacred names of Viṣṇu and Śiva whenever possible.[6] Vopadeva's most striking innovation is his algebraic terminology that goes far beyond that of Pāṇini and Devanandin; even the sound table has been altered to fit the peculiar design of the grammar. The author's originality, in the long run, was detrimental to his success: literary commentaries written with references to Pāṇini's grammar and the grammatical classics themselves were closed books to the students of the Mugdhabodha. The Mugdhabodha aims at brevity and simplicity; inflection rules are illustrated with partial paradigms, unusual forms and the Vedic language including the accents are all but neglected.[7] The arrangement of topics is derived from the Kātantra and Dharmakīrti. As Vopadeva could formulate his rules to suit his arrangement (giving the *kāraka* relations their due!), one can imagine that the Mugdhabodha only narrowly lost out to the Siddhānta-kaumudī and the Pāṇinīya-s.

The origin of the Sārasvata-vyākaraṇa is shrouded in mystery; for the 700 Sarasvatī-sūtra-s[8] which, according to one tradition, were revealed by the goddess Sarasvatī to Anubhūtisvarūpācārya (13th–14th cent. A.D.) were, according to another tradition, but a later creation.[9] The leading text of the school is Anubhūtisvarūpācārya's Sārasvata-prakriyā (1494 sūtra-s). In the preamble the author claims: *Sārasvatīm ṛjum kurve prakriyāṃ nātivistarām* "I straighten out the procedure that goes back to Sarasvatī without undue prolixity." This statement is incompatible with the tradition of divine revelation to Anubhūtisvarūpācārya. Since Anubhūtisvarūpācārya does not refer to the 700 Sarasvatī-sūtra-s (nothing is said about doubling their number!), his words can be taken in either of two ways: *sarasvatī* may be used poetically as a synonym for 'speech,' meaning that the author simplified the complex structure of the language; or it could refer in an abbreviated form to an older grammar, namely the Sarasvatī-kaṇṭhābharaṇa (though at first glance no special relationship between these two works is visible).[10] In his arrangement Anubhūtisvarūpācārya follows Dharmakīrti and Vopadeva very closely but stays within the conventional terminology. The Sārasvata grammar enjoyed for some time great popularity and was patronized by both Hindu and Muslim princes. It is striking

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[6] Vopadeva was outdone in this respect by later sectarian grammarians, e.g. the authors of the two Harināmāmṛta-s, Rūpagosvāmin and Jīvagosvāmin (15th and 16th cent. A.D.) who use God's names even for technical expressions (e.g. *Puruṣottama* = 'long') as the mere uttering of the names was regarded as beneficial.

[7] As happened with the Kātantra, later followers supplemented the work with further rules to cover every odd form.

[8] These were commented on by Rāmacandrāśrama (not later than the 16th cent. A.D.) in his Siddhānta-candrikā.

[9] HARAPRASĀDA SHĀSTRĪ, A descriptive catalogue (Calcutta, 1931), p. 136.

[10] For yet another explanation see YUDHIṢṬHIR MĪMĀṂSAK, Saṃskṛt vyākaraṇ kā itihās, I, p. 627.

that all earlier authors of the school were *saṃnyāsin*-s, religious devotees who renounced the world; it would seem that a simplified grammar met the *saṃnyā-sin*'s need of a working knowledge of Sanskrit just as it satisfied the educational desires of the ruling class. The great number of textbooks in the form of sub-commentaries written by court pandits shows that the pressure to 'publish or perish' existed long before our time.

In search of prestige the rulers of Mithila and of Cooch Bihar commissioned the Saupadma grammar by Padmanābhadatta (14th cent. A. D.) and the Prayoga-ratna-mālā by Puruṣottama (16th cent. A. D.). Efforts to teach Sanskrit by the 'direct method' produced conversation manuals: Varadarāja's Gīrvāṇa-pada-mañjarī and Kāśīnātha's Pradīpa;[11] but we must also consider that traditional pandits probably taught Sanskrit by the direct method since time immemorial, even without specially devised conversational manuals.

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[11] HARAPRASĀDA SHĀSTRĪ, A descriptive catalogue, p. cxvii f.

