

## INDOCENTRISM

### Autochthonous visions of ancient India<sup>1</sup>

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#### 11.1 Introduction

The “Aryan question” is concerned with the immigration of a population speaking an archaic Indo-European (IE) language, Vedic Sanskrit, who celebrate their gods and chieftains in the poems of the oldest Indian literature, the Ṛgveda, and who subsequently spread their language, religion, ritual, and social organization throughout the subcontinent. Who were the “Aryans”? What was their spiritual and material culture and their outlook on life? Did they ever enter the Indian subcontinent from the outside? Or did these people develop indigenously in the Greater Panjab?

This, the “Aryan” question, has kept minds and politicians busy for the past 200 years; it has been used and misused in many ways. The discussion has become a cottage industry in India during recent years. This chapter attempts to present many<sup>2</sup> of the *pros* and *contras* for the (non-)occurrence of a movement of an “Aryan” population and its consequences. First, a detailed summary of the traditional “western” theory (Sections 11.1–11.11), then the recent Indian counter-theories; this is followed by an evaluation of their merits (Sections 11.12–11.24); the chapter concludes with some deliberations on the special kind of “discourse” that informs and drives the present autochthonous trend.

#### 11.2 Materials: texts, dates, locations

Most of our evidence on the ancient “Aryans” comes from the texts and from the linguistic and cultural data contained in them.<sup>3</sup> The Vedas are a large collection of texts, orally composed and orally transmitted, perfectly, well into this millennium, almost like a tape recording. The oldest is the Ṛgveda (Ṛgveda Samhitā (RV), with many hymns of RV 10 as a late addition). The Old Iranian texts are quite similar to those of the Vedas. The five long Gāṇā (Yasna 28–53) are the RV-like poems by Zaraṭuštra himself; the Yasna Haptaṅhā’ti is a collection of Mantras used for fire worship. The rest of the Avestan texts is post-Zoroastrian.

The East Iranian texts of the Avesta are as elusive to absolute dating as the Vedic ones (Witzel 1972, 2000).

However, the Ṛgveda, whose geographical horizon is limited to the Panjab and its surroundings, does not yet know of iron but only of the hard metal copper/bronze (Rau 1974, 1983; *ayas* = Avest. *aiaah* “copper/bronze”). Iron is only found in later Vedic (Ved.) texts, where it is called, just as in Dravidian (Drav.) \**cir-umpu*, the “black metal” (*śyāma*, *kṛṣṇa ayas*). It makes its appearance in South Asia only by c.1200 or 1000 BCE.<sup>4</sup> The RV, thus, must be earlier than that.<sup>5</sup> The RV also does not know of large cities such as that of the Indus civilization but only of ruins (*armaka*, Falk 1981) and of small forts (*pur*, Rau 1976). Therefore, it must be *later* than the disintegration of the Indus cities in the Panjab, at c.1900 BCE. A good, possible date *ad quem* would be that of the Mitanni (Mit.) documents of Northern Iraq/Syria of c.1400 BCE that mention the Ṛgvedic gods and some other Old Indo-Aryan (IA) words (however, in a form slightly preceding that of the RV).<sup>6</sup> Post-RV texts (AV, etc.) whose geographical horizon stretches from Bactria (*Balhika*) to *Aṅga* (Northwest Bengal) mention iron for the first time and therefore should be contemporaneous or slightly rather later than 1200/1000 BCE. The early *Upaniṣads* precede the date of the Buddha, now considered c.400 BCE (Bechert 1982, 1991 sqq.) and of the re-emergence of cities c.450 BCE (Ersdosy 1988). On the whole the period of the four Vedas seems to fall *roughly* between c.1500 BCE<sup>7</sup> and c.500 BCE.<sup>8</sup>

Dating the Avestan (Avest.) texts, too, rests only on internal evidence (Skjærvø 1995). The Old Avest. texts reflect a copper/bronze (*aiaah*) culture; the younger texts might to some extent overlap with the expansion eastwards of the Median realm (c.700–550 BCE). Zaraṭuštra who spoke Old Avest. should be dated well before this time. Current estimates range from the fourteenth to the seventh century BCE.<sup>9</sup>

### 11.3 Immigration

Any type of immigration has increasingly been denied in India, especially during the past two decades, and more recently also by some Western archaeologists. How likely is an immigration scenario for people speaking IA, on the basis of comparable cases from Indian and non-Indian history? Beginning with the prehistoric migrations starting with the move of Homo Sapiens “Out of Africa” some 50,000 years ago, we actually *do know* that one group after the other has entered the Indian subcontinent, as immigrants or as invaders, in historical times.<sup>10</sup> In addition, small-scale semi-annual transhumance movements between the Indus plains and the Afghan and Baluchi highlands continue to this day (Witzel 1995: 322, 2000).

Why, then, should all immigration, or even mere transhumance trickling in, be excluded in the single case of the IAs, especially when the linguistic and cultural evidence (Sections 11.8, 11.21–11.23) so clearly speaks for it? Just one “Afghan” IA tribe that did not return to the highlands but stayed in their Panjab winter quarters in spring was needed to set off a wave of acculturation in the plains, by transmitting its

‘status kit’ (Ehret) to its neighbors.<sup>11</sup> Given the frequency of movements, large and small, into South Asia via the northwestern (and other) corridors persisting until this day, the vehement denial of *any* such possibility (Section 11.8 sqq.) is simply unreasonable (and can only be explained psychologically).

The important, clinching factor (Sections 11.6–11.7) to decide the question is that the IAs, as described in the RV, represent something definitely *new* in the subcontinent. Both their spiritual and much of their material culture are new; these *and* their language link them to the areas west and northwest of the subcontinent, and to some extent beyond, to the Ural area and to Southern Russia/Ukraine. The obvious conclusion should be that these new elements *somehow* came from the outside.

Indeed, the western relatives of the IAs the *Paršumaš* (Persians), and the people who brought IA elements to the Mit. (c. 1460–1330 BCE) and the Kassites<sup>12</sup> who, as a first wave, preceded them in Mesopotamia, all are *intrusive* (cf. Drews 1989). The same may be assumed for the Greater Panjab, where a new element brought in *new* items such as the domesticated horse and the horse-drawn chariot (Section 11.20), and IE/IA style poetry, religion, and ritual. A massive, if gradual introduction of some, if not all IA traits seems the only viable conclusion (see later, on Ehret’s model).

Denial of immigration into the area of an already existing culture has recently been asserted by some archaeologists as well; they posit a purely local, indigenous development of cultures, for example, by the British archaeologist Lord Renfrew (1987)<sup>13</sup> and by some Americans such as Shaffer (1984), Shaffer and Lichtenstein (1999) who think that new languages were introduced by way of trade and by taking over of new models of society.

If there was immigration, who then were the autochthonous inhabitants of the subcontinent? They can in fact *still* be traced in the substrates of the RV and of modern languages: an unknown Indo-Gangetic language has supplied about 40 percent of the agricultural terminology in Hindi (a typical feature already for the RV, Kuiper 1955, 1991).<sup>14</sup> Again, such a scenario is met with in many other areas of the world.<sup>15</sup> (See later in Section 11.5.)

#### 11.4 Acculturation

In spite of vague reminiscences of older homelands,<sup>16</sup> even the earliest RV hymns clearly reflect South Asian realities, in other words, they were already composed in the Greater Panjab. They also include many non-Sanskritic words and names, those of non-Aryan “foreigners” (*Kīkaṭa*, *Praṃaṅga*, etc.) and demons (*Śambara*, *Cumuri*, etc.) But also those of noblemen and chiefs (*Balbūtha*, *Br̥bu*) and occasionally of poets (*Kavaṣa*, *Kaṇva*, *Agastya*, *Kaśyapa*). All these non-IA words do not have a Ved. or IE background (see later in Section 11.5, n. 28), something that can be determined by purely linguistic means. Such words are *impossible* either in Ved. or in Indo-Iranian (IIR) or IE in general (Mayrhofer 1986: 95, Szemerényi 1970: 90 sqq.); this is a point almost universally neglected by autochthonists (Section 11.8 sqq.).

In the RV, *arya/ārya* does *not* mean a particular “people” or even a particular “racial” group but all those who had joined the tribes speaking Vedic Sanskrit and adhering to their cultural norms (such as ritual, poetry, etc.) – as had been underlined for decades.<sup>17</sup> The *Others*, such as the *Kikāṭa* (RV 3.53), who inhabit the Greater Punjab *together* with the *Ārya*, are even declared “not to be fit to deal with cows.” They form the amorphous group of the *Dasyu* “the foreigner, the enemy.” While the *ārya* frequently fight among themselves, their main enemies are the *dasyu* who are portrayed in typical half-mythical fashion as “foreign devils” and demons.

