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# EXPANDING AND MERGING HORIZONS

Contributions to South Asian  
and Cross-Cultural Studies  
in Commemoration of Wilhelm Halbfass

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## The Languages of Science in Early-modern India \*

An important factor in the modernization of the production and dissemination of knowledge in Europe was the transformation, beginning in the seventeenth century, of the vernaculars into languages of science and the eventual displacement of long-dominant Latin. Although South Asia had known a history of vernacularization in the domain of expressive textuality (“literature”) astonishingly comparable to that of Europe, Sanskrit persisted as the exclusive medium of communication for many areas of science, systematic thought, and scholarship more generally, outside the Persianate cultural sphere until the consolidation of colonial rule in the last decades of the eighteenth century. This is a puzzling difference, and arguably a consequential one, in the histories of their respective modernities.

The problem of the relationship between knowledge forms and language choice has a long history in India, beginning with the multiple linguistic preferences shown by Buddhists until Sanskrit gained ascendancy in the early centuries of the Common Era. I address some of this premodern history elsewhere.<sup>1</sup> Here I want to situate the problem of language and science more narrowly conceived within the context of the collaborative research project within which I first formulated it, and that has something to do with the descriptor “early-modern” in my title. I then go on to reflect briefly on what might we mean by the category “science” (or “systematic knowledge,” or “learning”) in this period and in its relationship to the complex “Question of the Language” with its two kinds of concerns, epistemological and social.<sup>2</sup> After delineating the boundaries of language choice in terms of a number of specific intellectual disciplines and vernaculars, I look more closely at one tradition, that of Brajhasha. Next, some of the presuppositions in Sanskrit language philosophy are reviewed that may have militated against the vernacularization of intellectual discourse. A useful orientation here, which summarizes the dominant position of early-modern Sanskrit intellectuals, is the work in *mīmāṃsā* of Khaṇḍadeva, the discipline’s foremost exponent in mid-seventeenth-century Benares. I end with drawing and weighing some contrasts with the case of Europe.

It bears noting how thoroughly the question of the medium of intellectual discourse in early-modern India has been ignored in scholarship. Thanks to the work of Staal and others, we may understand something of the discursive styles of the “Sanskrit of science”.<sup>3</sup> But we still understand next to nothing of its ideology or sociology, let alone how this might compare to other cultural formations contemporaneous to it. These are obviously vast and complex issues – the sort that, I trust, might have appealed to the searching intelligence Wilhelm

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\* This is a revised version of a paper delivered at the annual meeting of the Association for Asian Studies, Chicago, March 2001.

<sup>1</sup> Pollock 2006, especially chapter 1.

<sup>2</sup> These two concerns are well described for Europe by Roger Chartier (1996: 12).

<sup>3</sup> See the learned and challenging account in Staal 1995. The true question in the history of Indian science for Staal is not why it never vernacularized (an issue not in fact raised at all), but rather why India failed to invent an artificial language for science, except in linguistics, to which it remained confined. The issue of language medium is raised here (as it is elsewhere) only in passing; cf. p. 116: “There exists, in regions outside Kerala, in Sanskrit and other Indian languages, a considerable number of texts that proclaim themselves ‘Kerala Jyotiṣa’” (referring to K.V. Sarma, *A History of the Kerala School of Hindu Astronomy* [1972], though the bibliography Sarma provides consists entirely of Sanskrit texts).

Halbfass possessed – and it is not possible in this brief space to offer more than a sketch in broad lineaments, and to do so briskly and in a tentative spirit.

### Knowledge-Systems on the Eve of Colonialism

The research project of this name that forms the context for the thematic of the languages of science is designed to investigate the substance and social life of Sanskrit learning from about 1550 to 1750 across four geographical areas and eight intellectual disciplines.<sup>4</sup> As for the time boundaries, the endpoint is set by the consolidation of colonial domination in our spatial foci (Bengal 1764; Thanjavur 1799; Varanasi 1803; Maharashtra in the course of the following decade). Somewhat more arbitrary is the starting point. It is certainly not meant to be hard and fast; obviously different knowledge-systems followed different historical rhythms. But in many ways the work of the logician Raghunātha Śiromaṇi in the north and the polymath Appayya Dikṣita in the south (both fl. c. 1550) marked something of a historical break. The spatial boundaries are similarly somewhat flexible, but to the degree possible attention will be concentrated on trying to understand the varying conditions of intellectual production in what are, in socio-political terms, very different regional complexes (Delhi/Benares, Thanjavur/Madurai, Mithila/Navadvip, and Maharashtra). In addition to these time-space limits, the project restricts itself to eight disciplines: *vyākaraṇa* (language analysis), *mīmāṃsā* (discourse analysis), *nyāya* (logic and epistemology), *dharmasāstra* (moral philosophy, broadly speaking), *alaṅkārasāstra* (poetics), *āyurveda* (life science), *jyotiḥśāstra* (astral science), *prayoga* (ritual theory). These have been selected for their centrality to Sanskrit culture (language and discourse analysis, for example), for their comparative-historical value (life and astral sciences, for example), or for the new vitality the system seems to have demonstrated during these two centuries (ritual science).

The project is at once self-contained and preparatory to a comparative history, first with Indo-Persian and vernacular scholarship, and then, more grandly, with European thought. In the first instance it is essential to understand the nature of the Sanskrit knowledge-systems themselves, not only the conditions for their dynamism during the period in question, but the conceptual features that, with respect to their capacity for understanding and explaining the world, made them so vulnerable to the knowledge produced in capitalist modernity. The two centuries in question witnessed a flowering of scholarship, with an increase in the production of texts across disciplines and the rise of some new conceptual forms, including a degree of attentiveness to the historicity of intellectual life previously unexampled.<sup>5</sup> This dynamism lasted until the end of the eighteenth century, when a decline set in that ended the age-old power of Sanskrit intellectuals to define the Indian thought-world. Whether always and everywhere a causal relationship obtained between the rise of colonial power and the decline of Sanskrit culture remains to be determined; in the domain of literary culture more narrowly conceived I have argued otherwise.<sup>6</sup> But that many forms of Sanskrit knowledge proved powerless in the face of their European counterparts is a historical fact that can hardly be disputed. Sciences such as *vyākaraṇa* or *mīmāṃsā*, which were not easily integrated in Euro-

<sup>4</sup> Further information may be obtained at the project's website, [www.columbia.edu/itc/mealac/pollock/sks/](http://www.columbia.edu/itc/mealac/pollock/sks/) (27.07.2006). In addition to the materials available there, "Working Papers on Sanskrit Knowledge-Systems on the Eve of Colonialism I" was published in the *Journal of Indian Philosophy (JIP)* 30/5 (2002); "Working Papers ... II" was published in *JIP* 33/1 (2005), and "Theory and Method in Indian Intellectual History" is scheduled for publication in 2006.

<sup>5</sup> Pollock 2001b.