GRAMMARS OF THE MIDDLE INDO-ARYAN DIALECTS

For the educated Brahmin, the 'common' *(prākṛta)* language was meaningful only insofar as it reminded him of the correct Sanskrit form familiar to him; but common speakers would understand the Prakrit words immediately and would even assert that for them the Sanskrit forms conveyed meaning only through the Prakrit forms they brought to their mind (Vākyapadīya I 151–155). The poet Vākpati (8th cent. A.D.) thus regards Prakrit as the source of all languages, including Sanskrit:

> *sayalāo imaṃ vāyā visanti etto ya ṇenti vāyāo*
> *enti samuddaṃ ciya ṇenti sāyarāocciya jalāiṃ*
> Gaüḍavaho **93**

"All languages enter this [Prakrit] and all languages take their start from this: the waters enter nowhere but into the sea, and start from nowhere else than from the sea."

Conversely, Hemacandra in his commentary on his own rule VIII 1 1 explains that "Sanskrit is the base; what originates in it or comes from it is base-derived" *(prakṛtiḥ saṃskṛtam; tatra bhavaṃ tata āgataṃ vā prākṛtam).*

It is hard to believe that the early Jains and Buddhists, who pioneered the translation of canonical texts from one vernacular to another, should not have given any thought to grammar; but other than occasional remarks in their scriptures they have left us no systematical treatises.

The oldest pieces of Prakrit grammar are perhaps the fragments preserved in chapter XVII of the Bharata-Nāṭyaśāstra (hardly later than the first centuries A.D.). The first fragment, the stanzas 6 to 9 composed in the popular *āryā* meter, gives phonemic rules for the conversion of Sanskrit words into Prakrit; the most interesting feature of these stanzas is that they are written in Prakrit themselves.[1] In the Sanskrit stanzas that follow (10 to 23), the examples are displayed more prominently than the rules; the rules are abstracted from the examples. Evidently the Nāṭyaśāstra, being a manual for actors, was less interested in comprehensive grammatical rules than in a number of characteristic expressions. In the stanzas 25 to 56, Sanskrit and the various vernaculars are assigned to stage personalities: gods and brahmins speak

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[1] Such a tradition of grammatical rules in Prakrit may have existed among the Jains (A. N. UPADHYE, ABORI 13.45f.); a few such rules are quoted in later texts.

Sanskrit, employees of the royal harem Māgadhī, and guild masters Ardhamā-
gadhī, etc. On a different level again, stanzas 57 to 61 advise the actor to play
persons from Bihar with an abundance of /e/ sounds, people from Sindh with
many /u/ sounds in their speech, etc.: a superficial mimicking of the real dialects.

A much more detailed account of Prakrit is the Prākṛta-prakāśa (or Prākṛta-
lakṣaṇa-sūtra; title uncertain) attributed to the elusive author Vararuci; the
eight books (with altogether about 420 sūtra-s in Sanskrit) in fact deal only
with Mahārāṣṭrī. The great number of permitted duplicates and the striking
correspondences with forms occurring in Hāla's collection, Sattasaī (2nd cent.
A. D.), suggest that the rules were abstracted from a similar collection of popular
songs with regional grammatical differences.

In the 7th century A. D., the Prākṛta-prakāśa was commented on by the
rhetorician Bhāmaha whose text however includes two additional books: one
on the Paiśācī dialect and the other on Māgadhī, both of which are unknown to
the other and much later commentators of the text.[2] Some time after Bhāmaha,
book V was split into two when yet another book (on Śaurasenī) was added,
making a round number of 12 books.

The Prākṛta-prakāśa evidently presumes a knowledge of Pāṇini's grammar,
and lists, without any introduction, transfer rules that allow the connoisseur
of Sanskrit to form correct Mahārāṣṭrī poetry. The starting point is the Sanskrit
language in its pre-use stage: the suffix of the nom. sing. is still s^u, that of the
gen. sing. still $^n as$ when they are replaced by ō and ssa. Instead of dative
suffixes the genitive suffixes are used and plural forms replace dual forms. The
difficulty of formulating precise transfer rules leads to an excessive use of
'often' and 'or' in all Prakrit grammars; the practice has its forerunner in
Pāṇini's treatment of Vedic forms (bahulaṃ chandasi Pāṇini II 4 39, etc.).