There must have been a long period of acculturation between the local population and the “original” immigrants speaking IA. Indeed, the bulk of the RV represents only some five generations of chieftains (and some five generations of poets).<sup>18</sup> The famous chieftain of the *Bharata*, *Sudās*, is one of the latest mentioned. On the other hand, a number of tribal federations (*Anu-Druhyu*, *Yadu-Turvaśa*, etc.) preceded that of the *Pūru* and the *Bharata* who were dominant in the middle and late RV period (Witzel 1995, 1997). It is during the long period of *initial* acculturation, for the most part not present in our RV, that some of the linguistic (and cultural) features (Kuiper 1955, 1991) of the early (pre-)Ṛgvedic period must have evolved. They include new grammatical formations such as the absolutes in *-tvā*, *-tvī*<sup>19</sup> and *-ya* for verbs with preverbs (Tikkanen 1987). Absolute formation corresponds, among others, to Drav. verbal structure, but absolutes are *not* found in Iranian. Significantly, *Vasiṣṭha* the self-proclaimed (Iranian?) immigrant author of much of book 7, avoids them.<sup>20</sup> Only constant contact and bilingualism between speakers of Old Indo-Aryan (OIA) and of the local language(s) of the Greater Panjab could produce such innovations and calques.<sup>21</sup>

Local influence is indeed what the non-IE part of RV vocabulary suggests, by Kuiper’s count some 380 words or about 3.8 percent of the vocabulary of the RV (Kuiper 1991, 1995: 261). Such local substrate words can easily be identified because of their isolation within the IE-derived IA vocabulary, that is, they always do not have Iranian, Slavic, etc. counterparts. Frequently, their sounds and syllable structure are non-IE as well. This is a point so far completely neglected or simply derided<sup>22</sup> by the advocates of the autochthonous theory.<sup>23</sup>

### 11.5 Linguistic substrates

Since the very concept of a linguistic substrate (Anttila 1989: 154 sqq.) is often misunderstood (discussion by Bryant 1999), a brief characterization is in order (Witzel, *forthc.* a,b). Most words in early Ved. that do not conform to IE/IIr word structure (including sounds, root structure and word formation) and have no clear IE/IIr etymology must belong to a preceding language, a non-IA *substrate*; some of them, however, are loans from a neighboring non-IA language (*adstrate*, the favored position by those autochthonists who recognize that they actually have a problem, see e.g. Lal 1997). It is, however, important to underline that it is the phonetic and grammatical *structure* that does not fit the IE/IIr/IA one of Vedic

Sanskrit. Not just etymology (which may remain unsolvable in some cases<sup>24</sup> and is, in others, not even necessary),<sup>25</sup> but *all* the structural features are of equal importance here.<sup>26</sup>

A word that superficially looks IE/IA, such as *Kosala*, is simply disqualified linguistically by its *-s-*,<sup>27</sup> or, words such as *kīnāśa*, *kīkaṭa*, *pramaganda*, *balbūtha*, *bṛsaya* can by no means be explained in terms of IE: (1) there are no IE/IA roots such as *kīn*, *kīk*,<sup>28</sup> *mag*, *balb*, *bṛs* as only roots of the format {(s)(C) (R) e (R) (C/s)} are allowed;<sup>29</sup> (2) the sound *b* is very rare in IE; (3) suffixes such as *-ā-s-*, *-ṭ-*, *an-d/-a-nd-*, *-būth-/bū-th-* are not found in IE/IA; and (4) only *ṣ* (but not *s*) is allowed in Ved. after *i*, *u*, *r*, *k*. In addition, these words do not have any cogent IE/IA etymologies.

The use of such formal, structural categories immediately allows to detect many words as being non-IE, and as originally non-IA. Just as for IE and IA, similar structural rules exist Drav. and for Munda.<sup>30</sup> A comparison of these data frequently allows to *narrow down* the origin of a word,<sup>31</sup> though this has hardly been done in practice (Witzel, forthc. a,b).<sup>32</sup> Instead, etymological discussions deal, by and large, with vague similarities of ancient Ved., (old) Drav. and *modern* Munda words. To quote (*pseudo-*)Voltaire: etymologies, “where consonants count little and vowels nothing.”

There are, thus, clear and decisive rules in place that allow to narrow down, and in many instances even to determine the origin of Ved. words. Throwing up one’s hands in postmodern despair (Bryant 1999), and certainly, a haughty, nontechnical dismissal (Talageri 2000) are misguided.

The range of the non-Indo-Aryan words of the RV is perhaps even more interesting than their number. They include names for local plants and animals,<sup>33</sup> and a large number of agricultural terms, which are not expected in the vocabulary of the largely pastoralist IAs who left the tedious job of the ploughman (*kināśa*) and farming in general (*tilvila*, *phala*, *pippala*, *khala*, *lāṅgala*, etc.) to the local people. Instead, they preserved only a few general IE terms, such a *yava* “barley, grain,” *kṛṣ* “to scratch, plough.”<sup>34</sup> Some local river names, always a very resistant part of the vocabulary, are preserved as well.<sup>35</sup>

In sum, an early wave of acculturation of the immigrant speakers of Old IA (Ved.) and the local population has seriously influenced not just popular IA speech but even the highly traditional poetic language and many other aspects of their traditional Ir culture, religion, and ritual. This “Indianization” of the IAs began even *before* our extant RV texts (Kuiper 1967, 1991). A certain amount of codification of this process can be detected with the formulation, in the Puruṣa hymn (RV 10.90), of the system of the *four* classes (*varṇa*) instead of the more common IE three, which system has been called, by P. Mus, “the first constitution of India.”

On the Iranian side, however, one has so far observed very little of linguistic and other acculturation (Skjærø 1995). However, it would be surprising and is erroneous to state, as has generally been done, that O. Pers., Avest., etc. seem to have been affected very little by the preceding (substrate) languages of the great

Bronze Age cultures, such as those the BMAC, Shahri Sokhta, Mundigak, Tepe Yahya, and Elam.<sup>36</sup> There are, indeed, quite a number of words that are foreign even in Indo-Iranian<sup>37</sup> and there is a host of unstudied Iranian words taken from the various local substrates (Witzel 1999a,b, forthc. a,b). This feature is of extreme importance in evaluating the linguistic materials that speak for the immigration of speakers of OIA into the subcontinent.

### 11.6 Cultural continuity?

While the intrusive traits of IA language, poetics, large parts of IA religion, ritual, and some aspects of IA material culture are transparent, the obvious continuity of local cultures in South Asia, as prominently seen in archaeology, is another matter. Yet, how much of the culture of semi-sedentary tribes on the move (Scythians, Huns, Turks, Mongols) would indeed be visible in the archaeological record?<sup>38</sup> Further, the constantly shifting river courses in the Panjab may have obscured many of the shallow remnants of the IA settlements: temporary, rather rickety resting places (*armaka*, Rau 1983). Third, the IAs are known, from their own texts, to employ the services of the local populations.<sup>39</sup> Continuity of local styles thus is to be expected a priori. However, when traditional style pottery with traditional paintings, such as in the early post-Indus Cemetery H culture, appears *together* with a new burial style, that is cremation or exposition and subsequent deposition of the bones in urns, *and* with a new motif painted on them, that is, a small human, a “soul,” drawn inside a traditionally painted peacock, then all of this draws our attention. The bird-soul motif seems to reflect Ved. beliefs about the souls of the ancestors moving about in the form of birds (Vats 1940; Witzel 1984; Falk 1986). While this assemblage seems to indicate early acculturation, more data are necessary to confirm that the still little known Cemetery H culture in Harappa and Cholistan is one reflecting IA presence.

Presence of IA speakers would rather be indicated by the introduction of their specialty, the horse-drawn chariots with spoked wheels, horse furnishings, etc. When such items are found, there is a good chance that this represents IAs, but alternative scenarios cannot be excluded; tribes that were influenced and/or pushed forward in front of them, such as the Mit. and Kassites in Mesopotamia and the Hyksos in Egypt (Drews 1989); or, simply, neighboring local tribes that had adopted some facets of IA material culture early on.

Ideally, an “Aryan” archaeological site would include the remnants of horses and chariots, horse furnishings, a Ved. ritual site with (three) fire places nearby (preferably west of a river), a rather primitive settlement pattern with bamboo huts, implements made of stone and copper (bronze), some gold and silver ornaments, but with *local* pottery, evidence of food that includes barley, milk products, meat of cattle, sheep and goat, and some wild animals. However, this particular archaeological set (or part of it) has not yet been discovered, unless we think of the Swat Valley finds, c.1400 BCE (Gandhara Grave Culture, 1700–). Swat is known in the RV (8.19.37) as IA territory, *Suvāstu* “good ground.”<sup>40</sup>

In sum, we have to look out for a ‘*Leitfossil*’, a clear indicator of IA culture such as the chariot and Ved. ritual sites. The obvious continuity of pottery styles, taken alone, tells little.<sup>41</sup> *All aspects* of material and spiritual culture, of linguistics as well as genetics, have to be taken into account.