<sup>6</sup> This is discussed in Pollock 2001a.

pean conceptual schemes, retreated without a murmur as creative modes of thought, and it is important to understand their substance if we are to make sense of how this could have occurred.<sup>7</sup> Other types of knowledge sharing more common ground for discourse with European sciences, such as *jyotiḥśāstra* or *āyurveda*, did briefly resist before ceding authority in view of what was sometimes openly acknowledged to be the greater empirical success of those sciences (though of course some forms of medicine as well as astrology remained vital in South Asia, and have found a following in the antimodernist West). In many cases, the fall-off in scholarly production was swift and absolute, as the case of *rājadharmaśāstra* shows. This sub-discipline witnessed an explosion of activity in the sixteenth and seventeenth centuries almost unprecedented in sheer magnitude and scope, with works produced by Ṭoḍarmal (died 1589), Mitramiśra (fl. 1600-1640), Nīlakaṇṭhabhaṭṭa (fl. 1610-1645), Ananta-deva (fl. 1645-1675), among others. Thereafter, the silence that reigns in Hindu political thought is almost complete. In other core knowledges such as *alāṅkāraśāstra* no significant scholarship – significant in the eyes of the tradition itself – was ever again to be written. How to account for this momentous rupture is a complex question, and one of great importance both for history – the history of knowledge, colonialism, and modernity – and for cultural and social theory.<sup>8</sup>

It was largely as a consequence of pragmatic method, intuition, and professional orientation that the project has been organized by language, first Sanskrit, and eventually Persian and *deśabhāṣā*, or the languages of Place. But the decision to concentrate initially on Sanskrit was made also because we believed that the Indian knowledge-systems of the period were in fact concentrated in Sanskrit. Is it actually the case, however, that language choice in India (or anywhere else) has been a factor in the production of science (and systematic thought and scholarship), and if so, how and to what degree? And was science in the period 1550-1750 in fact concentrated in Sanskrit, and if so, why and with what consequences?

### “Science” and Language in Premodern India

Before the question of the relationship of language and science can even be raised we need to ask what is meant by “science”. This is no easy question to answer, however, for the intellectual history of premodern South Asia – or indeed, for that of the West. As recently as 1993 scholars were bemoaning the fact that there existed “no critical discussion of the changing meaning of the word ‘science’” in Europe; and in fact, an important recent collection on science and language in Europe over the past four centuries evinces complete indifference to the semantics of the term that defines the book’s very problematic.<sup>9</sup> The situation is hardly less acute in South Asian scholarship. “Science”, “systematic knowledge”, “scholarship”, “learning” (as well as “rule” and even “scripture”) would all be legitimately translated by the Sanskrit word *śāstra*. But what exactly is *śāstra*, and how does it relate to other kindred concepts, such as *jñāna* (and *viññāna*), or *vidyā*? Clearly it is no straightforward matter to map onto the English term “science” – which points to no natural kind but is a worryingly pliable signifier, indeed almost talisman (witness “Christian science” or “creation science” or “political

<sup>7</sup> This is not to overlook the irony that language analysis played a significant role in the creation of modern linguistics (historical-comparative, structural, and transformational). But the focus of this project is the fate of the Sanskrit tradition itself in South Asia.

<sup>8</sup> Pollock 2001b. The situation in other regions entering the process of colonization may have been different. In Egypt, for example, Pascal Crozet (1999) argues that traditional sciences serving traditional needs continued to develop until the end of the nineteenth century.

<sup>9</sup> See Cunningham and Williams 1993: 420, note; Chartier and Corsi 1996.

science”) – the congeries of terms and texts and intellectual practices we find in India during the two centuries before colonialism.

At the same time, there is a certain circularity, for traditional India, that presents itself in the very formulation of the central problem of this essay: If, from a long-term perspective, “science” – whether as *jñāna* in the sense of comprehension, or *śāstra* in the sense of system – is simply “knowledge”, *veda*, then science can *only* have been expressed in the Sanskrit language. This is surely one implication of the discourse on the *vidyāsthānas*: These fourteen (or eighteen) “knowledge-sites”, which were implicitly held to constitute the realm of systematic thought, all derive their truth from their relationship to Vedic revelation.<sup>10</sup> And accordingly throughout much of Indian history, new – or, ipso facto, counter – *śāstra* (or *jñāna* or *vidyā*) required new or counter language, beginning with the *śāstra* comprised in the teaching of the Buddha.

This apparently general cultural presupposition finds an echo in the widespread commitment to a postulate of Sanskrit language ideology: correct language is required for the correct communication of reality (“science”). This idea is at least as old as Kumārila in the seventh century:

The scriptures of the Śākyas and Jains are composed in overwhelmingly corrupt language (*asā-dhuśabdabhūyishtha*) – with words of the Magadha or Dakshinatya languages or their even more dialectal forms (*tadapabhraṃśa*). And because of their false composition (*asannibandhanatva*), they cannot be considered science (*śāstratvam na pratiyate*) ... When their words are false (*asat-yaśabda*) how could their doctrines ever be true (*arthasatyatā*)? ... That the Veda, on the other hand, is an autonomous source of true knowledge is vouchsafed by its very form (*rūpād eva*).<sup>11</sup>

Kumārila is entirely typical in his view on the relationship between “correct” language, Sanskrit, and truth, that only Sanskrit can articulate reality and thus speak “science”. Even the Indian Buddhists eventually agreed, after all. And his position was one *mīmāṃsakas* such as Dinakara Bhaṭṭa (fl. 1625) were still endorsing a millennium later:

The remembered Vedic text (*smṛti*) that restricts usage to grammatically correct [i.e., Sanskrit] language – i.e., *sādhūn evābhībhāṣeta nāsādhūn* (“Use only correct words, not incorrect ones”) – ... derives its authority from the extant Vedic text (*śruti*) requiring one to speak the truth and to avoid lies.<sup>12</sup>

Such a (mis)conception is not, of course, peculiar to Sanskrit intellectuals: only Greek can really speak philosophy for Derrida, only German for Heidegger. But Sanskrit intellectuals based their view on a far more clearly enunciated theory, which we will examine below. Some continuing energies from their various postulates and the quest for an ever more perfect fit between language and things – for an ever more sanskritic Sanskrit – may also have conditioned one of the most far-reaching developments in late-medieval intellectual life: the fash-

<sup>10</sup> For the *vidyāsthānas* see Pollock 1989. An influential enumeration is found in the *Viṣṇupurāṇa* (fifth century?): “The four Vedas, the [six] *vedāṅgas* (language analysis, phonetics, etymology, metrics, astral science, ritual science), *mīmāṃsā*, *nyāya*, *purāṇa*, *dharmasāstra* are the fourteen sciences. These number eighteen by the addition of *āyurveda*, *dhanurveda*, *gāndharva*, and *arthaśāstra*” (*VP* 3.6.28-29).

<sup>11</sup> *TV* on 1.3.12, p. 164,9-15 (I slightly rearrange the verse and the prose that glosses it); p. 166,2; cf. *NS* p. 236,10ff.

