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LITERACY AND RATIONALITY IN ANCIENT INDIA

(*Asiatische Studien / Études Asiatiques* 56(4), 2002, 797-831)

The problem

The production and use of written texts in classical Greece began to increase rapidly around the early fifth century B.C.E., and accelerated tremendously during the course of the fifth and fourth centuries. Complete illiteracy must have been common in the early fifth century, but much less so in the late fourth. During a period of barely two centuries literacy had become wide-spread, so one can reasonably and fruitfully ask what transformations of thought and expression this entailed.

The situation in India is entirely different. We are in no position to determine a period of two centuries during which literacy became an inalienable part of society, so that the effects of this change might then be studied. We do know approximately when writing began to be used in India, but we do not know how wide-spread its use then was. The surviving literature, though voluminous, rarely mentions reading and writing, and where it does, it sometimes does so in order to give expression to the inferior status of these activities. A number of texts were handed down orally, as some are to this day, and it is hard to find out exactly which texts fell into this category at any particular period. The Brahmins, sometimes referred to as the literate caste, were in reality primarily ritual specialists who knew their sacred texts by heart. They could accomplish their ritual tasks without literacy, and there can be no doubt that many learned Brahmins were strictly speaking illiterate. In this situation it is not easy to study the effects of literacy.

In this article I will concentrate on a feature that has been claimed by some to have arisen in India independently of literacy, viz. rationality. The discussion of rationality and its relation to literacy in Indology has been inspired by the anthropologist Jack Goody who, in a number of publications has presented a 'great divide' theory, not specifically for India, but for all societies that pass from an oral to a literate stage.[1] Goody did his own field-work among the LoDagaa of Northen Ghana, where he recorded — the first time in writing, later using a tape recorder — the recitation of their Bagre myth. Based on this experience, and

[1] For Goody on rationality, see esp. Goody, 1996, chapters 1 and 2.

on the analysis to which the resulting corpus was subjected, Goody arrived at certain ideas with regard to orality which he considers generally valid.

Ordinary memorisation versus Vedic memorisation

A number of Indologists have reacted to Goody's ideas and pointed out that his conclusions cannot be extended to India without major adjustments. Beside ordinary memorisation, India knows an altogether different kind of memorisation, viz. Vedic memorisation.[2] This kind of memorisation appears to be unique in the world, and must, in India itself, be strictly distinguished from other forms of memorisation. Vedic memorisation, which a youngster acquires in his teens or even earlier, uses special techniques to make sure that no syllable of the text committed to memory be lost.[3] Understanding the content of what is learnt by heart is not part of this training,[4] and is sometimes claimed to be a hindrance rather than a help.

Memorising the Veda in this manner goes hand in hand with the refusal to write down these texts. This at any rate is what the Persian traveller al-Bīrūnī maintained in the eleventh century in the following often cited passage:[5] "The Brahmins recite the Veda without understanding its meaning, and in the same way they learn it by heart, the one receiving it from the other. Only few of them learn its explanation, and still less is the number of those who master the contents of the Veda and their interpretation to such a degree as to be able to hold a theological disputation. ... They do not allow the Veda to be committed to writing, because it is recited according to certain modulations, and they therefore avoid the use of the pen, since it is liable to cause some error, and may occasion

[2] Goody's ideas on the Vedas can be found in Goody, 1987, chapter 4.
[3] See e.g. Staal, 1961.
[4] Aithal, 1991: 11; see also the passage from al-Bīrūnī cited below. Kane (HistDh II, 1 p. 348) claims: "Even in the 20th century ... there are hundreds of brāhmaṇas who learn not only the whole of the Ṛgveda ... by heart, but also commit to memory the pada text of the Ṛgveda, the Aitareya Brāhmaṇa and Āraṇyaka and the six Vedāṅgas (which include the 4000 aphorisms of Pāṇini and the extensive Nirukta of Yāska) without caring to understand a word of this enormous material." And Bühler claimed in the 19th century (1886: xlvii): "A perfect Vaidik of the Āśvalāyana school knows the Rig-veda according to the Saṃhitā, Pada, Krama, Jaṭā and Ghana Pāṭhas, the Aitareya Brāhmaṇa and the Āraṇyaka, the ritualistic Sūtras if Āśvalāyana, Śaunaka's Prātiśākhya and the Śikṣā, Yāska's Nirukta, the grammar of Pāṇini, the Vedic calendar or Jyotiṣa, the metrical treatise called the Chandas, Yājñavalkya's Dharmaśāstra, portions of the Mahābhārata, and the philosophical Sūtras of Kaṇāda, Jaimini, and Bādarāyaṇa. Similarly the Vaidiks of the Yajus, Sāmaṇ, and Atharvan schools are able to recite, more or less perfectly, the whole of the works of their respective Śākhās as well as some other non-Vedic books. But it would be in vain to expect from such men an explanation of the literary treasures which they possess." Unfortunately Kane does not tell us how thoroughly the other texts (different from the Ṛgveda) are being memorised, and nor does Bühler specify how many perfect Vaidikas there were in his time. My own very limited dealings with one of the most respected Vedic reciters around Poona, Pandit Kinjawadekar Shastri (cf. Bronkhorst, 1982: 79), taught me that his knowledge of the Ṛgveda and its *pada-* and *kramapāṭha* was absolutely stunning, but that this same traditional scholar (who did indeed admit not to understand the contents of what he recited) had difficulties with a passage from the Aitareya Āraṇyaka (or was it the Upaniṣad?) which I asked him to recite.
[5] Al-Biruni, India, p. 58-59.

an addition or a defect in the written text. In consequence it has happened that they have several times forgotten the Veda and lost it ... [N]ot long before our time, Vasukra, a native of Kashmir, a famous Brahmin, has of his own account undertaken the task of explaining the Veda and committing it to writing. He has taken on himself a task from which everybody else would have recoiled, but he carried it out because he was afraid that the Veda might be forgotten and entirely vanish out of the memories of men, since he observed that the characters of men grew worse and worse, and that they did not care much for virtue, nor even for duty." Some Brahmanical sources would seem to state the same.[6] Several centuries before al-Bīrūnī the Chinese pilgrim Yijing wrote:[7] "The Vedas have been handed down from mouth to mouth, not transcribed on paper or leaves." The means at our disposal confirm that Vedic memorisation has been, and still is, highly efficacious. A number of Vedic texts appear to have been preserved in this manner for countless generations without any deviation from the original.[8]

Since Vedic memorisation plays a crucial role in some of the arguments to be considered below, I will cite a passage from the introduction to a recent book by K. Parameswara Aithal, who here describes what he has learnt by visiting numerous accomplished Vedic reciters. Aithal depicts the method of teaching in the following manner (1991: 12):

> "In the early stages the procedure is somewhat like this: The young boys who have had their initiation (*upanayana*), sit in front of the teacher after they have finished their purificatory baths an performed the daily rituals, etc. The teaching begins early in the morning, soon after sunrise, with the chanting of the sacred syllables HARIḤ OM, as prescribed by the *Veda-lakṣaṇa* texts. First the teacher recites each *mantra*, *pāda* (= quarter) by *pāda*, and the pupil recites it three times immediately after the teacher. This *pāda* by *pāda* recitation is repeated twelve times. The same method is followed for the recitation of the halves of the *mantra*-s and for the full *mantra*-s. Usually one session lasts until one *adhyāya* is completed. Altogether each *mantra* is repeated 108 times. The study of the *pada*, *krama*, *jaṭā*, etc., is variously graded

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[6] Aitarya Āraṇyaka 5.3.3, which is often cited in this connection, does not appear to concern writing; see Falk, 1992. Kumārila Bhaṭṭa's Tantravārttika (6th or 7th century C.E.) on Mīmāṃsā Sūtra 1.3.7 (p. 123 l. 20-21) contains the following statement: *yathaivānyāyavijñātād vedāl lekhyādipūrvakāt / śūdreṇādhigatād vāpi dharmajñānaṃ na saṃmatam //* ... "Just as no knowledge of dharma is accepted [to arise] from the Veda if it is not properly mastered, if writing etc. have preceded it, or if it has been studied by a Śūdra." See further Malamoud, 1987.

[7] Tr. Takakusu, 1896: 182.