### 11.7 Palaeontology and genetics

Autochthonists, however, also maintain that there is no evidence of *demographic* discontinuity in archaeological remains during the period from 4500 to 800 BCE,<sup>42</sup> and that an influx of foreign populations is not visible in the archaeological record.<sup>43</sup>

The revisionists and autochthonists overlook, however, that such refutations of an immigration by “racially” determined IAs still depend on the old, nineteenth-century idea of a massive *invasion* of outsiders who would have left a definite mark on the genetic set-up of the local Panjab population. Presently we do not know how large this particular influx of linguistically attested outsiders was. It can have been relatively small, if we apply Ehret’s model (1988, derived from Africa, cf. Diakonoff 1985) which stresses the *osmosis* (or a “billiard ball,” or Mallory’s *Kulturkugel*) effect of cultural transmission.

Ehret (1988) underlines the relative ease with which ethnicity *and* language shift in small societies, due to the cultural/economic/military *choices* made by the local population in question. The intruding/influencing group bringing new traits may initially be small and the features it contributes can be fewer in number than those of the preexisting local culture. The newly formed, combined ethnic group may then initiate a recurrent, *expansionist* process of ethnic and language shift. The material record of such shifts is visible only insofar as new prestige equipment or animals (the “status kit,” with new, intrusive vocabulary!) are concerned. This is especially so if pottery – normally culture-specific – continues to be made by local specialists of a class-based society.<sup>44</sup>

Similar things could be said about Archaic Greece, or post-Jōmon Japan, but that would lead too far here. As will be seen later, the descriptions given just now fit the Indus/Ved. evidence perfectly.

### 11.8 Intruders or autochthons?

The preceding discussion (Sections 11.1–11.7) presupposes that groups speaking OIA (Ved.) were an intrusive element in the North-West of the subcontinent. This is strenuously denied by advocates of an autochthonous origin of the IAs (always called “Aryans”). Their Indocentric counter-theories range from: (1) a mild version, insisting on the origin of the R̥gvedic IAs in the Panjab, the “autochthonous” or indigenous school;<sup>45</sup> (2) a more stringent but increasingly popular “Out of India” school<sup>46</sup> which views the Iranians and even *all* IEs emigrating from the Panjab, to the; (3) most intense version, which has all languages of the world derived from Sanskrit: the “Devabhāṣā school,” which is mostly – but not solely – restricted to traditional Pandits.<sup>47</sup>

In these views,<sup>48</sup> though often for quite different reasons, any immigration or trickling in – nearly always called “invasion” – of the (Indo-)Aryans into the subcontinent is suspect or simply denied. The *Ārya* of the RV are supposed to be just another tribe or group of tribes that have *always* been resident in India,<sup>49</sup> next to Dravidians, Mundas, etc. The theory of an immigration of IA speaking *Ārya* (“Aryan invasion”) is simply seen as a means of British policy to justify their own intrusion into India and their subsequent colonial rule: in both cases, a “white race” was seen as subduing the local darker colored population.

However, present (European, American, Japanese, etc.) Indologists do not maintain anything like this now, even less so after the recent genetic discoveries that link all present humans to a fairly recent common origin, and all non-Africans to an even more recent emigration by some 10,000 people “Out of Africa,” some 50,000 years ago: the problem of an “Aryan invasion” into India is as relevant or irrelevant to Indologists as Bantu “invasion” of central, east, and southern Africa, or the polar Na-Dene deep into North America.

While the “invasion model” was still prominent in the work of archaeologists such as Wheeler (1966: “Indra stands accused”), it has been supplanted by much more sophisticated models<sup>50</sup> over the past few decades (see Kuiper 1955 sqq.; Thapar 1968; Witzel 1995). This development has *not* occurred because Indologists were *reacting*, as is now frequently alleged, to *current Indian criticism* of the older theory. Rather, philologists first, and archaeologists somewhat later, noticed certain inconsistencies in the older theory and tried to find new explanations, a new version of the immigration theories.

Linguists and philologists such as Kuiper 1955, 1991; Emeneau 1956; Southworth 1979; archaeologists such as Allchin (and Allchin) 1982, 1995; and historians such as Thapar 1968, all have maintained that the IAs and the older local inhabitants (“Dravidians,” “Mundas,” etc.) have mutually interacted from early on, that many of them were frequently bilingual, and that even the RV already bears witness to that. They also think, whether explicitly following Ehret’s model (1988; cf. Diakonoff 1985) or not, of smaller infiltrating groups (Witzel 1989: 249, 1995; Allchin 1995), not of mass migrations or military “invasions.” However, they still maintain, and for good reasons, that *some* IA speaking groups *actually entered* from the outside, via some of the (north)western corridors of the subcontinent.

Autochthonists, however, maintain in this *one* case that there has not been *any* influx at all, conveniently forgetting that most humans have emigrated out of Africa as recently as some 50,000 years ago. Instead, some simply *reverse* the “colonial” invasion theory and discover an *emigration* from India (the “Out of India Theory,” OIT): a truly Indocentric view of the world, echoed by quite similar ones now found in other parts of Asia. They like to utilize some of the arguments of current archaeology, for example, those of Shaffer (1984) and those of Shaffer and Lichtenstein (1995, 1999), who stress indigenous cultural continuity from *c.* 7000 BCE well into the semi-historic times of the first millennium, which he declares to be evident according to the *present* state of archaeology.<sup>51</sup> Consequently, he protests the

“linguistic tyranny” of earlier models. This is a much too narrow, purely archaeological view that neglects many other aspects, such as all of spiritual and some of material culture, but it is grist on the mills of the autochthonists.

Since language is of crucial importance for this argument, it needs to be addressed here in great detail. However, the revisionists and autochthonists have almost completely overlooked this type of evidence, or they have outrightly denied it. Recently some have begun to pay attention (see Bryant 1999, 2001; cf. also Elst 1999), however, still in an unprofessional manner (Talageri 1993, 2000).<sup>52</sup> Unfortunately, this was in large measure even true for the apparently lone IE scholar in India, S. S. Misra<sup>53</sup> (1992).<sup>54</sup>

However, opponents of the theory of an IA immigration or trickling in, whether revisionists, autochthonists, or OIT adherents must *also* explain the linguistic, textual, archaeological, geographical, astronomical, and other scientific data (Section 11.13 sqq. see Witzel 2001b) to become credible.

### 11.9. On scientific procedure

Like all scientific theories the theory of an immigration into South Asia by speakers of IA has to be constantly and thoroughly (re-)investigated. Scholarship is an *ongoing* dialectical process. However, all too frequently old and long given up positions are brought up by revisionists and juxtaposed to recent ones in order to show “contradictions” in what is called “the western approach.” This is improper procedure. Natural scientists do not seriously discuss pre-Copernican or pre-Darwinian systems any longer.<sup>55</sup>

New evidence has to fit in with the *general framework* established by the many, completely unrelated observations in the various branches of scholarship; otherwise a particular theory is revised or discarded. But, deducing a complete “paradigm shift” based on *isolated* facts is quite common in the contemporary effort to rewrite Indian (pre-)history, where even hard scientific facts are *explained away* and with the help of new, auxiliary, *ad hoc assumptions*. Rather, Occam’s razor applies.

In the ensuing discussion, therefore, we frequently have to reinvent the wheel and have to restate, sometimes even to prove well-known and well-tested principles and facts: this includes those of comparative linguistics (summaries by Hock 1986; Anttila 1989; Szemerényi 1970, 1996; Beekes 1995), comparative epic studies (Parry 1930–32, 1971; Lord 1991), of South Asian archaeology (Allchin 1995; Kenoyer 1998; Possehl and Gullapali 1999), Indus epigraphy (Possehl 1996a), of zoology and botany (Meadow and Patel 1997, Meadow 1998), or the evidence contained in the texts, as established by philology over the past two centuries (Witzel 1997).