<sup>12</sup> *BhD* fol. 41v,1-2. See also *ŚD* (p. 47,4): *sādhūn śabdān satyaparyāyān*. Injunctions such as *nāsādhū vadet* (“One should not speak ungrammatically”); *sādhubhir bhāṣeta* (“One should use grammatical speech”); *na brāhmaṇena mlecchitavai* (“A Brahman must not barbarize”); *na mlecchabhāṣām śikṣeta* (“One should not learn a *mleccha*’s language”) are often discussed together, as in the *TV* and *NS* on the *vyākaraṇādhikaraṇa* (*PMS* 1.3.24-29). As we see below, later *mīmāṃsakas* like Khaṇḍadeva discriminate among different realms of application of these *vidhis*.

ioning of a new idiolect by *navyanyāya* (the new logic), beginning in the thirteenth-fourteenth centuries, that was to profoundly influence discursive style across disciplines and regions. Indeed, exploiting to an extreme degree linguistic capacities with which Sanskrit is especially well endowed (in particular nominal compounding), this philosophical register was to make the transition to science and scholarship in vernacular languages even more difficult than language ideology already had. Sanskrit scientific thought had long been not only thought in Sanskrit but thought about Sanskrit, in other words, about the nature of this particular language and its attributes. (It is, for example, no easy thing to discuss *mīmāṃsā*'s concern with deontic verbal morphemes [*vidhi liṅ*] in languages that lack them.) This was the tendency that *navyanyāya*, with its invention of a new philosophical vocabulary, amplified to the point of untranslatability, even unintelligibility.<sup>13</sup>

Other elements of language ideology, in addition to the linkage between language that is correct/true (*sādhu/sat*) and the truth itself (*satya*), will be addressed below. But let us be more empirical for a moment, and examine the language practices of "science" understood as broadly as possible. Were there forms of systematic knowledge that were never communicated in *bhāṣā* texts prior to the colonial age?

Consider first the Indian *vidyātraya* of *pada*, *vākya*, and *pramāṇa*, the triple science of words, discourse, and grounds-of-knowledge, which, whatever its status in earlier times, had become by the seventeenth century an actual ideal of intellectual perfection. No synthetic work on the question of language medium in these disciplines has ever been done, but an informal survey suggests that access to them was attainable only through Sanskrit. Both *nyāya*, the *pramāṇa-śāstra* (along with the larger questions of epistemology), and *mīmāṃsā*, the *vākyaśāstra*, were entirely untouched by vernacularization; I have encountered not a single premodern work in either area in any regional language (except for the occasional and very late – almost certainly colonial-era – translation). The case of grammar and the related discipline of poetics is somewhat different, and we are confronted, too, with a significant and puzzling unevenness between north and south India. The Kannada philological tradition commenced c. 875 with an important grammatical-poetics text, the *Kavirājamārgam*, of Śrīvijaya, which was quickly followed by elementary grammatical (and lexicographical and prosodical) works leading to one of the most sophisticated descriptions of a vernacular language in the premodern world, the *Śabdamañidarpaṇam* of Kēśirāja (mid-thirteenth century).<sup>14</sup> Developments in Tamil are more or less contemporaneous with Kannada: Leaving aside the undatable *Tolkāppiam* (though its commentaries, appearing first in the eleventh century, suggest a much later origin than usually assumed), these include the grammar *Naṅṅūl* by Pavaṇanti (early thirteenth century), and the more strictly poetics texts *Viracōḷiyakārikai* (c. 1063-1069) and *Taṅṅiyalaṅkāra* (somewhat earlier). In the following three centuries appear grammatical works in Telugu (*Āndhrabhāṣābhūṣaṇamu* of Kētana, c. thirteenth century, and *Āndhraśabdacintāmaṇi* ascribed to the eleventh-century poet Nannaya but more likely authored by Appakavi in the last

<sup>13</sup> A consideration of the place of *navyanyāya* terminology in the early-modern *mīmāṃsā* is offered in McCrea 2002, and a useful general account in Staal 1995: 79-88. For the ridicule *navyanyāya* style earned in some quarters of the seventeenth-century intelligentsia, see the *VGĀC* v. 555bc (*paraṃ vāco vaśyān katipaya-padaughān vidadhataḥ | sabhāyāṃ vācāṭāḥ śrutikaṣu raṅanto ghaṭapaṭān ||*, "The [logicians] incessantly use a few words that are entirely dependent on language itself [i.e., metalinguistic?], and stridently bang their [verbal] pots and pans in the halls of debate").

<sup>14</sup> On the former see Pollock 1998a; the latter is examined in detailed in Pollock 2006: chapter 9, and in Pollock 2004.

quarter of the sixteenth century) and Malayalam (*Lilātilaka*, fourteenth century).<sup>15</sup> Wholly different is the situation in the north, where vernacular language without exception remained ungrammaticalized until the coming of the new colonial order of knowledge. A striking instance of this negative dynamic is Marathi. The language was conceptually objectified by the late tenth century and became the vehicle for expressive literature by the thirteenth (probably) or fourteenth (definitely). By the seventeenth century it was continually being adduced by Maharashtra-born scholars (Nilakanṭha Caturdhara is a good example) when glossing texts, a sure sign of its primacy in their everyday sphere. And, most significant, it was the language of the region where cultivation of Sanskrit grammatical studies had attained the greatest brilliance anywhere in seventeenth-century India. Yet systematic reflection on Marathi grammar (and lexicon and prosody) is, with one exiguous exception, entirely absent before the coming of European science.<sup>16</sup>

The linguistic monopolization by Sanskrit over the three primary disciplines of *pada*, *vākya*, and *pramāṇa* tallies with the evidence from many other areas of systematic knowledge. Again, this question awaits detailed study, but some first observations seem likely to be borne out by further work. In *dharmaśāstra*, vernacular works are exceedingly rare; there may well be more than the *Vijñāneśvariyaṃ*, a Telugu adaptation by Kētana of the celebrated Sanskrit work produced in Kannada country in the twelfth century, but that is all I have ever encountered.<sup>17</sup> In the field of *āyurveda*, to take a second example, matters are somewhat less clear. Sanskrit appears to have maintained a statistical dominance in some areas until the latter half of the eighteenth century, at which point a new linguistic situation began to develop, as medical authors began producing literary discourses in more than one language.<sup>18</sup>

Philosophical-religious poetry might seem to constitute one exception to the general exclusion of the *bhāṣā* from the realm of systematic thought, for it is not only common, but sometimes foundational to a vernacular tradition, as in Marathi. The thirteenth-century *Vivekasindhu* of Mukundarāja is a remarkably precocious example of vernacular Advaita-Vedantic exposition, as the near-contemporary work of Jñāneśvar, the *Bhāvārthadīpikā*, is a remarkably precocious example of vernacular philosophical-poetic commentary.<sup>19</sup> Similarly Śrīvaiṣṇava theology was composed in a new Sanskrit-Tamil register (*maṇipravāla*) in Tamil country, Viraśaiṅva theology in Kannada (and sometimes Telugu) in the Deccan. But in fact, I do not believe these offer an exception to the norm that, with the Hinduization of Sanskrit in the present age, we are apt to forget: The vehicle of organized, systematic *laukika* knowledge before colonialism was Sanskrit, while the *bhāṣās*, at least in their incarnation as literary languages, were in the first instance the voice of *alaukika* wisdom (a situation closely paralleled by Latin and the European vernaculars).<sup>20</sup> To make this distinction is not to value information

<sup>15</sup> On the *Lilātilaka* see Freeman 1998; on the dating of the *Āndhraśabdacintāmaṇi*, Rao 2003: 386-388.

<sup>16</sup> The exception is a brief account of Marathi morphology in the *Pañcavārtik* of Bhīṣmacārya sometime in the fourteenth century. On the vernacular glossators, the old essay by Printz (1911) remains useful. The north-south difference in grammaticization is discussed in Pollock 2006: chapter 10.