[8] Cp. Witzel, 1995: 91: "We can actually regard present-day Ṛgveda-recitation as a *tape recording* of what was first composed and recited some 3000 years ago." Note however that Renou (1960: 41 n. 1) provides some information that suggests that writing the Veda was not altogether unknown in relatively early days: "La Pāṇ[inīya] Śikṣā 32 (= Yājñ[avalkya] Śi[kṣā] 198) (Ghosh, 1938: 72; JB) moque les récitateurs qui utilisent un texte écrit, les *likhitapāṭhaka* (en même temps que les *anarthajña*); la Nār[adīya] Śi[kṣā] 2.8,19 s'élève également contre celui qui lit. Le [Mahābhārata] 13.23,72 vulg. (= Mhbh 13.24.70; JB) juxtapose les *vedānāṃ lekhakāḥ* avec les corrupteurs (*dūṣaka*) et les vendeurs du V[eda] (*vedavikrayin*)." Further passages that discourage the use of writing are referred to in Kane, HistDh II.1 p. 348-349.

> according to the ability of the individual student. The procedure is very strenuous and time-consuming and thus requires great patience. Since no material reward, nor any kind of professional prospect can be expected from such a study these days, firm faith in the spiritual efficacy and divinity of the Vedic Word is the essential prerequisite for such a rigorous course of study."

The existence of this unique form of Vedic memorisation, which is without known parallels elsewhere, appears to be uncontroversial among Indologists. It primarily concerns Vedic texts, and is not easily transferred to other texts, not even to other holy texts. This is illustrated by descriptions such as the one by C. J. Fuller, from which we learn (1984: 138; cited Goody, 2000: 17) that pupils at a school in Tamilnadu that is under the overall control of the Kanchipuram Śaṅkarācārya's monastery learn passages from traditional Āgamas "by memorising exactly the passages recited to them by their teachers. It is considered vital that these passages' words, pronunciation and scansion are all memorised absolutely accurately, and this cannot be done by reading books. ... Only when a passage has been fully memorised does the teacher explain its meaning." In spite of this imposed discipline these traditional Āgamas are not being preserved by an exclusively and uninterrupted oral tradition.[9] The school just mentioned was founded in the early 1960s, and one of its teacher's concerns is that many pupils forget much of what they have learnt after returning to work in their temples; not even the refresher courses run by the school can prevent this. It is not impossible that medical texts were memorised in a similar manner, whether with more success we do not know. One of them, the Suśrutasaṃhitā, describes the process as follows:[10] "At the time of study the teacher should teach the pupil according to his capacity *pada*, *pāda* or *śloka*. And those *pada*s, *pāda*s and *śloka*s should be arranged in order (?, *krameṇa*), and thus one should combine them one by one." This passage shows some similarity with texts describing the teaching of Vedic texts, but it is too short to derive definitive conclusions from it.

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[9] Cp. Fuller, 1999: 52: "In principle, the teaching method is entirely oral ... Nevertheless, students do have copies of the texts they are learning, and — rather like actors learning their lines — they often refer to the words on paper to help them memorise them. ... All the gurus insist that oral instruction is indispensable and that memorisation is far more important than understanding. .. [The students] mainly learn a series of relatively short passages from the manuals ... of Aghorasiva or other preceptors ..."

[10] Suśrutasaṃhitā 1 (Sūtrasthāna), 3.54: ... *adhyayanakāle śiṣyāya yathāśakti gurur upadiśet padaṃ pādaṃ ślokaṃ vā, te ca padapādaślokā bhūyaḥ krameṇānusandheyāḥ, evaṃ ekaikaïśo ghaṭayed.* Falk (2001: 196) paraphrases and comments: "teaching proceeds either in *pāda*s, half-stanzas of full stanzas depending on the capacity of the pupil. After that the taught portions are to be combined one by one. Unfortunately, the process referred to by *krameṇa* is not described in full." Scharfe (2002: 261) translates *te ca padapādaślokā bhūyaḥ krameṇānusandheyāḥ* as "and these words, quarters and stanzas should be step by step paraphrased".

As stated above, not all memorisation in India is of the Vedic kind.[11] Goody (2000: 13-14) draws attention to a study by John D. Smith (1991) of the Rajasthani epic of Pābūjī. Smith (1991: 26) points out that the epic of Pābūjī has "a degree of textual fixity that seems not to be known in other oral epic traditions", but this does not change the fact that the differences between the performances by different performers are considerable (pp. 25-26). Indeed, Smith is of the opinion that "[t]here is some reason to suppose that the epic as performed at the present day actually is more stylised, more 'flat', than at an earlier period — in other words, that there has been an actual shift away from a differentiated narrative and towards greater and greater uniformity" (p. 24). It may here be added that the reciters of this Rajasthani epic learn their text, along with other skills, by practice only, with no formal preceptor (p. 39). Interestingly, Smith's chief informant maintained that the oral transmission was a secondary development from an original written form (pp. 18-19). However that may be, Smith's study reminds us that memorisation of the Vedic kind and memorisation of the 'ordinary' kind are strictly to be kept apart, even in India. Colas (1999: 38) illustrates the same contrast with the help of two classical texts: "les transmissions orales qui ... véhiculèrent [ces deux textes] furent de nature très différentes. Le premier texte est le Ṛgveda, transmis oralement et sans corruption pendant vingt-cinq siècles, grâce à un ensemble de mnémotechniques réservées à certains groupes de brahmanes: la fidélité de l'oralité védique surpasse alors de loin celle de la transmission écrite. À l'opposé, l'autre texte, l'épopée du Mahābhārata ..., a fluctué au gré de la récitation des bardes, il foisonne en fautes grammaticales et défie les méthodes modernes de l'édition critique."

Pāṇini

As already indicated, Goody connects rationality with literacy. The term 'rationality' is notoriously vague, and there will be occasion to say more about it below. At this point it is important to mention that ancient India has left us a remarkably sophisticated intellectual composition, the famous grammar of Pāṇini; many scholars consider this grammar to be a manifestation of rationality if ever there were one. Indeed, they like to recall that the linguist Leonard Bloomfield (1933: 11) called it "one of the greatest monuments of human intelligence". Some Indologists use Pāṇini's grammar to criticize the very notion that the development of rationality is intimately linked to the appearance of literacy. One of them is Frits Staal, who has published articles with titles such as "The fidelity of oral tradition and

[11] For a study of a large number of oral epics in India see Blackburn et al., 1989.

the origins of science" (1986) and "The independence of rationality from literacy" (1989). Staal believes that we are "under the sway of cultural prejudices" including "the prejudice that writing is more reliable and therefore better than memory" (1986: 27).

In the publications just mentioned, Staal concentrates on two areas of early Indian thought, both of which he considers sciences: the science of ritual and the science of grammar.[12] Both are historically linked to Vedic recitation and memorisation: the science of ritual because Vedic recitation takes place during the ritual, and the science of grammar because it deals, among other things, with the sandhi between words. (Vedic recitation distinguishes two versions of the recited texts, the *saṃhitāpāṭha* and the *padapāṭha*; the former is the version with sandhi, the latter the one without it.) Staal, however, goes further. The Vedic tradition of transmission, he states (1986: 27/275), "has led to scientific discoveries that are of enduring interest and from which the contemporary West still has much to learn". Staal is not content with the assertion that this tradition of transmission was merely an interesting **object** of study; he is convinced that these sciences were somehow part of that tradition, that they arose from within it. More specifically, he believes that Pāṇini's grammar was composed without the help of writing.

Staal is well enough acquainted with Pāṇini's grammar to know how extraordinarily complex it is. He cites earlier scholars who were puzzled by this, but points out that in many cases "the at first sight puzzling order of Pāṇini's rules enables him to make generalizations that would fail to be captured otherwise" (1986: 270). This obliges Staal to think of a way in which Pāṇini could have composed this complex grammar without the use of writing. He suggests two solutions. The first is: Pāṇini was an extraordinary genius. Realising that this solution may not find favour with all his readers, Staal then proposes the following explanatory scenario (Staal, 1986: 36-37/284-285):

> "Pāṇini worked in close collaboration with some colleagues or, more likely, pupils. Let us assume, for example, that he had more or less completed the rules of vowel sandhi, and provisionally formulated these in a consistent manner and to his satisfaction. Now there appears a problem elsewhere in the grammar; and the only way in which it can be given a simple solution is by inverting two of the sandhi rules he had just formulated. Immediately a host of problems arise, and the rule system begins to generate ungrammatical forms. How to save it, safely modify and keep track of it without losing the thread?
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> The solution is simple: Pāṇini asked his favorite pupil to memorize the rules for vowel sandhi he had provisionally formulated. He turned his attention elsewhere, and returned to effect the required inversion. The student who was given the special assignment heard it, and knew precisely how to react to it by reformulation. Other pupils who had memorised other portions of the grammar were

[12] For the science of ritual as conceived of by Staal, see Staal, 1982.