In spite of the autochthonists’ stress on the “hard sciences,” all too frequently “scientific facts” are quoted which, on closer observation, are not hard facts at all. Each single item brought up for discussion must therefore be scrutinized well. For example, an unsuspecting reader may take for granted that LANDSAT photos show the drying up of the Sarasvatī River in 1900 BCE (Kak 1994a; cf. Gupta 1996). But

LANDSAT or aerial photos cannot by themselves indicate historical dates (cf. § 25 Witzel 2001b). Or, some selected linguistic data, such as *supposed* change from an older *aśva-* ‘horse’ (as in Skt) to Latin *equi-s* (Misra 1992), are used to indicate an Iranian and IE emigration from India. This contradicts standard (IE and non-IE) linguistic knowledge (Hock 1999). Such single, often erroneous facts, are simply made part of an *inclusivistic*, Indocentric belief system that *encapsulates*, in facile fashion, older mythical and religious ideas (Witzel 1986, 1992, 1998).

In short, facts from the various sciences must match, before a certain new theory can be accepted. If the linguistic, textual, archaeological, anthropological, geological, and other facts contradict each other, the new theory is in serious difficulty. *All* exceptions have to be explained, and well within plausible range; if they cannot, the theory does not hold. It *never* is proper working procedure that such inconsistencies are explained away by *ad hoc* assumptions and new theories, in other words, by special pleading. Occam’s razor applies.

### 11.10 On linguistic procedure

Besides genetics and archaeology it is language, and the spiritual culture embodied in language and texts, that are crucial for any theory of an influx of speakers of OIA into the subcontinent.

Linguistic evidence is available since the earliest forms of Sanskrit (Rgvedic OIA) and Zarathustra’s Gāṇās in Iran. The materials transmitted by language obviously point to the culture of its speakers and also to their original and subsequent physical surroundings. In addition, language has its own archaeology: the various subsequent historical “layers” of a particular language can be uncovered when painstakingly using well-developed linguistic procedures (see later).

However, linguistic data and even more so, linguistics, have generally been neglected by the autochthonists.<sup>56</sup> When actually used, the linguistic ideas and “arguments” of the autochthonists are far off the internationally accepted norms and procedures. Therefore, a discussion of their proposals and beliefs does not only take up much space but *must* be convoluted and torturous; in addition, it is often very technical.

Like other sciences, language study is not something that can be carried out by amateurs, even though an “everyone can do” attitude is widespread as far as one’s mother tongue and language in general are concerned, especially so in etymology and the (often assumed) origin and the (frequently lacking) history of individual words. Here, total amateurism is the rule. “Oakish” etymologies, such as *England* from *aṅguli* ‘finger’, or *abād* from *bath* (Gupta 1990b), go back to the tradition of Plato’s Kratylos or the equally unscientific explanations of *Yāska’s Nirukta*, and beyond.<sup>57</sup> Assyria is derived from *asura*, Syria from *sura*, Phoenicians from *Pani*, Hittites (Khet) from *Kaṭha*, Mit. from *Maitrāyaṇīya*, etc. (Surya Kanta 1943; Bhagavad Datta repr. 1974; Gupta 1990a,b, etc.).

In comparative linguistics, however, it is not similarity that counts but the *regularity* of sound correspondences (see later), though they outwardly may appear

non-intuitive. To quote one of the most hackneyed, non-intuitive examples: the correct equation, sound by sound, of Skt *dvā(u)*, Latin *duo* = Armenian *erku* < *tku* < *tgī* < *twī* < IE \* *dwī* (The sign '<' means "derived from"; \* indicates not attested, reconstructed forms).

Worse than comparing look-alikes is the trend, in the South Asian context, of cross-family comparison (Drav. and IA, IA, and Munda, etc.) that is especially widespread and has completely wrong results, as such comparisons are, again, simply based on overt similarities between words. Frequently, such comparisons are justified by positing a unified prehistoric South Asian linguistic area (*Sprachbund*, see Section 11.14).

However, in order to provide some concrete background to all such claims the theory and working methods of comparative linguistics have to be stated in brief form. Language is a communicative device similar to other auditory or visual signs, sign language, or even gestures. The devices used in language are based on sounds and meanings attached to (groups of) sounds. Their combinations are structured grammatically as words and sentences. The sounds of language are easily analyzable physical features as they are produced by the interactions of the vocal tract, tongue, mouth, and nose. The production of sounds, their frequency (in Hz) etc., all can be measured by instruments and can be described in a strict fashion. The same applies to their combinations as words (root, affixes, accent, etc.) and sentences (syntax).

Second, the sounds (or meanings) of a language change over time, sometimes very quickly.<sup>58</sup> Such sound changes are not random, but involve each word of a particular language and, as has been known for the past 130 years, they follow a fixed pattern (*Lautgesetze*) that is only disturbed by some analogies or dialect forms.

Due to such historical developments in sounds, grammar, and meaning, each language has many levels of development, just as the geological or archeological levels in the ground. The various historical levels are attested in writing (modern English; Shakespeare's, King James Bible; Chaucer's; Old Saxon Bible) or in outlying dialects (Scottish Engl. *bright* [brext]). Certain languages, such as English, become largely unintelligible within a span of five hundred to a thousand years.

The changes of the sounds and the grammar of a language and its dialects can be described and analyzed. The result is a series of changes that make up, just as in biology or genetics, a "family tree" of changes and grammatical innovations in dialects and related languages, the cladistic tree. Furthermore, since sound changes in each language concerned occur *across the board*, they are regular and their description results in the famous regularity of sound correspondences (*Lautgesetze*).

Comparison of various (more or less conservative) dialects and of obviously similar and related languages, in the case of English: Dutch, German, Scandinavian, and Gothic, then shows that these regular sound changes in all these languages lead back to a common, reconstructable Germanic ancestor that is different from that of other European (etc.) languages, the ancestors of Celtic,

Italic, Greek, Slavic, or Ilr, which in turn lead back to a common, well-reconstructed ancestor language, (Proto-)IE (PIE). Each one of these groups has *innovated* in phonetics and grammar with respect to the others and thus is clearly defined, like the various species in biology by their very innovations which lead, for example, from the various Galapagos finches back to a common source, the finch, and from this to the prehistoric early birds, the reptiles etc.

Just as in biology (taxonomy, the human pedigree, genetics, etc.) or in manuscript study (setting up of a stemma), the occurrence of common innovations *always* indicates that the innovative group has split off from the core group, and obviously is to be dated *later* than the core.

Languages, especially as far as their “skeleton” of sounds and grammatical forms are concerned, can be compared and arranged just as living beings are by paleontology and now, genetics. The resulting tree-like (or cladistic) arrangement will be used in the following discussion.

The matter is much more complex, though, when it comes to the changes in the meaning of words and the meaning of grammatical forms. Here, careful study of the oldest available texts will aid the reconstruction of the meanings of proto-forms.

Once the set of rules has been established, the theory requires that we can make predictions about the form of words in each related language, and at all its historical stages, whether attested in writing (or in a remote dialect) or not. Predictions are of course only possible as the theory is based on a strict set of rules and subrules that are derived from the “hard science” part of language, that is sounds and their groupings as words. Such predictions were possible especially after the more developed form of IE linguistics emerged, *c.*1870 CE, with the establishment of regular sound correspondences (*Lautgesetze*) by the Leipzig *Junggrammatiker* school.

Such predictions forecast the shapes and forms of words in the various related languages and always “get it right” when not disturbed by analogy. In other words, give me a Sanskrit or IE word, and I will predict its Old (or Modern) English form, whether already found in an old manuscript or a rare dialect or not. However, the predictions include also items that had not been observed in any IE language, for example, the proposal by the young F. de Saussure more than a century ago (1879), of a set of unknown sounds, later called laryngeals ( $h_1, h_2, h_3$ ). They have disappeared, with a few indirect traces, in all then known IE languages. When Hittite finally was deciphered and read in 1916,  $h_2$  was still found written (in words such as *pehur* = Grk, *pūr* = Engl. *fire*).<sup>59</sup> In other words, just as the existence of the planet Pluto was predicted by astronomy, so were the laryngeals, in both cases decades before the actual discovery.

Finally, just like living beings in nature, languages can be influenced by the surroundings, that is, by other languages, but they cannot “breed” with other species, that is, there is no such thing as a truly “mixed” language. Even if two languages strongly interact, the result still has most of the grammatical features of one of the “ancestors.” English still is Germanic though it has a large (Norman) French vocabulary and *some* grammatical forms taken over and expressed, in

calque, by Anglo-Saxon means: not *\*beautiful*, but “more beautiful” (< *plus beau*). To confuse this kind of interaction with genetic relationship is a common mistake in India, these days, where the unrelated Drav., Munda and IA language families are assumed to be the direct descendants of some sort of hypothetical ancient “Prākṛta” or Bronze Age pan-Indian language (see later in Section 11.14).

After this brief but necessary theoretical excursion we can investigate the details of the autochthonous theories, albeit, due to the lack of linguistic sophistication of autochthonists, in necessarily torturous detail.