<sup>17</sup> This work is complemented by what appears to be one of the earliest vernacular texts on polity, the *Beddaniti* (perhaps as early as the fourteenth century, see Wagoner Ms.), but except in literary texts the tradition of vernacular political thought seems not to have been continued.

<sup>18</sup> We thus find one Vyāsa Keśavarāma composing a bilingual Gujarati-Sanskrit medical glossary, while Mahārāja Pratāpasimha of Jaipur wrote in Marwari, and then translated his own work into Sanskrit verse and Hindi prose (Dominik Wujastyk, personal communication).

<sup>19</sup> On the *Vivekasindhu*, see Tulpule 1979: 316.

<sup>20</sup> On vernacularization in inscriptions, see Pollock 1996. Phillip Wagoner has reminded me of the *vyāvyahārika* usage among the Niyogi Brahmins of Andhra.

over imagination or to unjustly narrow the scope of *śāstra*; it is to describe a division of language labor, one that was real and highly consequential. It is true that in virtually every case in South (and Southeast) Asia the inaugural use of the *bhāṣās* was entirely pragmatic – in the business-end of inscriptions – and this *vyāvahārika* usage did leave later textual traces in some regional traditions. But outside the Persianate world, *systematic knowledge* appears to have remained largely the preserve of Sanskrit, and the literary and spiritual that of the *bhāṣās*.

The general tendencies in learning and language suggested by the above data are fully corroborated for a tradition that I want to look at in a little more detail, Brajbhasha, the language that supplemented, and then effectively replaced, Sanskrit as the transregional literary code in north India during the period 1600-1800.

### The Language of Braj Beyond the Literary

Brajbhasha is an important and especially good case to study for the problematic of language and science.<sup>21</sup> Although the history of non-literary Old Hindi has never been written – all the important survey works entirely ignore such materials – the resources for doing so exist in abundance and are comparatively well-ordered. These include the various manuscript catalogues compiled as a result of intensive searches in the early part of the twentieth century, including the three-volume manuscript catalogue published by the Nagaripracharini Sabha that lists according to genre nearly 4500 works (culled from a five-volume *Khoj* series).<sup>22</sup> Now, while it is admittedly hazardous to draw large conclusions from one survey of manuscripts however systematically prepared – let alone historical conclusions, since the majority of the manuscripts are undated – it does seem significant that something upwards of *seventy percent* of these are texts we would broadly classify as expressive, imaginative, “literary”. Of the remaining quarter, 500 or so, the greater part deal with practical arts: *jyotiṣ* (astrology), *śakun* (augury), *śālihotra* (veterinary science), *sāmudrikaśāstra* (physiognomy), and the like; religious practices, including works on *karmavipāk* (karma theory), *māhātmya/vrat* (sacred topography; religious vows), *stotra* (hymnody), *tantra/mantra/yantra/indrajal* (mystical and magical arts); and gnomic wisdom (versions of *Hitopadeśa* and *Pañcatantra*).<sup>23</sup> Works that concern themselves with *darśan*, the philosophical viewpoints, are conspicuous for their rarity.<sup>24</sup> The only areas of growth for Brajbhasha scientific textuality in the early-modern period are *āyurved* (Vol. 1, 48 mss.) and the adjacent field of *kāmaśāstra* (numerous examples of *Kokaśāstra* mss.). Once again, specific exceptions tend to prove a general rule.

<sup>21</sup> I owe a number of references in this section to Allison Busch, Columbia University, N.Y., and profited greatly from discussions with her on the issues raised here.

<sup>22</sup> *Hastalikhīṭ Hindī Granthasūci* (N.a. [1989]-1993). These findings are largely confirmed by the two-volume manuscript catalogue of the Hindi Sāhitya Sammelan (Varma et al. 1971-1987). No works at all in the *bhāṣā* are listed for *vyākaraṇa*, *mīmāṃsā*, *nyāya* (with the exception of two recent *śikās* on the last) or any other philosophical system save *pātāñjalayoga* (two or three mss.); *āyurveda* and *jyotiḥśāstra* are more substantially represented, but their numbers remain exiguous.

<sup>23</sup> There is also listed a *Rājanīticandrikā* (Vol. 3, Nos. 3420, 3421), but I have been unable to examine the ms.

<sup>24</sup> Only *vaidika* works are found: *Caturvedasatśāstramata* of one Balirām “Bali” (Vol. 1, No. 30; unpublished); Sundaradās’s *Jīānsamudra* (*Advaitasiddhāntanirūpan*) (verse; often printed); the anonymous *Bodha-darpan* (an exegesis of the *Puruṣasūktā*) (Vol. 1, No. 42); *Vedāntaratnamāñjuṣā* of one Puruṣottamācārya (Vol. 1, No. 52); *Sāṃkhyaśāstra*, anonymous (Vol. 1, No. 56) (all unpublished).



Brajbhasha shows a remarkable and relatively early development of a science of poetics (curiously absent in other north Indian vernacular traditions). The two foundational works of Keśavdās, *Kavipriyā* and *Rasikapriyā* (c. 1600), were preceded by a certain kind of philological interest (indicated by, among other texts, the *Mānmañjarī*, a thesaurus composed by Nandadās c. 1550), and succeeded by attempts at a more fully systematized discipline (as visible in the works of Cintāmaṇi, fl. 1650, and Bikhāridās, fl. 1730).<sup>25</sup> But again, grammatical analysis remains completely absent. Some works of spiritual reflection were composed in Brajbhasha prose, including a *guruśiṣyasamvād* titled *Siddhāntabodh* by Jasvant Siṃh, king of Jodhpur (1667; what appear to be comparable texts are noted in Hindi manuscript catalogues).<sup>26</sup> A tradition of expository prose in the form of commentaries began with Indrajit, king of Orcha (c. 1600), who commented on two of the *Śatakas* of Bhartṥhari; especially noteworthy are commentaries, something on the order of fifty, on the works of Keśavdās. As indicated by Indrajit, Jasvant Siṃh, and many others (including Rāyasimha, king of Bīkāner, c. 1600, to whom a Rajasthani commentary on Śrīpati's *Jyotiśaratnamālā* is attributed), courtly notables played a prominent role in the creation of a vernacular scholarly idiom.<sup>27</sup> This merits further scrutiny, as indeed does premodern vernacular literary commentary itself, especially from a comparative perspective (in Kannada, for example, virtually none exists before the modern period; very different is the Telugu tradition).