> eagerly listening in order to find out how any proposed modification would affect their domain; and if trouble arose, they immediately took steps to overcome the problem by changing the rules, their order, their formulation, or whatever else had to be changed. This led to revisions elsewhere in the grammar, supervised and synthesized by Pāṇini himself. There are many ad hoc devices for patching up rules that must have been resorted to on such occasions and that can in fact explain certain oddities that we meet with in the corners of Pāṇini's grammar."

I have quoted this passage at length because it plays, and has to play, an essential role in Staal's argument, and in that of all those who maintain that Pāṇini's grammar is the product of an exclusively oral culture.

Staal's reflections find support, at least at first sight, in subsequently published studies about writing in ancient India. Harry Falk's *Schrift im alten Indien* (1993) is widely regarded as the definitive study on this subject. It shows that all the literary indications that had been taken to prove the use of writing before the period of emperor Aśoka (ca. 268-233 B.C.E.) do no such thing. Moreover, Falk maintains that the inscriptions of Aśoka themselves show that writing was new, and underwent important improvements during the realm of the emperor itself. In other words, writing was not introduced into India until just before, or during, the reign of Aśoka. Falk adds that the script used in Aśoka's inscriptions is insufficiently refined phonologically to be used for Sanskrit; this adaptation occurred several centuries later, according to Falk.

It is no surprise that Falk subscribes to Staal's position to the extent that Pāṇini's grammar must have been composed orally, without any use whatever of writing. Indeed, Falk states in an article (1990: 110) that it is our fault, not Pāṇini's, that it is difficult for us to imagine how such an intricate system could have been developed without writing.

Here, I submit, Falk goes too far. It is fair to expect that we believe that Vedic memorisation — though without parallel in any other human society — has been able to preserve very long texts for many centuries without losing a syllable. The evidence in support of this is strong, and the determined sceptic can, still today, visit traditional Vedic scholars and test the extent and the precision of their mastery of the texts concerned. However, the oral composition of a work as complex as Pāṇini's grammar is not only without parallel in other human cultures, it is without parallel in India itself.[13] It would have to be regarded as a totally unique event, in India and in the world, and here the least one can

[13] Cf. Malamoud, 1997: 105-06; 2002: 148: "Mais peut-être faut-il distinguer entre ce que requiert la composition d'un texte et les caractéristiques qui facilitent sa transmission. Il est certain que les Sūtra, par de tout autres moyens que la poésie, sont conçus pour être confiés à la mémoire. Mais l'enchaînement de ces _fils_, surtout de ceux qui tissent la grammaire, suppose de la part des auteurs une prévision de tous les détail de l'ensemble, une mémoire raisonnante, une puissance intellectuelle dont on voit mal comment elles pourraient se déployer sans le secours de l'écriture."

ask for is some kind of indication as to how Pāṇini did it. It just will not do to state that our difficulty in conceiving any such thing is our problem.[14] Staal understood this. The credibility of his position, and that of Falk, is intimately linked to the plausibility of his explanation.

Mention must here be made of Jan E. M. Houben's observations (1999: 34 ff. § 4.6; 2001: 171 n. 9) to the extent that Pāṇini's grammar is not primarily or exclusively a testimony to the intelligence and genius of a single author. Rather, Pāṇini formed part of a tradition of grammar-authors plus an educated public that made use of those grammars. The result is that Pāṇini cannot have been all that extraordinary, for had he been, no one would have appreciated his work, no one would have learned it and made use of it, no one would have transmitted it. Houben may be right in all this, yet his observations throw no new light, as far as I can see, on the question as to how Pāṇini's grammar may have been composed without the help of writing.

In this context it is only appropriate to point out that Pāṇini, far from being totally unfamiliar with writing, is generally accepted (also by Falk) to be the first Indian author to unambiguously refer to it.[15] It is true that the brevity of his reference does not allow us to determine with certainty what kind of writing he was referring to. Hinüber (1990: 57) suggests Kharoṣṭhī or Aramaic but prefers the former; Falk (1993: 258-259) argues that it must have been Aramaic, a script used exclusively by a professional class of writers in the service of the Achaemenid empire. Aramaic was not used or understood by anyone outside this caste of writers, certainly not by Brahmins. Falk's is a possible interpretation of Pāṇini's reference to *lipi* 'script', but clearly not the only one.

To this must be added that, thanks to the work carried out by Hinüber (1990: 34-35) and Falk (1993: 303-304), we now know that Pāṇini lived, in all probability, far closer in time to the period of Aśoka than had hitherto been thought. According to Falk's reasoning, Pāṇini must have lived during the decennia following 350 B.C.E., i.e. just before (or contemporaneously with?) the invasion by Alexander of Macedonia. Indeed, in a more recent publication Falk (1994: 327 n. 45) considers it credible that Pāṇini may have lived under the Mauryas, and therefore (until) after the invasion of Alexander. It is moreover generally agreed that Pāṇini lived in the north-west of the Indian subcontinent, probably in what is now Pakistan.

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[14] All Falk says is (1990: 110): "Before Pāṇini perfected the system there were many generations in different parts of the subcontinent working on it and it is impossible to reconstruct the steps or to estimate the span of time needed to lead to such an end."

[15] Hinüber (1990: 57) mentions a passage in the Rāmāyaṇa (1.12.6) which may have contained *lipikara*, the word known to Pāṇini, in the meaning 'painter' rather than 'writer', but this can hardly have been the meaning known to Pāṇini.

Falk and those who agree with him like to cite the evidence from Megasthenes who, around 300 B.C.E., recorded that no writing was used in India. Megasthenes' evidence, which seems to be reliable, may apply to the heartland of India, primarily the capital Pāṭaliputra of the Maurya empire to which he had been sent as ambassador by Seleucus Nicator. It is an altogether different question whether Megasthenes' testimony can be taken to be valid for the north-west of the subcontinent, which was part of Seleucus' empire. Indeed, Nearchus' earlier testimony confirms the existence of writing in the parts of the subcontinent which he visited with Alexander.[16] Pāṇini, as we have seen, lived in those parts.

Regarding the early history of writing in India the following passage from Richard Salomon's recent book *Indian Epigraphy* must be cited, which refers to various other publications.[17] This passage reads (1998: 12):

> "[A] new body of material has recently come to light that seems to support the older theory that Brāhmī existed before Mauryan times, that is, in the fourth century B.C. or possibly even earlier. This is a small group of potsherds bearing short inscriptions, evidently proper names, which were found in the course of excavations at Anurādhapura, Sri Lanka in strata which are said to be securely assigned by radio-carbon dating to the pre-Mauryan period. Various dates have been proposed for these graffiti, ranging from the sixth to the early fourth century B.C. The more recent publications on the subject have tended to favor the later date within this range, but in any case, these inscriptions still seem to show that Brāhmī did indeed predate the Mauryan period."

Salomon cautions his readers to be careful, and he is no doubt right in doing so. Nevertheless, the findings he refers to suggest that the script Pāṇini knew may have been Aramaic, Kharoṣṭhī, or an early form of Brāhmī, or indeed any two or even all three of these.[18]

There is another element that may be important in this connection. It was pointed out above that the science of grammar deals, among other things, with the sandhi between words, and that it is sandhi which distinguishes two versions of the recited Vedic texts, the *saṃhitāpāṭha* and the *padapāṭha*. Often the *padapāṭha* — i.e. the version without sandhi, in which words are kept separate from each other — is stated to have resulted from a concern

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[16] So Goyal, 1985: 82-100. Hinüber (1990: 21) considers it probable that Nearchus referred to Aramaic writing.

[17] Deraniyagala, 1992: II: 739-750; Allchin, 1995: 163-181 & 209-216; Coningham, Allchin, Batt and Lucy 1996: 76-77.