### 11.11 Vedic, Iranian, and Indo-European

Even the most stalwart autochthonists have not denied that Vedic Sanskrit is closely related to Old Iranian (and to the other IE languages).<sup>60</sup> However, this relationship is explained by an *emigration* westwards of the Iranians and the other IEs *from* the Panjab (see later). Vedic Sanskrit is indeed so closely related to Old Iranian that both often look more like two dialects than two separate languages (e.g. *tam mitram yajāmahe* : *təm miθrəm yazama'de* ‘we worship *Mitra*'). However, that does not necessitate at all that the Old Iranian dialects were introduced to into Iran from the east, from India, just as little as Low German dialects from England.<sup>61</sup>

Rather, the comparison of the many common features found in Ved. IA and Old Iranian have led to the reconstruction of a common parent, IIr, spoken (at least) c.2000 BCE, by a group of people that shared a common spiritual and material culture (see Sections 11.3–11.4). Beyond that, the comparison of IIr and other IE languages has allowed similar reconstructions for all IE languages from Iceland and Ireland to Xinjiang (Tocharian). This theory was first developed in the early nineteenth century and has been tested extensively (and confirmed by new discoveries).

As a branch of Eastern IE, IIr shares many peculiarities with other eastern IE languages such as Balto-Slavic: in sounds (*\*k* > *š/ś* : Lithuanian *ašvò* (fem.), IIr *\*ac'ua* > E.Ir. *aspa*, Ved. *aśva*, but note western IE: Lat. *equus* “horse,” O. Irish *ech*, and Tocharian *yuk*, *yakwe*); also in vocabulary (Skt *dina* ‘day’, O. Slav. *din'*: Lat. *dies*, cf. Schrader 1890: 312), and perhaps even in mythology: Skt *Parjanya*, Lith. *Perkūnas*, O. Slav. *Perun'* (Schrader 1890: 414). The IIr parent language can be reconstructed by comparative linguistics, and large parts of the IIr spiritual and material culture as well, by *carefully* using the method of linguistic paleontology.<sup>62</sup>

Yet, in spite of the various “tests” comparative linguistics, whether IE or Bantu, has undergone for some 200 years, some revisionists and autochthonists even call into question the theories and methods of comparative linguistics as such. Some of them clearly lack an understanding of the principles at work.<sup>63</sup> In addition, they make use of the *expected* scholarly differences of opinion to show that the whole “theory of (IE) linguistics” does not work or is an “unproved theory” (Rajaram 1995: 144, 217) or a “petty conjectural pseudo-science” (2000, *passim*). (If so,

linguistics would hardly be taught at universities all over the world; this is not astrology!) Rajaram *et al.* neglect (a) that any science progresses and that certain opinions of the nineteenth century cannot be juxtaposed to those of the twentieth century, and (b) that in any contemporary field of science<sup>64</sup> there is a certain range of generally agreed facts but also a certain range of difference of opinion, such as between traditionalists, radical skeptics,<sup>65</sup> and those proposing new solutions to old or recently noticed problems. In short, there always are conflicting interpretations of the materials at hand that are discussed in dialectical fashion. Some interpretations are merely possible, others probable, and still others have actually been proved and have subsequently been shown to be correct.

Still, the autochthonous school maintains that the very assumptions at the basis of the genealogical, family (cladistic) tree model of the IE language family is wrong and deride it (cf. Elst 1999: 119; see discussion by Bryant 1999), or contest it *just* for the Indian linguistic area (see later). Actually, various models have been proposed and tested for the development from Proto-IE to the individual languages, to begin with, the “family tree” model (A. Schleicher’s *Stammbaumtheorie*, 1861–62), or a theory of dialectal waves of innovation emanating from a certain center (Joh. Schmidt’s *Wellentheorie*, 1872). Further, sociolinguistic theories include the development of PIE as a sort of camp language (another *Urdu*, so to speak), a new Pidgin or Creole, based on diverse original languages that eventually spread beyond its own rather limited boundaries, for example, with the introduction of horse-based pastoralism (Kuz’mina 1994; Anthony 1995, 2000, etc.).

Some autochthonists (Talageri 1993, 2000; Kak 1994a; Elst 1999: 159) use rather simplistic linguistic models, such as the suggestion that population increase, trade, the emergence of agriculture,<sup>66</sup> and large-scale political integration led to the extinction of certain languages and to a transfer of other languages across ethnic groups. However none of them in isolation, nor a combination of all of them, lead to the surprising spread of IE languages inside and outside the subcontinent.<sup>67</sup>

Autochthonists further neglect that language replacement, visible during the Ved. period, depends on a range of various sociolinguistic factors and not on single (monolateral!) factors such as the presence of nomads, increasing population density, etc. Rather, the situation differs from case to case, and the important factors for any particular replacement must be demonstrated, in the case of early India, the change from the language(s) of the urbanized Indus civilization to that of the pastoralist IAs. It certainly cannot be done, in Indocentric fashion, by positioning the homeland of the (“non-tropical”) IE language inside India and make its speakers emigrate, across the Indus area, toward Iran and Europe (see later in Sections 11.22–11.23).

Instead of the, by now, “traditional” comparative linguistics, the revisionist and autochthonists propose (a) the Out of India theory, often based on (b) a prehistoric Indian Sprachbund (of 3000–5000 BCE). Both will be discussed in the following sections.

### 11.12 “Out of India” theories

The direction of the spread of languages and linguistic innovations cannot *easily* be determined, unless we have written materials (preferably inscriptions). Therefore, *theoretically*, a scenario of an IE emigration from the Panjab is possible. But some linguistic observations such as the distribution of languages, dialect features, substrate languages, linguistic paleontology, words for cultural and natural features in the languages concerned, etc. all argue against the Out of India scenarios.

Out of India theorists such as Elst (1999: 122, 124 etc.), Talageri (1993, 2000), Misra (1992), Aiyar (1975), etc. envision an IE homeland in South Asia, to be more precise, in the Gangetic basin (Talageri 1993, 2000; Elst 1999: 118 sqq.). Talageri simply assumes, without any linguistic, archaeological, or paleontological sources and proof,<sup>68</sup> that in “prehistoric times the distribution of the languages in India may have been roughly the same as it is today”<sup>69</sup> (1993: 407) and that “a major part of the IEs of southeastern [*sic!*] Uttar Pradesh migrated to the west and settled down in the northwestern areas – Punjab, Kashmir, and the further north-west,”<sup>70</sup> subsequently to venture further west.<sup>71</sup> This view is based on data about peoples “clearly mentioned and described in the Puranas.”<sup>72</sup> Writing prehistory like this *naively* relies on texts that were composed millennia after the facts, and those are the products of a lively Bardic tradition (Parry 1971; Rocher 1986; Lord 1991; Brockington 1998), influenced by Brahmanical redactors (Horsch 1966; Söhnen 1986). In spite of what Pargiter (1913) and even Smith (1973) have tried to establish, we cannot write the history of archaic and ancient India based on the legendary Epic and *Purāṇic* accounts that were composed during the middle ages (Witzel 1990, 1995, 2001a,b).

Yet, Talageri actually knows, *somehow*, which IE group moved first and which later, and by which route (2000: 263).<sup>73</sup> This truly Indocentric, pseudo-*Purāṇic* fantasy is confidently self-characterized as: “This whole description is based on the most logical and in many respects the *only possible*, interpretation of the facts . . . Any further research, and any new material discovered on the subject, can only confirm this description . . . there is no possible way in which the location of the Original Homeland in the interior of northern India, so faithfully recorded in the Puranas and confirmed in the Rigveda, can ever be disproved” (1993: 408).<sup>74</sup> This is discussed later in the chapter.