“Science” existed in Brajbhasha, then, but in a highly restricted sense. Something of this constrained character of vernacular knowledge production is illustrated by the career of one of the more interesting seventeenth-century scholars, Kavīndrācārya Sarasvatī (c. 1600–1675).<sup>28</sup> A Maharashtra cleric, Kavīndra according to François Bernier (and there can be little doubt that the reference is to him), was Dara Shikoh's chief Sanskrit scholar, “one of the most celebrated pandits in all the *Indies*”, and later Bernier's constant companion over a period of three years. He was a familiar at the court of Mughal emperor Shah Jahan, who conferred on him the title “Hoard of All Knowledge” and provided him with a rich annuity enabling him to assemble one of the most celebrated Sanskrit libraries of the day (many of the manuscripts, recopied expressly for Kavīndra's collection, ultimately found their way into the library of the great bibliophile, Anūpasimha, king of Bīkāner, r. 1669-1698). Kavīndra's extant work in Sanskrit consists largely of commentaries on Vedic and classical texts, but one could argue that, historically viewed, his more remarkable contribution – less for its intellectual originality than for its sociolinguistic symbolism – was to Brajbhasha. Indeed, the very fact he wrote in Braj is remarkable; so far as I can tell – a provisional claim that sounds too extreme to be true, though it is borne out by materials currently available to me – he is the only Sanskrit scholar in the intellectually vibrant world of seventeenth-century Benares to have written in the vernacular.<sup>29</sup> But his relationship to the vernacular was conflicted. His most important

<sup>25</sup> This corpus of material is discussed in Busch 2003: chapters 3 and 5. As she notes, it is a measure of the underdevelopment of our knowledge that several texts of Cintāmaṇi, the most important Brajbhasha poetician of the seventeenth-century, remain unpublished or virtually inaccessible.

<sup>26</sup> The *Siddhāntabodh* is edited in Mishra 1972: 152ff. (for other comparable texts see Varma et al. 1971-1987, Vol. 2). The fact that, in the case of another work of the king's, the *Ānandavilāsa*, a Sanskrit translation was prepared contemporaneously (ibid., p. 32), raises in a pointed way questions about language, communication, and intellectual community of the epoch about which at present we know next to nothing.

<sup>27</sup> For Indrajit, McGregor 2003, and for the full exposition, McGregor 1968; for Keśavdās and his commentators, Busch 2003: chapter 3; for Rāyasimha, Pingree 1997: 93.

<sup>28</sup> Details in Pollock 2001a: 407-408; see also 2001b: 20-21.

<sup>29</sup> A collection of Vaiṣṇava *bhajans* entitled *Kīrtanaprañālīpadasaṅgraha* is ascribed to a Jagannātha, but few believe this man to be the Sanskrit poet and literary theorist (the work exists in a single unpublished manuscript, once in the temple library in Kankroli and now in Baroda and inaccessible to scholars).

work is the *Bhāṣāyogavāsiṣṭhasāra* (also known as *Jñānasāra*), a version of the anonymous Sanskrit *Laghuyogavāsiṣṭhasāra*, which he prepared in 1656-1657. In the introduction to this text Kavindra celebrates his learning in the Sanskrit knowledge-systems:

... the four Vedas and their meanings, the six *vedāṅgas*, on which he has given lectures, *nyāya*, *vedānta*, *mimāṃsā*, *vaiśeṣika*, *sāṃkhya*, *pātañjala*, on which he has cleared up all doubts and confusions. He has taught *nyāya* and so on repeatedly, and written many works on *sāhitya* ...

And then he adds:

*pahile godātīranivāsī pācheṃ āi vase śrīkāśī |*  
*ṛgvedī āśvalāyana śākhā kīnoṃ jñānasāra hai bhāṣā ||*<sup>30</sup>

He lived first on the banks of the Godāvārī, and then came to live in Kāśī. He is a R̥gvedin of the Āśvalāyana śākhā – and he has composed the *Jñānasāra* in the vernacular.

Kavindra's celebrating his Sanskrit learning in the introduction to a vernacular text implies less pride in his multilinguality, as one might think, than condescension toward the *bhāṣā*. This is confirmed elsewhere in his oeuvre, where a clear note of unease in writing in the vernacular can be heard. He actually uses the term *lāj* in the *Kavindrakalpalatā*, a collection of his *bhāṣākavitā*, or vernacular poetry:

*bhāṣā karat āvati hai lāj |*  
*kīnai graṃth parāe kāj ||*<sup>31</sup>

One feels ashamed to write in the vernacular  
It was only for the sake of others that this book was written.

Whatever we may make of this vernacular anxiety, however, what is not in doubt is that for Kavindra Brajbhasha was a language of poetry, not science. Nothing of the vast scholarship he claimed was ever transmuted into the language – with the sole exception of the text in hand, a work, as he calls it, of “Upanishadic” wisdom comparable to the other kinds of philosophical poems I mentioned above.<sup>32</sup>

What the case of Kavindra and Brajbhasha more generally shows – and this is likely to be corroborated for other regional languages – are the clear and untranscendable limits of vernacular textualization. Aside from poetics, which was crucial for the constitution of the “illustrious vernaculars” as such, the central concerns of the Sanskrit thought-world – and these constitute the central concerns of science and scholarly thought of precolonial India outside the Persianate sphere – remained almost entirely locked in Sanskrit. In language philosophy, hermeneutics, logic and epistemology or other *darśanas* whether *āstika* or *nāstika*, or moral thought (and the situation seems only slightly more favorable in life science or astral science), no original work whatsoever seems to have been composed in Brajbhasha; indeed, not one of the standard Sanskrit texts – *sūtra*, *vṛtti*, *bhāṣya*, *vārttika*, or any of the great *prakaraṇa* works – appears ever to have been made available in translation before the colonial period.

<sup>30</sup> *BhYVS* vv. 3-4.

<sup>31</sup> Divakar 1964: 34, citing the *Kavindrakalpalatā*; in the citation *ibid.* from the *Samarasāra* (an unpublished work on astral science), *samarasāra bhāṣā racyo, chamiyo budh aparādh*, we may have instead merely the conventional apologia.

<sup>32</sup> Note, too, that among the more than 2000 manuscripts in his library only two or three, on *vaidya*, are in the vernacular (see Sastry 1921).

### Sanskrit Language Ideology and the Character of Early-modern Science

The exclusion of the vernacular from the realm of scientific discourse has deep roots, it was suggested above, in a complex language ideology. Sometimes this ideology is formulated by a simple typology, articulated already in the prevernacular world in Bhoja's early-eleventh-century treatise on literature, *Śṛṅgāraprakāśa*:

Words with unitary meaning constitute a unit of discourse (*vākya*). There are three species of such discourse: Sanskrit, Prakrit, and Apabhramsha. As for Sanskrit discourse, it is of three types: relating to revelation, to the seers, and to the world ... Discourse relating to the world has two subtypes: *kāvya* and *śāstra* (literature and systematic thought).

Prakrit and Apabhramsha, by contrast, Bhoja goes on to describe solely in socio-linguistic terms and are shown to be restricted in their usage entirely to poetry.<sup>33</sup>

More instructive than this kind of typological presentation, which carries a second-order pragmatic dimension (as if simply reporting what the world of textual production consisted of), are the philosophical arguments that have a primary force in buttressing constraints on the production of science in the vernacular. Central here is the episteme mentioned above that links grammatical correctness and truth, an episteme of intrinsic Sanskrit veracity – and intrinsic vernacular mendacity. A range of other, more abstract, language-philosophical axioms enter into the mix. One was the old *vyākaraṇa* notion that all non-Sanskrit language has signifying power (*śakti*) only by the mediation of the original Sanskrit (somehow cognized) from which the vernacular was thought to derive: Whatever is sayable in the vernacular, this implies, has already been said (and said better) in Sanskrit.<sup>34</sup> Another is the *mīmāṃsā* postulate of the natural-and-uncreated (*autpattika*) connection of signifier and signified, along with its theory of reference, whereby all substantives are believed to refer to class properties (*ākṛti*), or indeed, universals (*jāti*), and not individuals (*vyakti*), and each signified is believed to have only one signifier.<sup>35</sup> We cannot scrutinize these theorems here, but their implication for vernacular knowledge should be obvious: In a world of non-arbitrary and singular language it is obviously impossible for any other language than Sanskrit to make scientific or other sense: other languages would not be referring to the universally real since they would be using false words (and if they were using real words – Sanskrit *tatsamas* – they would be completely redundant).