[18] Hinüber (1990: 55 f.) expresses surprise about the fact that the Maurya empire introduced two completely different scripts (Kharoṣṭhī and Brāhmī) at the same time. He comes to the conclusion that Kharoṣṭhī is older than Brāhmī. This conclusion may need reconsideration in the light of the new discoveries in Sri Lanka.

to preserve the *saṃhitāpāṭha*. Stated generally, this does not appear to be correct. In the case of the Ṛgveda we know that its *padapāṭha* is older than Pāṇini (who refers to it), whereas the *saṃhitāpāṭha* is younger than this grammarian (application of Pāṇini's rules to the *padapāṭha* occasionally gives rise to metrically correct results where the *saṃhitāpāṭha* does not preserve the original metre), perhaps younger than Patañjali (ca. 150 B.C.E.).[19] That is to say, the *padapāṭha* (as we have it) is older than the *saṃhitāpāṭha* (as we have it). This fact by itself does not explain that the *padapāṭha* of the Ṛgveda preserves some archaic features which it should have lost in the course of being handed down. One example must here suffice. The *padapāṭha* of the Ṛgveda contains forms like *nirnij*, with two dental nasals, where the *saṃhitāpāṭha* and all later Sanskrit literature replace the second dental with retroflex *ṇ*: *nirṇij*. Retroflection is known to have entered the Indo-Aryan languages rather late, but early enough to affect all our sources. It is therefore surprising to find forms without the obligatory retroflection in the *padapāṭha* of the Ṛgveda, which it should have undergone like all other Sanskrit texts. A solution that has been suggested is that the *padapāṭha* was originally, and perhaps for some time, the written form of the Ṛgveda;[20] the habit to write words separately, without sandhi, is after all wide-spread. Being written down, the Ṛgveda *padapāṭha* may conceivably have missed out on some developments that touched the oral version of this same text. This solution may not be without difficulties itself (cp. Bronkhorst, 1989: 306; Hinüber, 1990: 18 n. 36) and has to be treated with much caution, yet it cannot be totally discarded as long as no better explanation has been found.

Falk is aware of these features of the Ṛgveda *padapāṭha* and of their importance in the debate about writing in ancient India. His book *Schrift im alten Indien* promised to deal with them in extenso in a separate publication (1993: 250). The intended article has recently come out (Falk, 2001). It contains an interesting, though speculative, account of the origin of the *saṃhitāpāṭha* and *padapāṭha* of the Ṛgveda, in which it is postulated that these two versions at some time in the past drifted apart, to get reunited again afterwards. No word is said about the archaic features of the *padapāṭha* mentioned above, and one must perhaps assume that the period of separate development is to be held responsible for the differences between the two versions (even though Falk does not say so).[21] The question whether this explanation (if it is one) is better than the one it must replace remains open.

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[19] See Bronkhorst, 1981; 1987: 55-56; 1991: 75 f. Both the *padapāṭha* and the *saṃhitāpāṭha* of the Taittirīya Saṃhitā, and the final version of the Atharvaveda (Śaunakīya and Paippalāda), appear to be younger than Patañjali; see Bronkhorst, 1987: 55.

[20] Bronkhorst, 1982a.

[21] One might then also have to assume that the *padapāṭha* was preserved in a more western area than the *saṃhitāpāṭha*, where language was less affected by retroflection; see Deshpande, 1995: 74, with references to Mehendale, Bloch and Burrow.

Summing up, it is an open question whether Pāṇini used writing in composing his grammar. If he did, it may well be that we owe this much admired piece of scholarship to that fact. But perhaps he didn't. The very uncertainty that surrounds the first use of writing by Indian scholars obliges us to refrain from drawing any far-reaching conclusions.

The Mahābhāṣya

Falk is less inclined to refrain from drawing such conclusions. According to him, neither Pāṇini, nor indeed his earliest surviving commentators Kātyāyana and Patañjali used writing. It is worth our while to briefly review some of his arguments. Consider the following:[22]

> "Wie P. Thieme 1935 ausführlich dargelegt hat, gab es keine ununterbrochene mündliche Tradition von Pāṇini zu Kātyāyana und Patañjali. Zwischen Autor und Kommentatoren war das Wissen um Akzentuierung und Nasalierungen einzelner Sūtras verloren gegangen. Thieme erklärte die Verluste als Produkt einer Schrift, die wohl Zeichen für Vokale und Konsonanten aufwies, aber noch keine für Akzente und Nasalierung (122 ff.). Wäre dem so, dann hätte schon dem Vārttikakāra ein Manuskript vorliegen müssen, das ihn durch seine Unvollständigkeit verunsichert hätte. Doch sprechen weder Kātyāyana noch Patañjali jemals von einem Manuskript. Sie erwähnen keine Lesarten, keine abgebrochenen Ränder oder verblassten Buchstaben."

Falk does not express disagreement with Thieme's position that the oral tradition linking Pāṇini with Kātyāyana and Patañjali had been interrupted. But if this oral tradition had been interrupted, what else but a written tradition could have saved Pāṇini's grammar from total perdition? Falk suggests the following: "die mündliche Tradition folgte ähnlichen Prinzipien wie die vedische, die über den Wechsel von *saṃhitāpāṭha-* zu *padapāṭha-*Rezitation jeglichen Kontakt zur ursprünglichen Diktion der Ṛṣis verloren hatte". However, accents have been very well preserved in oral Vedic recitation; only the nasalisation of *ūṁ*, preserved in the *padapāṭha*, has been lost in the *saṃhitāpāṭha*. Furthermore, Falk's remarks to the extent that neither Kātyāyana nor Patañjali mention manuscripts, variant readings, etc. loose their force in the light of more recent authors, who certainly did use writing, but never mentioned any of these things.[23]

Falk then continues (p. 267):

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[22] Falk, 1993: 266-267.
[23] For some examples, see Bronkhorst, 1991a: 212 f.

> "In Anbetracht dessen, was heute über die Verwendung der Schrift für Sanskrit bekannt ist, erscheint es völlig undenkbar, dass schon um 250 v.Chr. (angeblich: Kātyāyana) oder um 150 v.Chr. (etwas sicherer: Patañjali) ein phonetisch derart raffinierter Text wie die Aṣṭādhyāyī schriftlich fixiert werden konnte. Es fehlten zu jener Zeit immer noch Doppelkonsonanz, *virāma*, *visarga*, velarer Nasal, den man für die Aṣṭādhyāyī unbedingt hätte entwerfen müssen, da er hier und in keinem anderen Śanskrit-Text als Phonem erscheint. ...
>
> Der Zustand der Brāhmī zur Zeit der Śuṅgas, die Natur des Textes und vor allem das Schweigen der beiden frühen Kommentatoren zu jeder Form von Schriftlichkeit verlangt zwingend nach der Erklärung, dass Pāṇinis Text, ebenso wie die Vārttikas und wohl auch das Mahābhāṣya selbst, ganz und gar den Bedingungen oraler Tradition folgten."

It is a pity that Falk does not discuss the consequences of his position. The Mahābhāṣya is as long as, if not longer than, the Ṛgveda.[24] A complete memorisation of the Ṛgveda, including its Padapāṭha and Kramapāṭha, "extends to more than eight years, with ten to twelve hours of learning each day" according to K.P. Aithal (1991: 12), as cited by Falk (1993: 323). There is no evidence that I know of suggesting that even half that time (or for that matter: any time at all) was ever reserved for memorising the Mahābhāṣya in the Vedic style (as opposed to studying it; don't forget the fundamental difference between Vedic and other forms of memorisation.) The Mahābhāṣya itself complains that 'nowadays' students, having studied the Veda, are in no hurry to study Pāṇini's grammar.[25] It is hard to believe that those same uninspired students would learn Pāṇini's grammar plus another text the size of the Ṛgveda by heart.

Yijing's remarks on the Sanskrit grammarians would at first sight seem to be in disagreement with the above. A closer inspection shows that this is not the case. Yijing, as has been shown in detail by John Brough (1973), made a number of serious mistakes in his account of Sanskrit grammatical literature, confusing both authors and texts. It seems nevertheless clear that he knew (or had heard of) the Mahābhāṣya, which he knew by the

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[24] The Ṛgveda, according to Gonda, 1975: 9, contains 165.007 words. A low estimate of the number of words in the Mahābhāṣya — 1412 pages in Kielhorn's edition, each containing on average some 200 words — comes to a total that is higher than that. (The length of the Mahābhāṣya is said to be 36.000 granthas, i.e., 36.000 x 32 = 1.152.000 syllables; see Bhāgavata, 1999: Upodghāta p. 09.)