In order to achieve his southeastern UP homeland, Talageri has not only to *rely* on the *Purāṇas* and the Epics, he also has to *read them into* his RV evidence (Witzel 2001a), though *pretending* to use only the RV itself to interpret the RV (Talageri 2000)<sup>75</sup> as this strengthens his case for a Gangetic homeland.<sup>76</sup> Nothing in the RV points to the knowledge of the lower Gangetic *Doāb*.<sup>77</sup> Nevertheless, the single appearances of *Jahnāvī* in the RV at 1.116.19 and 3.56.6 are made out to refer to the Ganges, which is clearly based on post-Vedic identifications.<sup>78</sup> Both passages clearly refer to a *Jahnāvī* which translators and commentators (including *Sāyaṇa*) have taken as a tribal designation<sup>79</sup> or an ancient clan (deity) which could have “settled” anywhere.<sup>80</sup>

Talageri's view is not conclusive even for the location of the *Yadu-Turvaśa*, *Anu-Druhyu* and *Pūru* tribes of the RV, which is far from clear for most of the Ṛgvedic period.<sup>81</sup> His opinion on the "western" "emigrant" Ṛgvedic tribes (*Anu*, *Druhyu*) is derived from that of the Epic and *Purāṇic* accounts of the Panjab and of the western neighbors of India, found first in *late Ved.* texts (ŚB and BŚS 18.13: 357.6 sqq., 18.44: 397.8 sqq.). It is "the view from the center," *Kuruḥsetra*, a view that was not yet present in Ṛgvedic times as the thirty-odd competing tribes did not have a "center" then.<sup>82</sup> In post-RV texts, however, *all* tribes and peoples outside the Center, the *Kuru(-Pañcāla)* realm, are regarded as "outsiders" (*bāhika* ŚB 1.7.3.8, *udantya*, *mleccha*, *asurya*), and they are characterized by their "incorrect" speech and obnoxious behavior (ŚB 9.3.1.24, the Panjabis) and lack of proper *śrauta* ritual (ŚB 13.5.4.19, the *Kāśi!*). The Panjabis (*Bāhika*) as well as the Banarsis (*Kāśi*) and the southern Biharis (*Aṅga*) are denigrated by middle Ved. texts.<sup>83</sup> This attitude<sup>84</sup> continued with respect to the west which was under constant and continuing threat of immigration, incursion, and occasional invasion from the Afghan highlands (cf. Rau 1957: 14). The Epic and *Purāṇic* accounts simply build on such late Ved. precedents: the Panjabis are regarded as "fallen Ārya," or in the words of BŚS, the *Gandhāri* have emigrated (from the center).<sup>85</sup> Again, nothing of this is found in the RV yet, instead we find the (post-Ṛg)Vedic attitude against "outsiders," the Other.

To combine some notices in the RV on the *Anu-Druhyu* with the much later, actually mistranslated *Purāṇic* story<sup>86</sup> about an emigration from India as statement of *fact* is as far-fetched. This Indocentric view is, in fact, just as mythic as the Roman insistence of their descent from the heroes of Troy (Vergil's *Aeneid*), or as the many tales about the lost tribes of Israel.<sup>87</sup> To use such legends, concocted long after the fact, as indications of actual historical events is completely anachronistic, and in fact unscientific.

### 11.13 "Innovative" linguistics and autochthonism

While Talageri's case is one of a nationalistic<sup>88</sup> non-linguist grappling with the very rudiments of linguistics, one of the few specialists of historical and comparative linguistics in India, Misra (1992), reportedly was unaffected by such influences. However, in his recent book he has taken<sup>89</sup> a step back beyond what is already well known and demonstrable. His results conform, intended or not, with the autochthonist and Indocentric view. He even overlooks the *hard facts*, that is, in his denial of PIE laryngeals as precursors of the actually *written* Hittite laryngeal sounds (Misra 1974, 1992). In general, he simply *rewrites*, on an *ad hoc* basis, much of IE (and general) linguistics. The technical details cannot be discussed here at length (for which see Hock 1999; Witzel 2001b). In sum, Misra's *ad hoc* rules do not make for a new system, they are a throwback to the early stages of IE comparative linguistics when strict rules of sound correspondences (*Lautgesetze*) had not yet been established by the Leipzig *Junggrammnatiker* School, at c.1870. It simply is uncontested among linguists of any persuasion and

any country that the remarkable, *grammatically regular* features of PIE are part and parcel of the parent language, the original PIE.

This language was at first confined to a still unknown area in a temperate (not a tropical!) climate, while autochthonists place the homeland of IE inside South Asia, or in certain parts of India (Misra 1992), or even in the southeastern Gangetic basin (Talageri 1993, 2000), – that is, in Indocentric fashion and not unexpectedly, in their own home land, India.<sup>90</sup> Further, Misra's dating of IE and of the RV, based on this "new" reconstruction, rests on the similarity of *his* "early nineteenth century" style PIE (looking altogether like Sanskrit) with reconstructed Proto-Finno-Ugric (Uralic) forms, for which he accepts the *guess* of Uralic linguists, a date of 5000 BCE. That guess is not any better than the various guesses for PIE, at 3000 or 4500 BCE. In sum, Misra's whole "system" rests on guesswork and on demonstrably faulty reconstructions.

To go into some of the details,<sup>91</sup> Misra's small book of 110 pages (1992)<sup>92</sup> is a curious collection of linguistic data spanning the Eurasian continent, from Tamil to Uralic (Finno-Ugric), and from IE, Ved. and Mit. IA to European Gypsy (Romani). It has the curious conclusion, typical of much autochthonous writing:

...the most original and orthodox (*sic!*) Indo-European speech, Sanskrit, was spoken in India ... This was a nice place to live. People would not like to go to places like Europe ... On the other hand, there is definite evidence of spread of Aryans (or Indo-Europeans) in different parts of Europe ...<sup>93</sup> The Finno-Ugric contact with Indo-Aryans speaks of the movement of Vedic Aryans from India to that area. Therefore it is likely that Pre-Vedic Aryans also might have gone out of India in several waves. ... The Iranian people were the last to leave ... based on the linguistic analysis or relative affinity with Sanskrit.

(Misra 1992: 100 sqq.)

Misra's main thesis, emigration *from* India, has already been refuted, on some linguistic grounds, by Hock (1999). However, as Misra is now quoted by autochthonists as *the* major linguistic authority who has provided "proof" for the OIT, some of his other conclusions must be discussed here.

As quoted earlier, Misra maintains (1992: 94) "the borrowed elements in the Uralic languages show borrowed R̥gvedic forms in 5000 BC." Unfortunately, his discussion is based on two wrong premises: Harmatta's list of IA/Iranian loans in Uralic<sup>94</sup> and Misra's own "unorthodox" but faulty reinterpretation of IIr and IA data.

Misra's date of the RV "beyond 5000 BC" (1992) is based on the *guess* of Finno-Ugric scholars for Uralic (PFU). The exact form of IIr loan words in PFU are much more important. For these early loans, Misra relies on the faulty listings and materials of Harmatta (1992) which are outdated both as far as IIr as well as PFU are concerned. Joki 1973; Rédei 1987; Katz (1985, cf. now 2001b) have recently worked on this problem; all are not mentioned by Misra.

Harmatta has arbitrarily divided his materials into eleven stages, ranging from 4500–1000 BCE, of 300 years each, with various unlikely positions within that scheme.<sup>95</sup> Misra’s faulty, nineteenth-century type reconstruction of IE (see Hock 1999) allows him to classify “most of the loan words . . . to be traced to Indo-Aryan. Of special importance is the borrowing traced to the earliest period (5000 BCE), *which is clearly Vedic Sanskrit*” (my italics, 1992: 24). This refers to words that are actually pre-IA,<sup>96</sup> rather PIr as they retain *c’* > Ved. *ś*, or *ṣ* instead of Ved. *s*, or the PIE vowels *e*, *o* instead of the later, Common Ir and Ved. *a*. Misra’s use of Burrow’s (1973: 23–7) and Abayev’s (1992: 27–32) materials suffers from the same methodological fault: forms that easily can be derived from Ir, such as Mordwinian *purtsos*, *purts* (reflecting Ir *\*parc’as* [part<sup>s</sup>as]) are declared by Misra as having come from the much later OIA (Ved.), in spite of their obvious retaining the old pronunciation *c’* [t<sup>s</sup>] and *not* the Ved. *-ś-*.<sup>97</sup> All of this produces a confused and confusing scenario.

The loans into PFU were not Misra’s Sanskrit-like ones; rather they took place at the stage of PIr (perhaps even at that of late common PIE). PFU has taken over a substantial number of loan words ranging from plants and animals to customs, religion, and the economy.<sup>98</sup>

Misra’s new dating of the RV at 5000 BCE, thus, is clearly impossible. It would be so, anyhow, due to the many contradictions raised by monolateral reasoning that he simply does not even notice: at 5000 BCE the RV could not contain the domesticated horse, chariot, copper/bronze weapons, etc. Instead, as the PFU loan words point to a pre-Ṛgvedic language (PIr, even some pre-PIr), the RV must actually be considerably *later* than the reconstructed PFU (supposedly of 5000 BCE). All of which fits in well with the “traditional” scholarly date for this text, in the second millennium BCE, which is roughly contemporary with the other early IE texts in Hittite, Mit. IA, and early, Mycenaean Greek. I leave aside here Misra’s faulty interpretation of Mit. IA words (see Section 11.16) and his curious but inappropriate use of Gypsy materials, a language that actually did emigrate from India, but thousands of years later, in medieval times (Witzel 2001b).<sup>99</sup>

### 11.14 A prehistoric pan-Indian linguistic area?

Next to the Out of India theory, the other new and equally misleading linguistic scenario is that of a very ancient, prehistoric Indian linguistic area (*Sprachbund*). Aiyar (1975), Waradpande (1993) and (nat.) scientists such as Kak (1994b), or mostly on the internet, the banker Kalyanaraman (1999, 2000) contend that two of the major language families of South Asia, IA (i.e. IE) and Drav. are not (very) different from each other. Both would rather represent two forms of an old South Asian Proto-language, which they call, variously, a Prakrit<sup>100</sup> or just the Indian Bronze Age language.