Other old but still functioning components of Sanskrit language ideology persisted; these may have been bent in the seventeenth century, but were not broken. Consider first the discussion of the well-known *pikanemādhikaraṇa* by Khaṇḍadeva, in his great *Mīmāṃsākau-*

<sup>33</sup> *ŚP* p. 165ff. The Jain canon, in Prakrit, was obviously not considered *śāstra* by Bhoja; Prakrit was rarely used by Jains (or anyone else) for scholarly purposes after the second or third century; Apabhramsha figures occasionally in tantric philosophical texts but typically only for *saṃgrahaśloka*s (e.g., Abhinavagupta's *Tantrasāra*).

<sup>34</sup> This conception did not go unchallenged, as the *Vaiyākaraṇabhūṣaṇasāra* of the remarkable Maharashtra philosopher of language Kauṇḍa (or Koṇḍa) Bhaṭṭa (fl. 1650) shows (Pollock 2001b: 27-29). But even while defending the autonomous expressivity of Marathi, Kauṇḍa appears not to have written a single line in the language.

<sup>35</sup> See *PMS* 1.3.26 (*anyāyaś cānekaśabdatvam*). It was precisely a proposition in European scholasticism comparable to the *autpattikasambandha* that Descartes, the first great French philosophical vernacularizer, challenged with his proto-Saussurean declaration in *Le Monde*: "Les paroles, n'ayant aucune ressemblance avec les choses qu'elles signifient ..." (cited by Beretta in Chartier and Corsi 1996: 109).

*stubha*.<sup>36</sup> The larger context of this topic (the *smṛtipāda*), to characterize it generally, is the grounds for the authority claimed by various Sanskrit knowledge-systems per se. The specific question at issue in the topic concerns the words *pika* and *nema*, non-Sanskrit terms present (or held to be present) in Vedic texts and yet having no currency among *āryas* themselves, but only among *mlecchas* (the latter an imprecise term, but comprising all who stand outside of Sanskrit culture): Are *mlecchas* competent to understand the meaning of their own language, or must the signification of such words be determined by the application of Sanskrit knowledge techniques, especially etymology?<sup>37</sup> To be sure, Khaṇḍadeva accepts the *mīmāṃsāsiddhānta*: The communicative practices of the *mlecchas* can be shown to be beginningless, for words such as *pika* and *nema* cannot be proven to be corrupted either phonologically or semantically (unlike other lexemes such as *pīlu* that are current among both *āryas* and *mlecchas* but in radically different senses, and where, therefore, the suspicion of corruption among the latter cannot be removed).<sup>38</sup>

This leads us to assume that their linguistic usages do express meaning. Accordingly, their practices, too, [no less than those of the *āryas*] should be authoritative in determining the signification of words.

But it is to his *pūrvapakṣa* I call special attention. *mīmāṃsā* is celebrated among pandits for avoiding the straw man and mounting the strongest arguments possible against its own tenets (since, as Bhoja says [ŚP p. 742,3], the stronger his adversary the more ennobled the victor). There is little reason to doubt that the following position as formulated by Khaṇḍadeva, constructed only to be rejected though it may be, would have seemed entirely reasonable to a seventeenth-century Sanskrit intellectual:

Lacking education (*abhiyoga*) the *mlecchas* are observed to corrupt (*viplutī*) language by using incorrect (*asādhu*) speech items, and so they have no competence to determine the real phonetics of words (*śabdātattvāvadhāraṇa*). By the same token, neither have they competence to determine their semantics (*tadarthāvadhāraṇa*), because of their mistaken use of words like *pīlu* and so on. One cannot argue that since we do not find any corruption in words such as *pika* that it should be possible to accept the meaning attributed to them by *mlecchas*. For those words, too, are [in fact phonologically] corrupted (*apabhraṣṭa*), insofar as only the stems [and not the full inflections] are used. What the *mlecchas* are therefore employing are words similar to the Sanskrit words used in the Veda, not those very same Vedic words themselves. And we cannot, on the basis of mere similarity, conjecture the meaning of the words *pika* and so on [as found in] Sanskrit texts from the meaning of the words known to *mlecchas*. Were one to base oneself on mere similarity, one could wind up assuming that, for example, the word *śālā* [room] expresses the same meaning as *mālā* [garland]. In his *Tantravārttika* Kumārila considered at length the difficulties of trying to conjecture, by means of similarity or the interpolation of additional phonemes, the Sanskrit words [that lie at the origin of words] used in the Āndhra and the Draviḍa languages and thus their capacity to signify what the [original] Sanskrit words signify. He showed accordingly how just for those two languages it is impossible to determine the words and meanings in any systematic way.<sup>39</sup> This is *a fortiori* the case with respect to languages of those even more remote than the

<sup>36</sup> MK pp. 79,1-84,16 (the *Kaustubha* was evidently prized by Kavindra as well, who acquired a copy for inclusion in his library, see *Kavindra's List* [Sastry 1921] no. 368); cf. PMS 1.3.10. The topic is briefly discussed in Halbfass 1988: 183-185.

<sup>37</sup> The words in question, which are said to mean "cuckoo" and "half" respectively, are non-Indo-Aryan, perhaps Munda, though the argument could be and has been extended to non-Sanskrit as such.

<sup>38</sup> Kumārila had argued that, with respect to a word like *pīlu* (meaning a type of tree in Sanskrit and elephant or ivory staff in some indeterminate, but almost certainly non-Dravidian language), *ārya* usage, based on learning, is primary and authoritative, and *mleccha* usage is secondary and erroneous (TV on 1.3.9, pp. 143-144). Khaṇḍadeva addresses the question on pp. 58-59, and concurs with Kumārila.