[25] Mahā-bh I p. 5 l. 6-11: *purākalpa etad āsīt: saṃskārottarakālaṃ brāhmaṇā vyākaraṇaṃ smādhīyate / tebhyas tatra sthānakaraṇānupradānajñebhyo vaidikāḥ śabdā upadiśyante / tad adyatve na tathā / vedam adhītya tvaritā vaktāro bhavanti: vedān no vaidikāḥ śabdāḥ siddhā lokāc ca laukikāḥ / anarthakaṃ vyākaraṇam iti / tebhya evaṃ vipratipannabuddhibhyo 'dhyetṛbhya ācārya idaṃ śāstram anvācaṣṭe: imāni prayojanāny adhyeyaṃ vyākaraṇam iti /* "In olden days it was like this: brahmins studied grammar after their (initiation-)ceremony. After they had learnt the different places of articulation, the articulatory organs and the extra-buccal process of articulation, they were taught the Vedic words. Nowadays, it is not like this. Having learnt the Veda [the students] are quick to say: 'the Vedic words are known [to us] from the Veda, and the ordinary words from common speech. [So] grammar is useless.' To those students entertaining false notions the teacher teaches this science [of grammar] saying: 'these are the uses, [therefore] grammar must be studied.'" (tr. Joshi and Roodbergen, 1986: 68; modified)

name Cūrṇi, but which he failed to distinguish from the vārttikas which it contains. Confusingly, he appears to use the expression Vṛttisūtra for the vārttikas, but ascribes far too great a length to this text (18'000 ślokas), which he seems to believe to have been studied independently from the Cūrṇi. This great length is no doubt to be explained by the fact, pointed out by Brough, that Yijing was unable to discriminate between the vārttikas and the Mahābhāṣya. This leaves us with the question what Yijing may have precisely been referring to when mentioning the duration of studying this text. However that may be, he says the following about it (Takakusu, 1896: 175): "Boys of fifteen begin to study this commentary, and understand it after five years. ... All these books (?) should be learnt by heart. But this, as a rule, applies only to men of high talent, while for those of medium or little ability a different measure (method) must be taken according to their wishes. They should study hard day and night, without letting a moment pass for idle repose." About the Cūrṇi he says (p. 178): "Advanced scholars learn this in three years."

It has to be repeated that Yijing's remarks have to be read with much caution. But assuming his testimony about the way of studying grammatical texts to be by and large correct, there is an obvious contrast with the way he described Vedic learning, which we already considered above. About the latter he says (p. 182): "The Vedas have been handed down from mouth to mouth, not transcribed on paper or leaves. In every generation there exist some intelligent Brâhmans who can recite the 100,000 verses." He says no such thing about grammatical texts. In other words, these grammatical texts were not exclusively handed down from mouth to mouth. Indeed, Yijing makes a point of stating that less talented students would not learn them by heart at all. The long duration required for studying the Mahābhāṣya (three years? five years? eight years?) can be explained by the great complexity of its contents, not necessarily by the effort needed to learn it by heart. Yijing's account contains no hint that the Mahābhāṣya was ever studied the Vedic way.

If we now return to the question of scripts, it is hard for me, not being a specialist, to see how Falk can be sure that the Brāhmī script at the time of the Śuṅgas could not yet be used for Sanskrit, since practically all our early evidence is in other languages than Sanskrit. With the growing popularity of Sanskrit or 'Epigraphical Hybrid Sanskrit' as inscriptional languages all the necessary characters (*ṛ*, *au*, *ṅa*, *ḥ*, and *halanta* or *virāma*) as well as consonantal clusters appear in the inscriptions (Salomon, 1998: 37).[26] It is not

[26] Hinüber (1990: 61) appears to consider it significant that the Lalitavistara, where it enumerates the list of Brāhmī signs, skips the letter *ṛ*. This same list does however contain *ai*, *au*, and *ṅa*; see Lal(V) p. 89. It is to be kept in mind that the list in the Lalitavistara is used to inculcate some important truths with the help of words or expressions that have the sound concerned in the first or second place (*a*: *anityaḥ sarvasaṃskāra[ḥ]*; *ā*: *ātmaparahita*; etc.). In such a list there is no place for *ḥ* and *halanta / virāma*, and perhaps not for *ṛ* (the Sanskrit index to the Abhidharmakośabhāṣya — Abhidh-k-bh(Hi) — contains just nine entries beginning with

evident that this must imply that these or similar characters may not have been used in Sanskrit non-inscriptional writing well before these inscriptions. To this may be added the 'überraschende Tatbestand' (Hinüber, 1990: 61) that Brāhmī has ligatures which serve no purpose in the Middle-Indic languages for which it is used; ligatures are of course essential for Sanskrit.[27]

It is important to insist once again on the difference between Vedic memorisation and other forms of memorisation. Many of the non-Vedic feats of memorisation enumerated in Falk's chapter "Berichte vom Umfang des Memorierten" (1993: § 14.1, pp. 321 f.) concern either texts that have been handed down in rather widely differing versions, thus showing the unreliability of this method of memorisation (cf. Falk, 1993: 322: "Häufig mussten sich die Chinesen mit lückenhaften [buddhistischen] Texten zufrieden geben, weil ihren Gäste das eine oder andere Kapitel aus dem Gedächtnis geschwunden war"); or texts that could at any time be corrected with the help of their written versions. (The recent discovery of Buddhist manuscripts in north-west India from perhaps the beginning of the first century C.E. suggests that the Buddhist texts that were memorised may have had written versions from an early date onward; see Salomon, 1999.) The Mahābhāṣya is different: it is a highly technical text which appears nonetheless to have been preserved in a form that hardly deviates from the original.[28]

Systematic philosophy

I have concentrated so far on Pāṇini's grammar because it is probably the most 'intelligent' composition from the late-Vedic period that has survived ("one of the greatest monuments of human intelligence", as we have seen). Writing can help in composing particularly complex works, even though we do not know whether it did in the case of Pāṇini. Writing can have other effects, too. It allows readers access to works that do not belong to their own tradition. There will be a limit to the extent of what even the best memoriser can memorise, and to what he will be willing, or allowed, to memorise. It is difficult to believe that people

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ṛ, none of which may have been suitable). It is furthermore not clear that this enumeration of sounds concerns specifically the Brāhmī script. In this context it may be of interest to note that the Kharoṣṭhī script of one of the recently discovered early Buddhist manuscripts from Gandhāra has a sign for *ṛ* (i.e. for *kṛ*; see Salomon, 1999: 123).

[27] Cp. Colas, 1997: 127: "la finesse de l'analyse phonétique dont témoignent les premières écritures indiennes (attestées au III^{e} siècle avant notre ère) trahit l'intervention des érudits mêmes qui déconsidéraient l'écrit. Le bon sens suggère donc que ces clercs employèrent l'écriture plus tôt que le III^{e} siècle avant notre ère, peut-être dans des manuscrits utilisés comme aide-mémoire." On p. 129 Colas expresses his view that the first Indian writing systems must have been created in the circle of grammarians or under their influence.

[28] See in this connection Bronkhorst, 1987a: 14-42 ("The text history of the Mahābhāṣya").

put much effort into memorising texts which they looked upon as heretical, wrong, or dangerous.

It seems undeniable that Pāṇini was familiar with a considerable portion of Vedic literature, going well beyond any one Veda.[29] So was his commentator Patañjali.[30] This circumstance might be used to argue for the existence of written Vedic texts at the time of these linguists, but this would not be a particularly strong argument. Representatives of different Vedas were in contact with each other (one needs several of them to execute a sacrifice), and it is conceivable that they provided each other with suitable examples to illustrate, say, specific grammatical rules.

However, it was no doubt much harder to gain access to texts belonging to altogether different, even hostile, traditions. This happened in an intellectual development that began some time after Pāṇini, and which distinguishes itself in an essential manner from the development that led to his classical grammar. Let me try to explain what the difference consists in.

It has already been pointed out that Pāṇini's grammar is a very intelligent piece of work. It does not however challenge generally accepted opinions, as far as we can tell. Even though modern scholarship has been fascinated by, and therefore often has concentrated on, its comparison with modern linguistics, studies that deal with the intellectual background of Pāṇini's grammar reveal a fundamental continuity with late-Vedic thinking.[31] This fits in with the general picture in which Pāṇini, and perhaps other grammarians before him, organised and systematised ideas which were generally accepted, rather than providing a total break with what preceded.

Some time after Pāṇini such a break — or rather: a number of them — did take place in Indian thinking. In the various schools of what is commonly called classical Indian philosophy revolutionary new ideas came up, quite suddenly it appears, which did constitute radical breaks with what preceded. Buddhist thinkers all of a sudden denied the existence of phenomenal reality, sometimes going to the extent of claiming that no Buddha exists or ever existed. Certain Brahmanical thinkers — most notably the Vaiśeṣikas — came up with most remarkable analyses of reality, maintaining for example that a pot and its two halves constitute three different entities. Others argued that nothing ever comes into existence, and that future entities exist already in their material causes. The most orthodox defenders and interpreters of the Veda, the Mīmāṃsakas, came to deny the very existence

[29] Bronkhorst, 1991.
[30] Rau, 1985; to be used along with Bronkhorst, 1987.
[31] Bronkhorst, 1981; 1999: 12-17.

of the Vedic gods and claimed, more generally, that practically nothing in the Veda is to be taken literally. This list could easily be extended. For our present purposes it is most important to see that something dramatic happened to an important number of Indian thinkers, not to all at the same time to be sure, but yet during a rather limited period of a few centuries.