A forerunner of this idea is Aurobindo (cf. Talageri 2000). He and others confused the (ultimately correct) feeling of an all Indian *cultural* unity with

that of *linguistic unity*.<sup>101</sup> For example, Swaminatha Aiyar writes:

... from a linguistic point of view also, Dravidian is more comparable to Indo-Aryan than to any other language family in the world... But Dravidian may be the first to have been separated and went north. Next the centum people separated and left through the Himalayan passes to Caspian or Pamir and then to Europe etc. The satem speakers left after that, batch by batch. The last batch might have been the Iranians.  
(1975, quoted with approval by Misra 1992: 73–8)

The first part of the quote confuses descent (genetic relationship) of languages with secondary mutual influences of neighboring languages (South Asian linguistic region, *Sprachbund*).

The issue at hand is whether there ever was such a thing as a common South Asian or Indian “Prakrit.” Kalyanaraman, Kak (1994b), or Misra (1992) simply (or handily) confuse the relatively new concept of a South Asian linguistic area (*Sprachbund*) with the “genetic” relationship, based on cladistics, of the languages involved.

The *Sprachbund* idea was developed early in the twentieth century when linguists noticed that several disparate languages in the Balkans shared many features. These include Rumanian, Macedonian, Bulgarian, Serbian, Greek, and Albanian – all IE languages from various quite diverse subfamilies.<sup>102</sup> However, they have stayed together for a long time, and have had intermingled settlements for some 1500–2000 years. Consequently, bilingual speakers have influenced each other considerably, especially in syntax and by mutual loan words. Yet, there still is no “new Balkan language” or a “Balkan language family” in sight. The basic vocabulary of these six languages and most of their grammatical *formantia* still are very different from each other.

The same applies to South Asia, where the idea of a linguistic area was pioneered by Emeneau (1956) and Kuiper (1967).<sup>103</sup> But, *unlike* the Balkans, South Asia has at least three different large language families:<sup>104</sup> IE, Drav., Munda, which have nothing in common, either in basic vocabulary or in word structure or in grammatical *formantia*.<sup>105</sup> Over the past few millennia, these three (as well as the other) language families of South Asia have converged to a large degree, including phonetics (retroflexes, see Section 11.17), word formation (Munda changed from a monosyllabic language with prefixes into a polysyllabic one working with suffixes) and syntax (spread of absolutes, see Tikkanen 1987, or sentence structure preferring SOV arrangements, see Hock 1986).

The spread of such convergent items has been taken by some (Kak 1994b) as a sign that the various South Asian languages are underway to form a new Indic language family. This is overstating the matter by not just a little margin. Tamil speakers do not use Hindi words in their *basic* vocabulary, nor do Bengali speakers basic Santali words, nor Kashmiri speakers Burushaski words, nor Nepali speakers Tibetan words, and vice versa. And, the various grammars involved still are far apart from each other, in spite of all the converge features evoked earlier.

In sum, the proponents of a “common” South Asian Proto-language/‘Prakrit’ and a “new S. Asian language family *in statu nascendi*” confuse the outcome of a long stay together and original “genetic descent.” To state things differently, this simply is bad linguistics and special pleading.

### 11.15 Autochthonous linguistics and homelands

The two positions described earlier, that of a prehistoric Indian linguistic area (*Sprachbund*) and the (often linked) assumption that one of them involved the IE group of languages that then would have moved “out of India,” are not tenable for the reasons already mentioned and for those to be discussed in detail in the following sections.

First of all, as regards an IE homeland inside India, we would expect an original clustering of the various IE subgroups inside India, in other words, a clustering of innovations, right from the period of close proximity and of constant linguistic exchanges between the speakers of the PIE language and its incipient dialects. This kind of evidence has been observed in various parts of the world: closely packed areas of related languages indicate original habitat, while a geographically wide spread of one (sub)family points to recent expansion. Bantu covers all of Central, East, and South Africa while its parent group, Niger-Congo, has a very dense arrangement of diverse languages in West Africa.<sup>106</sup> Or, the large array of English dialects in England, and the very few but widely spread variants outside England (North America, Australia, etc.) clearly point to England as the place of origin.

The actual spread of IE across Eurasia points in the same direction. The famous Satem innovations ( $k' > c'$  etc. ) are limited to the IE languages in the east of the IE settlement area.<sup>107</sup> Clearly, the older Centum block has been split by the Satem innovations, with Celtic, Greek etc., in the west and Tocharian in the east. This clustering indicates that IIr is a *secondary* southeastern extension of eastern (Satem) IE, and that Ved. is a further, in fact the latest, easternmost one of these Satem branches; for a recent summary, see Hock (1986: 452, 1999). In short, the “dialectal features” in the arrangements of (P)IE languages indicate a general expansion of IE westwards and eastwards from an unknown center, somewhere close to the geographical center before the precolonial expansion of IE languages (over Siberia, the Americas, etc.).

Other items include the temperate, nontropical core vocabulary of IE (Section 11.23) or early IE loans from Semitic somewhere in the Near East such as *\*wVjn-*, IE *\*woin-* ‘wine’ (Nichols 1997: 143), words that are *not* found in India. Or, on a typological level, there is the intermediate position of PIE between the Uralic and the various (NW/NE and S) Caucasian language families (Nichols 1997, 1998).

This would indicate an original settlement of the ancestor language somewhere in (the steppes of South) Eastern Europe. However, many early IE languages of that region have disappeared since,<sup>108</sup> and the SE steppes were subsequently settled by the North Iranian Scythians, several Turkic and Mongolian (Kalmyk)

steppe peoples, and finally by Slavs.<sup>109</sup> This area is also at the fault line between the western Centum and eastern Satem languages and of certain syntactic features of IE (Hock 1999: 15).

All such observations make an Indian homeland of PIE a priori unlikely. Hock (1999) has adduced a further reason why this cannot be the case: all early dialectal differences in PIE, supposedly developed inside India, would have been exported, at various periods, and would have *exactly* reconstituted themselves geographically, all over Europe and the Near East, in the *same* geographical relationship as originally found in the hypothetical Indian homeland. This scenario certainly needs very special pleading, and simply falls prey to Occam's razor.<sup>110</sup>

### 11.16 Telling absences: lack of Indian characteristics west of India

Further, the case *against* an Indian homeland of PIE, and conversely, *for* a non-Indian homeland of PIE, Proto-IIr, and even of Proto-IA (pre-Vedic), can be made by observing the total absence of typical South Asian features (both local and OIA) in the other IE languages west of India. These include absence of typical Indian features and grammatical innovations in Mit. IA, Old Iranian, and the rest of IE, as well as the lack of typically Indian words for South Asian plants, animals, technology, etc. All of them should have been exported along with the emigration from India of the Iranians and other IEs. Proponents of the Indian homeland and Out of India theories as well as those of an early Indian *Sprachbund* would have to explain cogently why all these typical Indian features did not make it westward, beyond the Khyber and Bolan passes: collective amnesia? This problem, in typical monolateral fashion, is simply overlooked.

To begin with the language most closely related to Vedic Sanskrit, Mit.-IA. This language is attested by a number of OIA loan words (Mayrhofer 1979, EWA III 569 sqq.) in the non-IE Hurrite language of the Mit. realm of northern Iraq/Syria (c.1460–1330 BCE). The loans cover the semantic fields of horses, their colors, horse racing, and chariots, some important “Vedic” gods, and a large array of personal names adopted by the ruling class. However, the Mitanni documents do not show any typical *South Asian* influence.<sup>111</sup>

These remnants of IA in Mit. belong to an early, pre-R̥gvedic stage of IA, seen in the preservation of IIr *-zdh-* > Ved. *-edh-*, IIr *ai* > Ved. *e*, as well as in the absence of retroflexion.<sup>112</sup> How could all of this be possible at c.1400 BCE if one supposes an emigration from India, in some cases (Misra 1992) even *after* the supposed hoary date of the RV (5000 BCE)? The RV, after all, is a text that already *has* all these features.