<sup>39</sup> Kumārila's rather convoluted discussion of Draviḍa and other non-Sanskrit languages is found in TV pp. 150-151. The *pūrvapakṣa* seems to claim that Dravidian dialectal pronunciations (*apabhāṣaṇa*) are mere

Āndhras and the Draviḍas, such as the Pāraśi [Persians] and the Romakas ["people of Rome", i.e., Constantinople/Istanbul?]. Accordingly, the knowledge of *mlecchas* has as little authority in the determination of linguistic meaning as it does in the determination of *dharma* and *adharmā*.<sup>40</sup>

What is most remarkable here, amidst many older arguments, is the fact that the question whether speakers of Persian and European languages were competent to understand their languages was still being seriously discussed in the mid-seventeenth century. Elsewhere in his work, too, what Khaṇḍadeva chooses to recover from early discussions suggests that his general attitude toward language and sociality retains many traces of the archaic. Here is one example:

The following objection has been raised: It may be granted that the [beginningless] communicative practice of their ancestors is authoritative for the *mlecchas* [which would validate their own linguistic competence], but since they are disallowed from hearing the language of the Veda, and *āryas* are prohibited from speaking with them or learning their speech [see below], there is no possibility for *āryas* to come to know the meanings familiar to the *mlecchas*. But this objection has no force. *mlecchas* might have learned Sanskrit from bilingual *āryas* (*dvaibhāṣika*) who violated the prohibition, and these *mlecchas* might have taught to *āryas* the meanings of words known only to them. Thus there is no insurmountable obstacle in the *āryas*' acquiring the requisite linguistic knowledge.<sup>41</sup>

On matters of true knowledge, communication outside the domain of Sanskrit was still somehow transgressive and exceptional in the *imaginaire* of Sanskrit scholarship. As far as the vernacular in particular is concerned, Khaṇḍadeva does acknowledge a communicative space for it, but it is tellingly narrow. When considering the prohibition that we noticed above on using incorrect Sanskrit, he argues, in what appears to be an open-minded way, that the rule has reference only to the domain of sacrificial activity; it does not constitute a general moral principal and thus does not militate against making use of *bhāṣā* – that is, *apabhraṣṭa* Sanskrit words thought to be the source of the vernaculars – in other contexts. "For these [*apabhraṣṭa* Sanskrit words] are used by learned men of all regions (*sakaladeśīyāḥ śiṣṭāḥ*) in their everyday activities as well as in chanting the name and virtues of God (*hari*)." His general *siddhānta*, too, is that there is no general human good (*puruṣārtha*) attaching to the prohibition on ungrammaticality (or dialectism, or vernacularity, *asādhubhāṣaṇa*). "While ungrammaticality can impair a sacrifice it cannot impair other Vedic activity nor pose a threat to human welfare (*puruṣasya pratyavāyah*)." This would seem to open

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copies (*pratirūpa*) of Sanskrit words, used with different [i.e., erroneous] meanings; if *āryas* were to try to restore the Sanskrit for such words, to make them accord with meanings current among Tamil users – if for instance [Tamil] *pā[m]p[u]* (snake) were to be derived from Sanskrit *pāpa* (evil) because snakes are wicked (p. 150,24-25) – such a procedure would consist of entirely arbitrary conjecture (*svacchandakalpanā*). The meaning of the putative original Sanskrit word can therefore only be truly determined on the basis of etymology. In his conclusion, as I read him, Kumārila demurs: "The corruptions in the vernaculars are so deep that it is impossible to distinguish" the correct Sanskrit words and meanings from which they derive (*deśabhāṣāpabhraṣṭapadāni hi viplutibhūyiṣṭhāni na śakyante vivektum*, *TV* p. 151,23). Note that Kumārila also refers to "Pārasika, Bārbara, Yavana, and Raumaka [sic] languages"; the seventeenth-century understanding of these terms, however, is likely to have been quite different.

<sup>40</sup> *MK* pp. 79,15-80,3 (*pūrvapakṣa*); p. 82,10-23 (*siddhānta*). As late as 1700 the south Indian *mīmāṃsaka* Vāsudeva Dīkṣita felt it necessary to exclude from the domain of solecism (largely *tadbhavas*) such Tamil words as *ayyā* and *appā*: These are not to be considered *asādhu* because they do not "share a similar form" with a correct word. *tadbhavas* are produced by a failure to generate the correct Sanskrit form, and they convey meaning only by prompting recollection of that form, to which they bear a resemblance (incorrect *gāvi* leading to correct *gauḥ*). *appā* and the like, however, are simply "a separate species" (*vijātiya*) of words (*AMKV* on 1.3.24).

<sup>41</sup> *MK* p. 82,4-9 (see also *TV* p. 152,5-6).

the door to a wide range of vernacular practices, but it is surely significant that Khaṇḍadeva restricts this to *vyavahārakāla* and *saṃkīrtana*, the pragmatic and the devotional, activities outside the realm of science, learning, scholarship. And in general his position on language is as inflexible as that of other *mīmāṃsakas* of his day, such as Dinakara Bhaṭṭa, with whom he directly agrees on the question of Persian:

However, there does indeed exist a prohibition of a general moral scope (*puruṣārtha*) [rather than one restricted to ritual, *kratvartha*] applying to words of Barbara and other languages, since there is a scriptural prohibition against learning them at all: *na mlecchabhāṣāṃ śikṣeta* (One should not learn a *mleccha* language). With regard to this statement there are no grounds such as primary context [as there is in the case of another scriptural prohibition, *na mlecchītavai*, "One is not to barbarize"] for setting aside the conventional meaning of the word *mleccha* [which he elsewhere identifies as Parsika and Romaka] [and interpreting the word as referring more narrowly to ungrammatical Sanskrit]. Thus the prohibition on Barbara and other languages only is purely of a general moral sort, whereas the prohibition on other language [i.e., *apabhraṣṭa* Sanskrit, as expressed in *na mlecchītavai*] relates to sacrificial activity and that only.<sup>42</sup>

The actual degree of Sanskrit–Persian intercommunication in the period 1550–1750, like so many other questions raised here, awaits systematic study. We do know that, whereas intellectual intercourse among astronomers may have been relatively relaxed, and some scholars like the Jain Siddhicandra celebrated their skills in *yāvanībhāṣā*, other sources substantiate Khaṇḍadeva on the resistance among Sanskrit intellectuals to the use of Persian.<sup>43</sup> Among Kashmiri Brahmans there emerged a new caste division between *kārkun* (bureaucrats), those who learned Persian and entered the service of the Sultans, and *bhāṣbhāṣas* ("language scholars"?), those who maintained a Sanskrit cultural identity. In the description of Maharashtra in the contemporaneous *Viśvaguṇādarśacampū* of Veṅkaṭādhvarin, scorn is heaped on those who, at the time of life they should be practicing Vedic recitation, do nothing but learn Persian. But also derided are those (Tengalai Śrīvaiṣṇavas are intended, though Kavindra might just as well have been included)

who senselessly bother with vernacular texts (*bhāṣāprabandhe*) when the Veda is at hand, source of all human values. When standing on the shore of the milk ocean, you don't run off to a cowherd's hut for a glass of milk.<sup>44</sup>

To be sure, at precisely the same moment others were speaking in favor of a *bhāṣā* competence even on the most transcendent plane. Nilakaṇṭha Caturdhara, for example, the celebrated editor of and commentator on the *Mahābhārata*, argued in his *Śivatāṇḍavatantraṭīkā* not only that tantric texts should be numbered among the fourteen knowledge-sites and so be adjudged Vedic in origin and hence true knowledge, but that the power of their mantras even when composed in *bhāṣā* was undiminished:

Their actual sequence of phonemes may not be Vedic, but their meanings are Vedic, and it is precisely this that gives them their efficacy ... And it is perfectly possible that Vyāsa, Śabara (!), and others were able to set out the meaning of Vedic texts in vernacular as well as in Sanskrit language, and to compose texts through the power of their asceticism ... Therefore, the Vedic origins of ... the vernacular mantras is established. It is precisely as a result of the differences [from Vedic

<sup>42</sup> *MK* p. 132, 14–18 (discussed in greater detail in Pollock forthcoming). This contradicts, and is meant to contradict, Dinakara's assessment, see above, at n. 12.