An 'eastern school' of Prakrit grammarians expanded Vararuci's opus closely
following, in the main part, Vararuci's rules for Mahārāṣṭrī and then dealing
with the stage Prakrits similarly to the Nāṭyaśāstra; they add a treatment of
Paiśācī and Apabhraṃśa. The oldest of the grammars preserved[3] is Puruṣot-
tama's[4] Prākṛtānuśāsana (12th cent. A. D.) preserved in a single manuscript;
Mārkaṇḍeya wrote his Prākṛta-sarvasva in the 17th century or earlier, remark-
able for his philological acumen and reliability; Rāmaśarman's Prākṛta-kalpa-
taru (17th cent.) again survives in a single manuscript. These authors lived at a
time in which direct observation of spoken Prakrits can be ruled out; they had
to rely instead on the grammatical tradition (which they often misunderstood)
and on a study of available manuscripts of the Prakrit classics (with a broad

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[2] Vasantarāja's Prākṛta-saṃjīvanī (14th–15th cent.), Sadānanda's Prākṛta-subo-
dhinī, anonymous Prākṛta-mañjarī, Nārāyaṇa Vidyāvinoda's Prākṛta-pāda and
Rāmapāṇivāda's Vṛtti (18th cent.).

[3] The frequent references to the teachings of Śākalya suggest that an author of
this name wrote a Prakrit grammar that is now lost (L. NITTI-DOLCI, Les gram-
mairiens prakrits, p. 95).

[4] He is also the author of a work on Pāṇini's grammar (above, p. 174).

spectrum of variant readings). The problem of how far we should go in correct-
ing the Prakrit literature to conform with the rules of the grammarians is not
easy to decide; the manuscript fragments of some dramas found in the sands
of Turkestan are actually earlier than any of these grammarians.

The Jain Hemacandra Sūri (A.D. 1089–1172) taught the Prakrits through
transfer rules as did Vararuci; it was only logical that he offered these 1119
rules in the eighth and last book of his Sanskrit grammar (above, p. 169).[5] The
transfer rules follow the rules on Sanskrit grammar and close with the statement
that in all remaining respects Prakrit is like Sanskrit *(śeṣaṃ saṃskṛtavat
siddham)*. Hemacandra's formulations depend heavily on Vararuci, with many
additional rules on the 'basic Prakrit' (i.e. Mahārāṣṭrī) inserted here and there.
He is the first author we know of to state the obvious rule that a long vowel
before a consonant cluster is shortened in the transformation: VIII 1 84 *hrasvaḥ
saṃyoge*. Hemacandra's treatment of Māgadhī, Paiśācī and Śaurasenī shows the
influence of a lost treatise of which we have a reflection in the commentary of
the Jain Namisādhu (A.D. 1069) on Rudraṭa's Kāvyālaṃkāra II 12. More
original are his contributions concerning the language of the canonical Jain
scriptures, the Ardhamāgadhī, which he calls *ārṣa* '[language] of the saints';
almost all the special forms have been verified from the texts. Apabhraṃśa too
receives a detailed treatment, illustrated with many stanzas called *dohā* taken
from then current poetry. Differing from other Prakrit grammars, Hemacan-
dra's Apabhraṃśa appears more as one well defined language, even though
dialectal differences can be found in the illustrations; it is a forerunner of Old
Gujerati.[6]

Kramadīśvara (12th cent. A.D. or earlier) also treated Prakrit in the eighth
book of his Sanskrit grammar, the Saṃkṣiptasāra (above, p. 187f.). But the
eighth book has not enjoyed the same popularity as the rest of the work and
manuscripts of it are extremely rare. Kramadīśvara based his work on Vararuci,
whose description he tries to shorten in several ways. The optional replacement
$a > i$ taught by Vararuci for several words (I 3 *id iṣat-pakva-svapna-vetasa-
vyajana-mṛdaṅgāṅgāreṣu*) is abbreviated to VIII 1 2 *it pakvâdeḥ* "/i/ [for the /a/] in
pakva, etc." (e.g. *pikka* as well as *pakka* 'ripe'). It is interesting to see that
Hemacandra VIII 1 47 takes a middle position: he lists three nouns and avoids
the use of 'etc.' Kramadīśvara VIII 2 6f. joins Hemacandra VIII 1 180 in
recognizing the *ya-śruti*, i.e. a hiatus-removing /y/ inside a word (e.g.*nagaram >
naaram > nayaram*). The few obvious similarities and deep differences do not
yet allow any inference on the relative chronology of Kramadīśvara and
Hemacandra.