One of the great tragedies of Indian intellectual history is that little is known of the details of these momentous changes. Only rarely can we associate a revolutionary development with one or more concrete individuals. We know even less about the circumstances that set these changes going. However, it seems certain that they had much to do with the fact that the thinkers concerned had to defend their points of view in encounters with opponents who totally disagreed with them. The opposition between Buddhists and Brahmins appears to have been particularly important in all this, but oppositions between schools within these and other movements were important, too. Thinkers were obliged to defend their points of view, because they might be summoned by the regional ruler to confront a star speaker from a competing school. As a result they made their position as coherent as possible, and removed, suppressed or de-emphasised any feature that would appear problematic to a critical outsider. If one understands rationality to mean, or imply, openness to criticism (freely accepted or imposed) in all areas,[32] the case could be made that the early Indian philosophers, who had to deal with critics who would not grant them an inch, are at least as much if not more entitled to the qualification 'rational' than Pāṇini.[33]

It is important to add some specifications to the above. Debates between proponents of different currents of belief or practice took place long before the beginning of classical Indian philosophy. We can be sure that early Buddhism and Jainism, for example, being missionary movements, did not eschew meetings and discussions with others. The early Buddhist canon preserves memories of such encounters, and the descriptions there found of early Jainism, to take this example, turn out to be fairly reliable. Yet neither early Buddhism nor early Jainism felt obliged to improve its own position as a result of such meetings. They did not need to, because there was no one to reward the winner and punish

[32] This is easily misunderstood. Houben, for example, criticises this notion in the following words (2001: 170 n. 8): "there may very well be areas of reality which, for the thinkers involved, are fundamentally beyond critical inquiry". This may indeed be true for individual thinkers, but that is not the point. The point is that in a rational tradition thus conceived, the enemies and opponents of thinkers will be free to criticise issues which for the latter are beyond critical inquiry, and that the thinkers criticised will yet have to listen and respond to this criticism. A rational tradition can in this way be understood as a social phenomenon, not as a description of the habits of thought of individual thinkers.

[33] For an elaboration of this idea of rationality and references, see Bronkhorst, 1999a: 5 f.

the looser in such informal debates. This, however, appears to have changed in subsequent centuries. We know that in classical India kings might oblige representatives of different movements to participate in public debates, in which much — e.g. the life or freedom of the participants, or the well-being of their movement — might be at stake. Public debates of this kind have no doubt inspired authors to compose the manuals of debating skills that come into existence during the first centuries of the Common Era. And these same kinds of public debate appear to have inspired thinkers to revise and improve their positions, thus creating the schools of classical philosophy. It seems however likely that beside these public debates informal debates continued to be held. After all, the Buddhists and the Jainas were still interested in making converts, and for this purpose discussions with as yet unconverted people are necessary.

We are informed about the classical debates mainly through the reports of foreign visitors; two examples will here be briefly presented. The Chinese Buddhist pilgrim Xuanzang has left us a detailed account of his visit to India in the first half of the seventh century of the Common Era. In this account he regularly mentions debates between representatives of different schools of thought. The debates he refers to normally took place in the presence of a king, and tended to end in victory for one of the two parties, and defeat for the other. According to the biography of Xuanzang composed by his pupil Huili, Xuanzang himself volunteered to participate in a debate on one occasion. The event is described as follows:[34]

> "At that time a heretic of the Lokāyatika school came to seek a debate and wrote his argument in fourteen points, which he hang on the door of the monastery, while he announced, 'If anybody is able to refute any one point of my argument, I shall cut off my head to apologize!'
> After the passage of several days, nobody came out to accept the challenge. The Master [= Xuanzang] then asked his personal servant to take down the poster, destroy it, and trample the broken pieces under his feet. Being greatly enraged, the Brahmin asked, 'Who are you?' The servant said in reply, 'I am a servant of the Mahayana-deva.' The Brahmin, who had already heard of the fame of the Master, was ashamed of himself and did not say anything more. The Master sent for him and brought him to the presence of the Venerable Śīlabhadra [Xuanzang's teacher of Nālandā Monastery], with various virtuous monks as witnesses, to start a debate with him about the principles of his school and the theories founded by other heretical sects as well."

At this point Xuanzang starts to criticise various heretical schools, among them the two Brahmanical schools of philosophy called Sāṃkhya and Vaiśeṣika, but not, surprisingly,

[34] Li, 1995: 132 f. (modified)

the Lokāyatika school. Only his criticism of the Sāṃkhya school is given in some detail. The text then continues:

> "In this manner the argument was carried on with repeated refutations; and the Brahmin remained silent and said nothing. Then he rose to his feet and said with apology, 'I am defeated, and I am ready to keep my word.' The Master said, 'We Buddhists do not take any man's life. I now make you my slave, and you should work according to my orders.' The Brahmin was glad to obey the Master's orders with reverence, and was brought to his living quarters. All those who heard about this event praised it with delight."

It is unlikely that this passage accurately presents what happened. It is hard to believe that a Brahmin who was seeking a debate would accept total defeat without as much as uttering a word. But nor would we expect historical accuracy in a document that primarily sings the glory of Master Xuanzang. It will be interesting to see what kind of arguments supposedly led to his victory in debate.

The text does not offer much in terms of arguments, with one notable exception. The Master is supposed to have dealt with the Sāṃkhya system of thought in a rather more detailed manner. First he presents an outline of the system, which agrees with what we know about it. After this exposition he draws attention to what he considers its lack of coherence. It is not clear why a follower of the Lokāyatika school should have wished to defend ideas belonging to the altogether different Sāṃkhya school of thought. Xuanzang's exposition and refutation of the Sāṃkhya position can therefore hardly have been part of his debate with his hapless opponent. Nor is it likely that a real Sāṃkhya would have felt defeated by the reflections brought to bear on their system by the Chinese pilgrim. It is yet interesting to see that Xuanzang is here depicted as presenting what is an accurate description of the main features of the Sāṃkhya philosophy, and that, having presented this outline, he tries to show its inner incoherence. The fundamental assumptions of this philosophy do not, according to the position attributed to Xuanzang, justify the functions it ascribes to the various entities it postulates.

Accounts like this are extremely interesting, and give us a glimpse, if ever so faint, of situations India's philosophers may have been familiar with. In the present context we have to limit our reflections to one issue: How did Xuanzang know so well the system of his opponent? It seems extremely unlikely that he had been trained by one of them. It is much more likely that he had studied their texts, either alone or with the help of a Buddhist teacher. Indeed, Xuanzang himself reports that Sāṃkhya and various other non-Buddhist

topics were taught at the Buddhist university of Nālandā.[35] It seems safe to conclude that intellectual confrontations like the one involving Xuanzang could not have taken place, at least not in this form, without access to written documents; and indeed, the extensive use of reading and writing at his period is not controversial. But what do we know about the debates that took place many centuries before Xuanzang? And what did the participants in those debates know about the views of their opponents? We will return to these questions below.

First we turn to our second example, which is situated a few centuries before the time of Xuanzang. It depicts a debate between a Buddhist and a Sāṃkhya in which, this time, the latter is victorious. The story is found in Paramārtha's *The Life of Vasubandhu.* The main character is the Sāṃkhya teacher Vindhyavāsa, who modified the Sāṃkhya doctrine and came to think that the doctrine set forth by him was the greatest, and that nothing could be superior to it. However, Buddhism was flourishing in the world at that time. Vindhyavāsa therefore resolved to refute it. The text continues:[36]

> "Accordingly he went to the country of Ayodhyā and beat the drum of dispute with his head and said:
> (The translator of this passage explains in a note that, according to a commentator, 'it was customary for a king in India to keep a drum at the Royal Gate. When a man wants to appeal to the Court or to challenge a dispute, he has to beat it.')
> 'I will dispute (with any Buddhist Śramaṇa). If I am defeated my opponent shall cut my head off; but if, on the contrary, he is beaten, he shall give me his head.' The King, Vikramāditya ..., being informed of the matter summoned the heretic and asked him about it, whereupon the latter answered: 'Thou art, O King, the Lord of the Land, in whose mind there should be no partial love to either Śramaṇas or Brahmins. If there be any doctrines prevailing (in thy country) thou shouldst put them to the test (and see whether) they are right or wrong. Now I intend (to dispute) with a disciple of Śākya-muni [= the Buddha] to determine which party is the winner or the loser. Each should vow to stake his own head.' The King thereupon gave him permission and despatched men to ask all the Buddhist teachers of the country in the following words: 'Is there anyone who is able to oppose this heretic? Whosoever thinks himself competent should dispute with him.'
>
> At that time the great Teachers of the Law, Manoratha, Vasubandhu, and others were all absent travelling in other countries. ...
> There was at home only Buddhamitra the teacher of Vasubandhu. ... This Teacher of the Law was formerly very learned, but he was now advanced in years and therefore weak in mind and feeble in his speech. He said: 'Now the great champions of the Law are all abroad. The heretic is strong and obstinate and must not be let alone any longer. I will now see to it myself.' He informed the King, who appointed a day on which he summoned a great assembly to the hall of discussion, where the heretic and the Buddhist teacher were to meet and dispute.