<sup>43</sup> On the astronomers, see Minkowski 2002; on Siddhicandra, Pollock 2001a: 406.

<sup>44</sup> See Kachru 1981: 25 and n. 4; *VGĀC* vv. 134 and 230. See also v. 89, where Brahmans of Kāśī who consort with Yavanas (Muslims) are criticized (cf. also vv. 96 and 97).

mantras] in the sequence of their phonemes that both higher and lower castes, as appropriate, have the right to pronounce the phonemes.<sup>45</sup>

Yet there is an archaic exception to the modernist exception too obvious to miss: For knowledge to be true it must have Vedic affiliation; and even to claim vernacular truth meant to set forth the claim, as Nīlakaṇṭha himself does here, in Sanskrit.

### The Case of Europe

The remarkable asymmetry between literary and scientific vernacularization in India and Europe was noted at the beginning of this essay. It is especially the parallel in literary-language change and the linkage often assumed between the development of scientific and literary discourse that make the apparent resistance to scientific vernacularization in India so curious. I have written about literary vernacularization elsewhere, and need only state here that the commonalities, conceptual, social, and chronological, in the emergence of the vernaculars in the two regions are remarkable.<sup>46</sup> As for the vernacularization of scientific knowledge in western Europe, this commenced in the natural sciences by the mid-sixteenth century with Peletier writing in French on algebra (1554), and gained powerful momentum by the time Galileo published his *Discorsi* in Italian (1638); in philosophy, Bacon's *The Advancement of Learning* (1605), and Descartes's *Discours de la méthode* (1637) are among the most important early works.<sup>47</sup> Latin long retained its appeal, to be sure (scientists from Copernicus, Harvey, and Kepler, through Newton and Gauss continued to use the language), because of its supposed universality, stability, prestige, and demonstrated communicative capacity, but the trend toward science in the demotic idiom was irreversible.

Sometimes the choice of the vernacular was not a choice but a matter of practical necessity – Peletier is said to have used French simply because he was ignorant of Latin. Sometimes the use of the vernacular was an attempt to achieve a certain new kind of diffusion of a national-popular sort, a goal pursued, it seems, by Descartes with his *Discours*, despite the substantial conceptual challenge of presenting a discourse on universal reason in a non-universal language.<sup>48</sup> The role of the new academies (the Académie française was established two years before the *Discours* was published), and more largely, of the cultural initiatives of the nascent nation-state, are pertinent factors here, too. Other motives for the vernacularization of science, as conceived by the agents themselves, include the confirmation by language choice of the idea of *translatio studiorum et imperii*; popular disclosure of useful information hitherto kept secret; and the education of women and aristocratic officials. Pertinent also are the arguments, ever more forcefully made, that favored the supposed natural language, especially its facility and putative transparency, over the artificial (something already to be found in Dante,

<sup>45</sup> *Śivatāṇḍavatāntraśikā* 2v-3r. I thank Christopher Minkowski of Oxford University, who provided me with his transcription of a manuscript of this work in his possession.

<sup>46</sup> Pollock 1998a, 1998b, 2000.

<sup>47</sup> Note however that there were large-scale translation programs since the late Middle Ages. Nicole Oresme's French translation of Aristotle's *Ethics* of 1370 was the first complete version of an authentic Aristotelian work in any modern language. Even earlier is Gossouin of Metz's *Image du monde* (Lorraine, 1246), probably the oldest encyclopedic treatise written in a European vernacular. Such initiatives are entirely absent in India.

<sup>48</sup> The issue is raised and explored in Derrida 1984.

who proclaimed already in 1300 what no one in Europe had ever proclaimed before: *nobilior est vulgaris*).<sup>49</sup>

Several hard questions are raised by thinking through the cases of Europe and India together. With respect to the vernacularization of literature as a cultural and political process, similar developments occurred more or less simultaneously in both Europe and India to produce, each autonomously, its own brand of modernity, on the one hand national, on the other – for want of a better term – *deshi*. But the vernacularization of scientific discourse never happened in precolonial India, for most of the core disciplines of the dominant intellectual order, and one's first impulse is to interpret this as obscurantism or blind traditionalism, a practical enactment of Sanskrit's archaic language ideology – in short, as failure. To be sure, few of the factors identified for European scientific vernacularization were present in early-modern South Asia. Sanskrit competence among intellectuals never deteriorated to the degree that made writing in the vernacular unavoidable. No national-popular projects, let alone institutions, that instrumentalized and rationalized cultural practices were ever developed. No polity ever sought to draw on culture to make its language the “*compañera del imperio*”. But these are again absences; is there a more positive interpretation?

Here I am put in mind of a remark made by the historical sociologist Shmuel Eisenstadt regarding the old text of Werner Sombart's, *Why is There no Socialism in the United States?* For Eisenstadt, it is just as reasonable or even more so to ask, instead, Why was there socialism in Europe? Similarly, we might want to turn the tables of our assumptions and ask, not why India failed to vernacularize science but why Europe did, and what intellectuals in South Asia sought to achieve by their choice to remain transregional. I have elsewhere sought to make sense of the continuing commitment to Sanskrit on the part of late-precolonial intellectuals as an attempt to reinvigorate and sustain an old ecumenical cultural order in a changing world where a middle-class, national-cultural regime was not a condition of possibility.<sup>50</sup> Perhaps, in accordance with the Eisenstadt principle, we ought to proceed even further against the obvious grain. Not only is it the case that few of the factors present in early-modern Europe are relevant to India, but deeper, or wiser promptings may also have been in play. If unlike literature systematic knowledge in general and science in particular is not idiographic (let alone ethnographic), but nomothetic, then the cultural nationalization of science and scientific language in early-modern Europe turns out actually to have been a bizarre experiment – and, indeed, it was eventually abandoned.<sup>51</sup> Supranational communication forms, whether transnational English or the abstract language of mathematics, constitute a Latin *redivivus*, and we now think of “German chemistry” or “French mathematics” not as science but as chapters in the history of science. Might therefore a conceptual “provincialization of Europe”, as Dipesh Chakrabarty puts it, permit us to think of the Sanskrit domination

<sup>49</sup> *De vulgari eloquentia* 1.4. See the excellent essay of Pantin 1996, from whom I adopt a number of ideas in this paragraph. As she points out, there was no clear and invariant line of progression (most of Galileo's students reverted to Latin, for example), and no good explanations are available to account for this indirect route of the vernacular's eventual conquest. Even as French, Italian, and English became the principal vehicles of scientific expression, anomalies continue to be found, such as Latin treatises produced for aristocratic environments, or vernacular treatises destined for Europe-wide dissemination.

<sup>50</sup> Pollock 2001b: 30-31.

<sup>51</sup> This was recognized to some degree from the start by European vernacular intellectuals like Bacon: The Latin translation of his *Advancement* (which he commissioned in 1607-1608) was, he said, “a book I think will live, and be a citizen of the world, as English books are not”. “My end of putting it into Latin was to have it read everywhere.” Similarly regarding the Latin translation of his *Essays*: “For I doe conceive, that the Latine Volume of them, (being the Universall Language) may last, as long as Bookes last” (Kiernan 2000: liv).



of science as a good universalism, and thus not as failure according to the norms of European modernity, but, according to an Indian ethos, as a kind of civilizational achievement?

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