The Prākṛta-śabdānuśāsana of the Jain Trivikrama[7] (13th cent. A.D.), with

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[5] This book has its own two commentaries by the author; the shorter one is
called Prakāśikā.

[6] The gap between Hemacandra and the oldest Gujerati texts is bridged by the
material found in the Mugdhāvabodhamauktika (above, p. 188, fn. 4).

[7] A.N. Upadhye, BhV 2, 2, p. 160–176.

the author's own vṛtti, consists of c. 1036 sūtra-s with a technical terminology that includes newly defined determinatives. Some scholars believe that the sūtra-s are metrical and should be so written; but as sūtra-s often straddle the assumed metrical divisions, this does not seem to be a good idea. Some commentators on the text suggest that the sūtra-s are not really Trivikrama's but Vālmīki's. But there seems to be no doubt that both sūtra-s and commentary depend heavily on Hemacandra, and the author himself acknowledges his debt to his predecessors down to Hemacandra, thus excluding any intermediary. The third book of Trivikrama's work is valuable because of the many Apabhraṃśa stanzas quoted in it.

Rishikesh Sastri's Prākṛta-vyākaraṇa, with English translation (Calcutta, 1883), treats basically Mahārāṣṭrī and refers to other dialects in footnotes. Rules are formulated for multiple application only, whereas unique developments are listed in the tables. Inflection rules are supplemented by paradigms under the influence of European grammars. Probably also a recent work is Caṇḍa's Prākṛta-lakṣaṇa, although its editor, A. F. R. Hoernle (Calcutta, 1880), believed he had a text of the 3rd century B.C.; no manuscripts of it have been found that are earlier than the second half of the 19th century A. D.

It is possible that Buddhaghoṣa (5th cent. A.D.), the Buddhist commentator of Pāli texts, refers to a lost Pāli grammar when he discusses grammatical questions. But the first Pāli grammar we have is the Kaccāyana-vyākaraṇa written between the 5th and the 11th centuries A. D. in the Pāli language; the oldest known commentary on it is Vimalabuddhi's Nyāsa (11th cent. A.D.).Its four *kappa*-s, with c. 675 *sutta*-s, deal with phonology, nouns (including *kāraka*-s, secondary word formation and compounds), verbs, and primary word formation. The author relied on the Aṣṭādhyāyī as well as the Kātantra.[8] The Sanskrit influence is visible in the recognition of a separate dative case even though its forms are identical with those of the genitive; only rarely do original dat. sing. forms in -*āya* occur. The different case suffixes of the various noun classes are derived from a set of standard suffixes by substitutions. Among the several recasts of this grammar, the Rūpasiddhi of Buddhappiya Dīpaṃkara (late 13th cent. A.D.) is the most prominent; commentaries on Kaccāyana's grammar exist both in Pāli and in Sinhalese.[9]

Aggavaṃsa from Arimaddana in Burma was the teacher of King Narapati Sithu of Pagan. He composed his voluminous Saddanīti in the year A. D. 1154 and a copy of it was soon taken to Ceylon. The work was well received in both countries. Aggavaṃsa largely follows Kaccāyana but achieved a much more

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[8] R. O. FRANKE's attempt to show influence of the Kāśikā (Geschichte und Kritik der einheimischen Pāli-Grammatik und -Lexicographie, p. 17–19) is not convincing. Illustrations like *pāṭhayati māṇavakaṃ vedam*, which the Kāśikā on I 4 52 copies from Candravṛtti on II 1 44, are clearly older than the Buddhist Candragomin and cannot prove FRANKE's point even if they should have influenced Kaccāyana's formulation of rule II 6 30.