[35] Joshi, 1967: 127,
[36] Takakusu, 1904: 283 f. Cp. the discussion in Larson & Bhattacharya, 1987: 131 f.

> The heretic said: 'Will you first set forth your opinion? Or will you refute the opinion first set forth by me?' The priest replied: 'I am like a great ocean which swallows up all that comes. You are like a lump of earth which will be submerged if it comes to the ocean. You may do as you like.' His opponent said: 'Then you had better set forth your own opinion (first). I will refute it.'
> The Buddhist teacher, thereupon, set forth his doctrine of impermanence and said: 'All composite things are in process of destruction every moment, why? because they disappear in the end.' He further supported this by various arguments. The heretic opponent could repeat all these arguments of the Buddhist priest after once hearing them and began to criticise them one by one by processes of reasoning. On being requested to commit to memory and repeat these refutations the priest failed to do so. He could not even re-construct his own arguments, though requested to do so.
> Thus the Buddhist priest was completely defeated. The heretic said: 'You are a Brahmin by caste and I also am a Brahmin. We are not allowed to kill. I will beat you on the back instead, in order to show that I am the victor.' He did so. The king gave him three lacs of gold as a prize. On receiving the gold he distributed it among the people at large and returned to the Vindhya mountain where he entered a rocky cave."

The story has a happy ending after all, for Vasubandhu, after his return, composed a work criticising the Sāṃkhya doctrine in such a competent manner that the heretics had nothing left for them to fall back upon. In this way, without meeting Vindhyavāsa, Vasubandhu took full vengeance on him and wiped off the disgrace put upon his teacher.

These examples show that loosing a debate could have serious consequences. It is not surprising that debating manuals were produced, some of which have survived. Public debates had to be won, and all possible means were used in order to attain that goal. This included trickery, but also straightforward, and soundly based, criticism of each other's positions. It is this aspect of the debate tradition which has no doubt exerted a more lasting influence. Criticism directed at others and criticism received from others had the unavoidable effect that all participants in these debates straightened out their own positions. Incoherent or inconsistent views might not survive scrutiny, not by an opponent in debate, but neither by the thinker who did not wish to be exposed by those who disagreed with him.

This process of improving and systematising the own position becomes visible, perhaps for the first time, in a scholastic development of Buddhism during the centuries preceding the Common Era. Buddhist scholasticism of that period, called *abhidharma*, has mainly survived in two bodies of texts, belonging to two schools of Buddhism. One of the two, belonging to the Theravāda school of Buddhism, shows an ongoing refinement, but little or no attempt to develop a coherent system of thought. Such an attempt characterises the other school, Sarvāstivāda, several texts of whose canonical "Basket of scholasticism"

(*abhidharma-piṭaka*) testify to the innovations made in this domain. Since the innovations concerned were made on the basis of traditional material, the result is often quite complex, and this is not the place to deal with them in full detail.[37] Only some striking features must here be mentioned. The Sarvāstivāda conception of the world is essentially atomistic. The macroscopic, and therefore composite, objects which we are acquainted with from everyday experience do not really exist. What really exist are the ultimate constituents, called *dharma*s. A particularly important composite object is the human person which, too, does not really exist. The atomistic understanding of the world also finds expression in the belief in momentariness: nothing exists for more than a single moment.[38] Various questions linked to this atomistic vision of the world are raised and often answered by introducing an appropriate *dharma*. The question, for example, how different bundles of *dharma*s stick together so as to form different persons (remember that persons do strictly speaking not exist), is answered with the introduction of a *dharma* called *prāpti* 'possession'. Other difficulties were connected with the belief that mental events occur only one at a time in one person. This leads to difficulties in the case where someone observes, say, his own desire. This activity involves two mental events, the observation and the desire, which cannot simultaneously exist. When the observation is present, the observed desire must of necessity be non-present. Observation of a desire is therefore only possible if a non-present object (the desire) exists. The Sarvāstivādins concluded from this that past and future exist. This particular view, incidentally, is responsible for their name, Sarvāstivāda, the "position (*vāda*) according to which everything (*sarva*) exists (*asti*)". Sarvāstivāda, as will be clear from this very brief presentation, made a major effort to rationalise its teachings, Theravāda did not. Sarvāstivāda played a major role in the tradition of debate that came to involve all schools of philosophy, whether Buddhist, Brahmanical, or Jaina; it seems even likely that the Sarvāstivādins were the first to adhere to this tradition of debate in India. Theravāda played no such role, and indeed left India before this tradition of debate had attained a prominent position.

The marginal role of Theravāda Buddhism is illustrated by one of the earliest surviving texts in India dedicated to criticising the positions of others. This text is the Kathāvatthu "Text dealing with disputes", according to tradition composed 218 years after the death of the Buddha (Hinüber, 1996: 70 f.), and belonging precisely to the Theravāda branch of Buddhism. It criticises in its oldest portions a position which we know was held

[37] For a slightly more detailed, but still very incomplete, presentation, see Bronkhorst, 2000: 76-127.
[38] Momentariness is not explicitly mentioned in early Sarvāstivāda Abhidharma texts, but this position can quite safely be attributed to their authors; see Bronkhorst, 1995.

by the Sarvāstivādins, mentioned earlier. An analysis of the criticism presented in the Kathāvatthu shows that its author had not understood, and had perhaps no knowledge whatsoever of, the arguments used by the Sarvāstivādins to justify their position. The Sarvāstivādins held that past and future exist, and their argumentation, as we have seen, was built on their fundamental belief that no two mental events can simultaneously occur in one person. The author of the Kathāvatthu presents instead an argument that is totally nonsensical.[39]

The Kathāvatthu, then, is a text which criticises the position of others without being properly informed about it (at least in this case). No wonder that its uninformed criticism carried little weight. The Sarvāstivādins did not, and did not need to, change their views as a result of the criticism expressed in this Theravāda text. What is more, the Theravādins felt no need to tighten up their own views and develop them into a coherent whole.

All this takes us back to the question of writing. One may not necessarily need to know writing in order to debate, nor for producing a well-constructed argument, or for seeing the weakness in the position of someone else. However, to destroy the position of one's opponent, one has to know that position. If the opponent belongs to a tradition altogether different from one's own — as is the case in a confrontation between a Brahmin and a Buddhist — knowledge of the other's texts is unlikely to be part of one's own curriculum. In such cases the most obvious way of gaining access to the position and defensive arguments of one's opponent is to study the texts which the opponent himself has read. (Other ways are possible, but no doubt rare: according to legend, the Brahmanical thinker Kumārila had in his youth joined a Buddhist monastery in order to gain deep knowledge of the doctrines he was going to criticise; cp. Hulin, 2001: 24.)

For much of the history of Indian philosophy there can be no doubt that the main participants in the ongoing debate read the writings of their opponents. Authors criticise each other and show considerable familiarity with the writings of their worst enemies. For this part of the history of Indian philosophy the importance of writing cannot be doubted.

To illustrate the extent to which at least certain philosophical authors were acquainted with the literature of their opponents, I refer to a passage in the Nyāyavārttika of Uddyotakara, a commentator who wrote around the year 600.[40] In this passage Uddyotakara criticises the Buddhist doctrine of No-Self (*anātman*). One of the arguments he presents is that the Buddhists, by believing this, go against their own sacred texts. At this point

[39] Bronkhorst, 1993.
[40] For details, see Bronkhorst 1996.