[9] A rich bibliography on Pāli grammar is given by D. L. BARUA, IC 15. 194–202.

complete description of Pāli than the latter. The work consists of three main parts: the Padamālā, a detailed morphology of the 'word and paradigm' type beginning with the verb (cf. Kramadīśvara!) followed by noun, pronoun and numeral; the Dhātumālā, a root list[10] with a comprehensive survey of the attested verbal and nominal derivatives and compounds (cf. Maitreyarakṣita's Dhātupradīpa!); the Suttamālā, which in 1347 *sutta*-s covers the same ground as the two previous parts, but this time in the 'item and process' manner, closely following Kaccāyana.[11]

Moggallāna from the Thūpārāma monastery in Anurādhapura wrote his Māgadha[12] Saddalakkhaṇa during the reign of Parakkamabāhu I (A.D. 1153–1186). In six *kaṇḍa*-s he treats phonology and metarules, noun inflection, compounds, secondary noun formation, secondary roots and primary noun formation, and verb inflection. The influence of Candragomin[13] is evident in the avoidance of several technical terms, e.g. the *kāraka*-s; the syntactic rules II 2–42 are strikingly similar to Candragomin's II 1 43–98. In addition to Moggallāna's own commentaries *vutti* and *pañcikā* (the latter is lost), there is a large body of literature on this system, both in Pāli and in Sinhalese.

Though the specialists evidently knew Sanskrit, it was less important for the Buddhist communities of the Theravāda tradition than Pāli. It is not surprising therefore that the Pāli grammarians did not derive this canonical language from Sanskrit; nor did they teach it in a transfer grammar based on Sanskrit. Though they depended totally on the known body of Pāli literature, their subsequent influence on the canonical texts must be considered in any linguistic-philological study of the Theravāda canon.

A Sinhalese classic is Vedeha Thera's (?) grammar of the Old Sinhalese poetic style (Eḷu), the Sidat-saṅgarāva, written in Eḷu in the 13th century A.D. Besides Pāṇini, Kātantra and Moggallāna, it is influenced by the Tamil grammar Vīracōḷiyam and, like the latter, includes the elements of poetics. In the traditional Tamil way consonants are likened to the 'body' and vowels to 'life' (*gatakuru* and *paṇakuru; gātrâkṣara* and *prāṇâkṣara* in Sanskritized Sinhalese).[14]

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[10] On an old Pāli root list cf. R. O. Franke, Album [Fs. H.] Kern (Leiden, 1903), p. 353–356. The root list attached to Kaccāyana's grammar is a later addition.

[11] Aggavaṃsa breaks up the long chapter on nouns, and treats *kāraka*-s, compounds and secondary noun formation separately. The *kāraka*-s (with the sole exception of *okāsa* 572) receive dual values (548–555), e.g. *yo kurute yo vā jāyati so kattā* ,,Who does or who is born is an agent"; Kaccāyana has only two such formulations (Kaccāyana II 6 1 and 6).

[12] With the Buddhist tradition Moggallāna believes Pāli to be the language of Magadha.

[13] R. O. Franke, JPTS 1902–1903. 70–95.

[14] C. E. Godakumbura, BSOS 11. 837f.; H. Günther, ZDMG 96. 84–97.

THE PĀRASĪ-PRAKĀŚA

Kṛṣṇadāsa was commissioned by Emperor Akbar (ruled 1556–1605) to write a grammar and glossary of the Persian language as spoken in India; both works are called by the same name, Pārasī-prakāśa. Kṛṣṇadāsa is otherwise known for his Maga-vyakti, a work on the Iranian immigrants who had joined the Hindu social system as Maga Brahmins, and was possibly himself a member of that community.[1] His grammar is topically arranged in a manner similar to the Kātantra, etc.; the only peculiarity is a list of Persian numerals inserted into the first chapter. The grammar teaches Persian (in c. 480 rules in Sanskrit with the author's own commentary) as a transfer grammar (Sanskrit > Persian).[2] It differs from earlier transfer grammars (Sanskrit > Prakrit) where the rules often correspond to an historical development; in the Pārasī-prakāśa hardly any rules can be interpreted historically as neither language is derived from the other. As both languages go back to Indo-Iranian and as Sanskrit has stayed closer to the original synthetic structure than analytic modern Persian, the transfer rules often amount to simple reductions: a multitude of Sanskrit forms usually corresponds to a single Persian form. For the suffix s^i of the nominative singular, Persian substitutes 'zero' (I 1), for all accusatives -rā (II 5), and, instead of an instrumental suffix, the word bā 'with' is put before the noun in all numbers (II 6). The use of these cases is determined by the kāraka-s.

For Sanskrit roots two Persian verbal bases are substituted: one for the present tense and one for the past, e.g. √bhū > śavad/śud (VII 16–27),[3] √dṛś > vinad/did (VII 50f.), etc. Primary noun suffixes are attached to the present tense base with the exception of the infinitive which is formed from the past (śud-an, did-an VIII 22).[4] In the chapter on secondary noun formation, Kṛṣṇadāsa lists, besides evident suffixes, bound nouns in composition: śāhzāde

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[1] Prominent among his examples are āftāb 'sun' (so important to the Maga Brahmins who worshipped the sun) and Akbar śāh.

[2] Z. S. HARRIS, IJAL 20. 259–270. The point of departure is Sanskrit in its pre-use stage (cf. above, p. 192).

[3] The historical counterpart of √bhū on the other hand appears as one of the substitutes for √as; present hast, past būd (VII 40–47).

[4] Historically speaking, the stem finals /d/ are remnants of the personal ending rather than part of the stem; we would therefore analyze śu-dan, di-dan. Kṛṣṇadāsa's goal, on the other hand, was the most simple and elegant set of transfer rules possible.

'son of a king, prince,' *gul-i-stān* 'rose garden.' The abundance of Arabic loan words in Persian suggested grammatical patterns of their own and thus Kṛṣṇadāsa derives agent nouns like *'ādil* and *hākim* from *'adal* 'justice' and *hukm* 'command' with the help of a suffix a^n that entails a vocalism $\bar{a}$-i (VI 9f.).

In the verb inflection, again the analytical form of Persian contrasts with the rich morphology of Sanskrit. A simple example of the transfer rules is the formation of the 3rd sing. present: $\sqrt{bh\bar{u}} + ti^p >$ *śavad* $+ ti >$ *me-śavad* 'he becomes' (VII 16f.). Because of the peculiar base form for the present tense base, the causative affix is taught as an infix: VII 238 *dhātoḥ preraṇe 'na^m* "-*ana*- is inserted into the root to denote causation," e. g. $\sqrt{d\bar{a}}$ 'give' $>$ *dihad* $+ ana^m >$ *dihānad* 'cause to give.' The last rule of the grammar states, as do so many Prakrit grammars, that substitutes, affixes, losses, etc. apply freely beyond the rules given.

It is hard to believe that this grammar was intended to teach Persian to Sanskrit pandits. It was rather a part of Akbar's project to show the equivalence of Indian and Muslim traditions, demonstrating that Persian, the language of the Delhi court, could be treated as a transfer from Sanskrit, comparable to the Prakrits.

GRAMMARS OF THE NEW INDO-ARYAN LANGUAGES

Because of the Indian preoccupation with the classical languages and perhaps partly due to a lack of patronage in times of foreign domination, grammatical descriptions of several modern Indian languages were first undertaken by European missionaries and scholar-administrators. The need was greatest in the early phases of European influence and decreased later as the local people acquired a working knowledge of the European language spoken by their superiors. These works, e.g. Father Stephens' Konkani grammar (16th cent. A.D.),[1] J.J. Ketelaer's (i.e. Kettler) Hindostani grammar (1715)[2] and Manoel da Assumpçam's Bengali Grammar (1734),[3] fall outside the present survey.