Uddyotakara cites a text which it is not possible to locate in the surviving versions of Buddhist Sūtras. But apparently the cited passage was not well-known to the Buddhists in Uddyotakara's time either, for he says: “Don't say that this is not Buddha word; it occurs in the Sarvābhisamaya Sūtra.” Apparently Uddyotakara had made extensive searches in the sacred literature of his opponents, so much so that he had unearthed a passage that few Buddhists knew.

We have to address the question whether classical Indian philosophy came about as a result of acquaintance with writing. Is it possible that it would *not* have come about without it? Questions like these are difficult to answer. Most of the earliest surviving philosophical texts present their own system and pay little explicit attention to other philosophies. It seems safe to maintain that they had become interested in systematising their own position and removing inconsistencies because they felt threatened by other thinkers. But one can *be criticised* by others without knowing the details of their positions. What is more, one can *criticise* the positions of others without knowing those positions all that well.

We have seen that the Kathāvatthu illustrates this. It criticises other positions, but in the one case where we can check what it is doing we find that it had not at all understood the position it criticises. Not seeing the inner coherence of the views it criticises, the Theravāda tradition apparently did not feel the need to increase the coherence of its own, as the Sarvāstivādins had done. There is a great temptation to conclude that the Theravādins had no access to the texts of their opponents. This in its turn might be interpreted to mean that they did not yet use writing at that period. But was the situation different for the contemporary Sarvāstivādins?

Unfortunately this is far from clear. It seems likely that the Vaiśeṣika philosophy arose under the influence of Sarvāstivāda thought (Bronkhorst, 1992), but it is not clear how much in-depth knowledge of that Buddhist school was required in order to be familiar with its main theoretical presuppositions; the Vaiśeṣika Sūtra (the oldest text of this school) may in any case be too young to be of importance in this discussion. The same may be true of the Nyāya Sūtra. The early Sarvāstivāda texts that have been preserved do not as a rule speak of the positions of others. However, a Gandhari manuscript fragment from the first century C.E. (which is being prepared for publication by Collett Cox) contains parts of a polemical, non-Sarvāstivāda, Abhidharma text which criticises alternative positions, most notably the Sarvāstivāda. Alternative views are also mentioned in he Mahāvibhāṣā, a voluminous commentary which may have been composed, in its earliest form, in the first half of the second century C.E. This text does not only mention the deviating opinions of

other Sarvāstivādins, also rival schools of Buddhism receive coverage, as do a variety of non-Buddhist schools.[41] Unfortunately it seems that the information we find in this text about non-Buddhist schools is minimal, so much so that no certain conclusions can be drawn about the acquaintance of its authors with the texts of their non-Buddhist rivals. This question is in need of further study as far as the Mahāvibhāṣā is concerned,[42] but it is clear that other early Sarvāstivāda texts, including the Abhidharmahṛdaya,[43] the Saṃyuktābhidharmahṛdaya,[44] and even Vasubandhu's much more recent Abhidharmakośabhāṣya[45] tell us very little about rival non-Buddhist schools. The text which is partially preserved in the so-called Spitzer manuscript (third century C.E. at the latest), on the other hand, contains frequent references to "non-Buddhist literature and topics, e.g., the Mantras, Brāhmaṇas and Upaniṣads, *arthaśāstra*, *kāmaśāstra*, Rāmāyaṇa, Mahābhārata, the *kalā*s, etc., and notably to the non-Buddhist philosophical schools of Sāṃkhya and Vaiśeṣika" (Franco, 2000: 558 ([53])). Familiarity with the doctrines of different schools is also attested in the poem called "Acts of the Buddha" (*buddhacarita*) by the Buddhist author Aśvaghoṣa, who belonged to the first centuries of the Common Era. This poem contains a description (and criticism) of the Sāṃkhya philosophy which seems to be well informed.[46] It also contains indications suggesting that its author was acquainted with Vaiśeṣika.[47] Regarding Aśvaghoṣa, Johnston observed (1936: II: xviii): "he had an acquaintance, so wide that no parallel can be found to it among other Buddhist writers, with all departments of Brahmanical learning, including some knowledge of the Veda and ritual literature as well as mastery of all the sciences a kavi was expected to have studied." However, this may not be evidence for the accessibility of all this learning to non-Brahmins, but rather for the opposite, viz., that Aśvaghoṣa was born a Brahmin and had been given a Brahmin's education; this is indeed what the Chinese tradition maintains. For familiarity with Brahmanical philosophical learning on the part of a Buddhist author we have to turn to Nāgārjuna, whose Vaidalyaprakaraṇa and Vigrahavyāvartanī betray thorough knowledge of the Nyāyasūtra.[48] All this information about other schools in these works may not, however, be of much help, since it seems unlikely that anyone would seriously maintain that the Mahāvibhāṣā and the poems of Aśvaghoṣa, not to speak of the

[41] EIP VII, pp. 110-111 (R.E. Buswell and P.S. Jaini).
[42] Cp. Willemen, Dessein, Cox, 1998: 239 (Sāṃkhyas, Vaiśeṣikas, Lokāyatas, Śabdavādins).
[43] Willemen, 1975.
[44] Dessein, 1999.
[45] See the indexes in Abhidh-k-bh(Hi) and Abhidh-k(VP) VI; cp. Bronkhorst, 1997.
[46] Cp. Ramakrishna Rao, 1964; Kent, 1982.
[47] Bronkhorst, forthcoming.
[48] Bhattacharya, 1977; Lindtner, 1982: 87 f.; Bronkhorst, 1985; Oetke, 1991: 44 f.; Tola & Dragonetti, 1995; Meuthrath, 1999.

works of Nāgārjuna, were composed orally: with these texts we have no doubt entered the age of literacy.[49]

And yet, even in an age of literacy information may be difficult to obtain. Qvarnström (1999: 172) paints the following depressing picture:

> "[T]here were no public libraries, no public centers of education or information. Philosophical systems were, so to speak, private property. To learn something about the 'exoteric' views of an opponent one might attend or participate in a public debate (*vāda*)."

This picture is no doubt too bleak. Hinüber (2001: 359), referring to Qvarnström's remarks, draws attention to the Vinaya of the Mūlasarvāstivādins, which stipulates that when books are left by testament to the Buddhist order, the Buddhist books should be kept and given to the library, whereas books belonging to other śāstras should be sold.[50] This rule would make no sense if there were no readers who read books belonging to different philosophical and scientific traditions.

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Conclusions

The conclusions to be drawn from the above reflections cannot but be disappointing. It may be that writing played a role in the composition of Pāṇini's grammar, but we don't really know. It may be that literacy, and access to the writings of thinkers belonging to different schools, made possible the intellectual revolution that created classical Indian philosophy, but once again, we cannot be sure.[51] All we know is that the subsequent development of classical Indian philosophy depended upon access to the written documents not only of the own school, but to those of others as well.

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[49] It is in this context interesting to recall that the (Mahā-)Vibhāṣā is familiar with the numerical place-value system (Bronkhorst, 1994).

[50] Gilgit Manuscripts vol. III part 2, p. 143 l. 5-7: *pustakānāṃ buddhavacanapustakā avibhajya cāturdiśāya bhikṣusaṃghāya dhāraṇakoṣṭhikāyāṃ prakṣeptavyāḥ / bahiḥśāstrapustakā bhikṣubhir vikrīya bhājayitavyāḥ /*

[51] The extent of the interaction between different schools of thought during the centuries preceding the Common Era is often underestimated; see Bronkhorst, forthcoming a.

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Abbreviations:

Abhidh-k(VP)	Vasubandhu, Abhidharmakośa, traduit et annoté par Louis de La Vallée Poussin, 6 vols., Paris 1923-1931
Abhidh-k-bh(Hi)	Akira Hirakawa, Index to the Abhidharmakośabhāṣya, pt. 1-3, Tokyo 1973-1978
EIP	The Encyclopedia of Indian Philosophies, ed. Karl H. Potter, Delhi 1970 ff.
EIP VII	EIP, vol. VII: Abhidharma Buddhism to 150 A.D., Delhi 1996
Kane, HistDh	Pandurang Vaman Kane, History of Dharmaśāstra, second edition, Poona: Bhandarkar Oriental Research Institute, 5 vols., 1968-1977
Lal(V)	Lalitavistara, ed. P.L. Vaidya, Darbhanga 1958 (Buddhist Sanskrit Texts, 1)
Mahā-bh	Patañjali, (Vyākaraṇa-)Mahābhāṣya, ed. F. Kielhorn, Bombay 1880-1885
Mhbh	Mahābhārata, crit. ed. V.S. Sukthankar u.a., Poona 1933-41 (Bhandarkar Oriental Research Institute, Poona)