But already during the rule of Aurangzēb and, we can further specify, prior to the year 1676, Mīrzā Khān Ibn Fakhru-d-Dīn Muḥammad wrote a short grammar of Braj bhāṣā as part of the introduction to his literary compendium Tuḥfatu-l-Hind 'A present from India,' written in the Persian language. His intention was to introduce the art of Braj poetry to the Muslim ruling class. He took great care in assigning the appropriate Arabic letter to Indian sounds, though his phonetic terminology is not scientific; he differentiates *d*, *dh*, *ḍ* and *ḍh* as 'lighter d', 'heavy d', 'd rendering itself heavy' and 'heaviest d'. In the morphology he always mentions alongside the Persian term its Indian equivalent and spells it out meticulously. It is interesting that these terms are not in Sanskrit form but in a vernacular garb: *sandachhar* (Sanskrit *sandhyakṣara* 'diphthong'), *binjan* (*vyañjana* 'consonant'), *purling* (*puṃliṅga* 'masculine'), *astrīling* (*strīliṅga* 'feminine'), *kirt* (**kṛta* 'object'), etc. The author differentiates between those feminine nouns that have a masculine counterpart (e.g. *hastanī* 'female elephant') and those 'irregular ones' that do not (e.g. *agan* 'fire'). Many instances of old composition he regards as cases of suffixation, e.g. *bhūp* 'king,' originally a compound of *bhū* 'earth' and *pā* 'rule' is analyzed as *bhū* 'earth' with a suffix *-p* indicating 'lordship.' Another work in the Islamic tradition is Inshā Allāh Khān's Urdū grammar Daryā-e-Laṭāfat (A.D. 1802) written in Persian.

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[1] H. SALDANHA, BSOS 8.718–720. The grammar was not published until 1640.

[2] J.PH. VOGEL, BSOA 8.817–822.

[3] Manoel da Assumpçam possibly was not the sole author of the grammar, but edited the work of others (MUHAMMAD A.R. KHONDKAR, The Portuguese contribution to Bengali prose, grammar and lexicography, Doctoral dissertation, University of London, 1971, p. 244–246).

The author of the first Marathi grammar is Veṅkaṭa Mādhava, a lecturer of Marathi at the Fort St. George College in Madras. His three works on Marathi (as it was spoken by the large Maratha colony in Tanjore!) exist only in the autographs of the author or his assistant Bhīma Paṇḍita. The Mahārāṣṭra-prayoga-candrikā (c. 1827) has 227 sūtra-s in Sanskrit and is accompanied by a Sanskrit commentary, a Marathi commentary and Marathi illustrations; the Sanskrit section is written in Devanāgarī script, the Marathi in Moḍī script. The grammar, which generally follows the Siddhānta Kaumudī in its design, was probably meant to introduce Marathi to the neighbouring Tamil speakers.[4]

The Kashmirian Īśvara Kaula (1833–1893) wrote his Kaśmīra-śabdāmṛta in 1875 and revised it in 1879. As his object was to describe the Hindu dialect of Shrinagar, he eschewed the use of the Arabic script and created a modified Devanāgarī script through the addition of diacritical marks. The phonemes of Kāśmīrī are classified as *prasiddha* 'known [from Sanskrit]' and *aprasiddha* 'unknown'; several phonemes of Sanskrit on the other hand are not found in Kāśmīrī (introduction). The work consists of 778 sūtra-s in nine books and a commentary in which examples are often translated into Hindi. Īśvara Kaula follows the terminology and arrangement of the Kātantra, with a few interesting innovations: e. g. the three persons are characterized as *a-śrotṛ* 'non-hearer' = he, *śrotṛ* 'hearer' = you, and *vaktṛ* 'speaker' = I (VIII 1 3) and the agent of the causative is defined as "the imposition of being an agent to somebody else's action in case of default of the proper agent" (VIII 4 1 *svâkartṛtvâvasare para-kriyā-kartṛtvâropo hetuḥ*). The Dhātupāṭha, here rather a list of verb stems than of roots (with an additional list of roots that have only nominal derivatives), is incorporated into the text as book VII.

Under the influence of Western linguists a new school of historical and descriptive Indian linguists developed early in this century, culminating in the founding of the Linguistic Society of India (1928). Soon after the attainment of Indian independence, the Language Project at Poona (1954–1959), supported by the Rockefeller Foundation, gave the necessary stimulus for expanded institutional research in university departments and advanced centres which were generously supported by the University Grants Commission. The influence of Bloomfieldian and Chomskyan linguistics has occasionally led to a neglect of the historical-literary implications and the abandoning of the Indian concept of *vāg-arthāv iva sampṛktau* 'fused like word and meaning' (Raghuvaṃśa I 1). But these problems as well as the achievements of contemporary Indian linguists are no longer specifically Indian and belong rather in a history of modern linguistics.[5]

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[4] S. D. LADDU, ABORI 53.260–266.

[5] For the more recent development cf. Current trends in linguistics, edited by TH. SEBEOK, vol. V (The Hague, 1969).

ABBREVIATIONS

ABORI	Annals of the Bhandarkar Oriental Research Institute
AIOC	All India Oriental Conference
Ait.	Aitareya
AJPh	American Journal of Philology
ALB	Adyar Library Bulletin
AO	Acta Orientalia (Leiden)
APAW	Abhandlungen der Preussischen Akademie der Wissenschaften
Ār.	Āraṇyaka
As. St.	Asiatische Studien
BB	Bezzenbergers Beiträge
BEFEO	Bulletin de l'École Française d'Extrême-Orient
BhV	Bhāratīya Vidyā
Br.	Brāhmaṇa
BSOS/BSOAS	Bulletin of the School of Oriental [and African] Studies
BSPS	Bombay Sanskrit and Prakrit Series
Cv	Candravṛtti
DAWW	Denkschriften der Kaiserlichen Akademie der Wissenschaften, Wien
EVP	Études védiques et pāṇinéennes
E&W	East and West
FoL	Foundations of Language
Fs.	Festschrift
GGA	Göttinger Gelehrte Anzeigen
GSAI	Giornale della società Asiatica Italiana
IA	Indian Antiquary
IC	Indian Culture
IF	Indogermanische Forschungen
IHQ	Indian Historical Quarterly
IIJ	Indo-Iranian Journal
IJAL	International Journal of American Linguistics
IJDL	International Journal of Dravidian Linguistics
IL	Indian Linguistics
JA	Journal asiatique
JAOS	Journal of the American Oriental Society
JAS (Calc.)	Journal of the Asiatic Society (Calcutta)
JBORS	Journal of the Bihar and Orissa Research Society
JDLCU	Journal of the Department of Letters, University of Calcutta
JIBS	Journal of Indian and Buddhist Studies
JIPh	Journal of Indian Philosophy
JOIB	Journal of the Oriental Institute, Baroda
JOR	Journal of Oriental Research (Madras)
JPTS	Journal of the Pali Text Society
JRAS	Journal of the Royal Asiatic Society
JUP	Journal of the University of Poona, reprinted in PCASS
JVS	Journal of Vedic Studies
KSS	Kashi Sanskrit Series

KZ	(Kuhn's) Zeitschrift für vergleichende Sprachforschung
Lg	Language
Mbhāṣ.	Mahābhāṣya
Mém. Acad. Imp.	Mémoires d'Académie Impérial St. Petersburg
MW	M. Monier-Williams, Sanskrit-English Dictionary
NGGW	Nachrichten von der Gesellschaft der Wissenschaften, Göttingen
NIA	New Indian Antiquary
OLZ	Orientalistische Literaturzeitung
Pāṇ.	Pāṇini
PCASS	Publications of the Centre of Advanced Study in Sanskrit (reprinted from JUP)
PhE&W	Philosophy East and West
Phil. Ind.	Philologica Indica (Fs. H. Lüders)
Pr.	Prātiśākhya
Saṃh.	Saṃhitā
Śat.	Śatapatha
SAWW	Sitzungsberichte der Akademie der Wissenschaften, Wien
SHAW	Sitzungsberichte der Heidelberger Akademie der Wissenschaften
SPAW	Sitzungsberichte der Preussischen Akademie der Wissenschaften
ŚS.	Śikṣā-saṃgraha
Tait.	Taittirīya
TAPS	Transactions of the American Philosophical Society
Up.	Upaniṣad
vārtt.	vārttika
VIJ	Vishveshvaranand Indological Journal
VP	Vākyapadīya
WZKM	Wiener Zeitschrift für die Kunde des Morgenlandes
WZKSA/WZKSOA	Wiener Zeitschrift für die Kunde Süd[- und Ost]asiens
ZDMG	Zeitschrift der Deutschen Morgenländischen Gesellschaft
ZII	Zeitschrift für Indologie und Iranistik

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INDEX

A. Indian Terms

B. Indian Authors

C. Indian Texts

D. Miscellany