It also is important to note the typical innovations of OIA in Mit. IA which attest to their early existence *outside* South Asia in Mesopotamia, in the earlier Mit.-IA habitat in the Zagros Mountains, and beyond in Greater Iran. Such typical OIA (Ved.) linguistic innovations include *aika-vartana* (*a-i-ka-ua-ar-ta-an-na*) ‘one turn’<sup>113</sup> instead of Ir. *aiva-* or general IE *\*oino* > *\*aina*. Still, the vocabulary

does not yet show signs of typical *South Asian* influence: for example, there is no retroflexation in *mani-nmu*, or the Southwest Iranian, Elam. O.P. *\*bara-mani* and in the East Iranian dialect, Avest.: *ma'ni* (in spite of the very specific, phonetic alphabet used by the Zoroastrians!) But retroflexation is precisely what is found once OIA enters South Asia: RV *mani* 'jewel'.<sup>114</sup> Mit. IA also does not have typical South Asian loan words such as *āni* 'lynch pin'.

The Mit. loan words also share some Ilr religious innovations, such as the new *Asura* gods *Varuṇa*, *Mitra*, *Indra*, and the *Nāsatiya*<sup>115</sup> and the new the concept of *Ṛta* (Iran. *Arta*, in *very late* Avest. pronunciation = *aša*),<sup>116</sup> and perhaps the newly introduced ritual drink, *sauma*, Ilr *\*sauma* (Ved. *soma*, Avest. *haoma*).<sup>117</sup> There is extensive proof for the use of the domesticated horse (*ašuuva*, cf. names for horse colors<sup>118</sup>), the chariot (*rattaš*) and chariot racing.<sup>119</sup>

To see in some of these words a post-RV form of OIA, a "Prakrit" (Misra 1992; Elst 1999: 183)<sup>120</sup> is misguided as this form is due to the peculiarities of the cuneiform writing system. Mit. IA *seems* to fit in well (at dates c.1400 BCE) with Misra's theory of an early RV at 5000 BCE as he regards some of the Mit. words as representing post-Vedic, Middle Indo-Aryan (MIA) developments. He assumes (repeated by Elst 1999: 183) MIA replacement of *v-* by *b-* as in Mit. *biriya-* < Ved. *vīrya* (rather, *priya-*, see EWA I 139), or MIA assimilation of clusters in Mit. *satta* < Ved. *sapta* 'seven'.

However, it has been asserted for long that *satta* in *satta-vartana* 'seven turns' has been influenced by Hurrite *šinti* 'seven'<sup>121</sup> as *sapta* could easily be written in cuneiform. The words starting with *b-* such as *bi-* did not receive their *b-* from a MIA pronunciation of *vi*,<sup>122</sup> as Misra maintains, but are due to the fact that Mit. does not allow initial *v-* (Diakonoff 1971: 30, 45) which Misra, surprisingly, does not know. Clearly, all such forms are due to the exigencies of cuneiform writing and Hurrite pronunciation found in the Mit. realm. In short, the Mit. IA words are not Prakritic but pre-Ṛgvedic (see earlier).

In sum, Mit.-IA is older than the RV and cannot have come from the Panjab or India in general, but must have been spoken on the north-eastern border areas of Mesopotamia; finally, it influenced the Hurrite language of the Mit. that belongs, just like its later relative in Urartu, to the North (Eastern) Caucasian group of languages (Diakonoff 1971, 1986). Thus, Misra's early "Middle Indo-Aryan" at 1400 BCE simply evaporates, along with his early RV at 5000 BCE.<sup>123</sup> We are back at the "traditional" dates.

Indeed, some of the rather indirect IA influx into the Near East may have been earlier than the one visible in Mit. (Drews 1989). The Kassite conquerors of Mesopotamia (c.1677–1152 BCE) have a sun god *Šuriiāš*,<sup>124</sup> perhaps also the *Marut* and maybe even *Bhaga* (*Bugaš*?), as well as the personal name *Abirat(t)āš* (*Abhiratha*); but otherwise, the vocabulary of their largely unknown language hardly shows any IA influence, not even in their many designations for the horse and horse names<sup>125</sup> (Balkan 1954).<sup>126</sup>

If one now thinks through, exemplarily, the implications of the autochthonous theory, the ancestors of the Mit. IAs would have left India very early indeed (well

before the favorite autochthonist hoary date of the RV, 2600–5000 BCE). They would have done so with the R̥gvedic dialect features (*ai* > *e*, *zdh* > *edh*) *not yet* in place, and without any of the alleged MIA forms of Misra (*satta*, etc.), but *with* the typical OIA and IIr terms for horses and chariot racing (*before* their invention and introduction into South Asia *c.*2000–1700 BCE, Meadow 1996, 1998)! They would also have done so *without* any of the local South Asian innovations (no retroflex in *mani-*, etc.) that are already found in the RV (“at 5000 BCE”). Mit.-IA also is *without* any particularly local Indian words (lion, tiger, peacock, lotus, lynch pin *āṇi*), all of which would have been “selectively” forgotten while *only typical* IIr and IE words were remembered. In short, a string of contradictions and improbabilities. Occam’s razor applies.<sup>127</sup>

### 11.17 Absence of retroflexes west of India

Turning back in time, or in the cladistic scheme, to the closest relative of OIA, Old Iranian, we will note a few typical innovations that separate it from IA, further below. However, Old Iranian (Old Persian, Avest., etc.) also contains clear evidence that does not allow for its emigration from India westwards, but rather requires a scenario that posits the introduction of Iranian into the Iranian plateau *before* it ever reached the borders of the Indian subcontinent. One such feature is the complete absence of typical Indian words referring to nature and culture (see below Sections 11.16 and 11.23) that simply could not have been forgotten *en masse* “while crossing the Bolan pass.”

Another feature is the absence of retroflex sounds (*t*, *ṭh*, *d*, *ḍh*, *ṣ*, *ṇ*) in Old Iranian. Retroflexion is also found sporadically in some other parts of the world (Hock 1986), such as in Scandinavia or Australia (innovative in both cases). However, it is typical for South Asia when compared to its neighboring regions, that is Iran, West/Central Asia, the Himalayas, and Southeast Asia.<sup>128</sup>

Again, in the autochthonous scenario, the hypothetical emigrants from India would have lost the typical South Asian “bending back of their tongues” as soon as they crossed the Khyber or Bolan Passes: not even Old Iranian (East Iran. Avest.) has these sounds. But, conversely, the Baluchi, who originally were a West Iranian tribe, have *acquired* retroflexion – just in *some* of their dialects – and *after* their arrival on the borders on the subcontinent, early in the second millennium CE (Hoffmann 1941; Hamp 1996; cf. Hock 1996). The same has happened to other late, incoming western Iranian groups such as Parachi and Ormuri that are found in Eastern Afghanistan, and also to some local Iranian Pamir languages such as Wakhi. Clearly, retroflexion affects those *moving into* the Eastern Iranian borderland/Indus plain. Importantly, the most widespread appearance of retroflexes is among the cluster of Hindukush/Pamir languages, that is the languages surrounding these mountains in the east (Nuristani/Kafiri, Burushaski, Dardic, and the rest of these northernmost IA languages) as well as in the north (some of the Iranian Pamir languages: Wakhi, Yigdha, Sanglechi, Ishkashmi, Khotanese Saka), as detailed by Tikkanen (in Parpola 1994: 166). Retroflexes *may* also have

belonged to (a *part* of) the Central Asian/Afghanistan substrate of the RV (Witzel 1999a,b). Retroflexion clearly is a northwestern regional feature that still is strongest and most varied in this area. In sum, retroflexion affects all those moving into the East Iranian borderland, the Indus plain and the subcontinent.<sup>129</sup>

Had retroflexion indeed been present in the pre-Iranian or the Proto-Iranian coeval with the (Rg)Vedic period, its effects should be visible in Old Iranian, at least in Avest.<sup>130</sup> which was spoken in East Iran, that means in a large part of the territory of modern Pashto (which has retroflexes indeed).

Cases such as IIr *\*waj'h-tar* > *\*waj'dhar* ‘the one who pulls’ > Avest. *vaštar*, but > Ved. *voḍhar-* ‘draft ox’ present perhaps the best testimony for the several stages of conditioned reflexes in the development from IE to Ved. A change from Ved. *voḍhar-* > Avest. *vaštar-* (à la Misra) is plainly impossible in any version of phonetics, as also *voḍhar-* > IE *\*wek'h-tor-* (as in Latin *vec-tor*). Missing consonants as in *vo-dhar-* do not suddenly (re-)emerge out of the blue in other languages, and *not* as *-š-* in Iranian, as *-k-* in Latin, or as *-k-* in Gaulish *Vectur-ius*, or as *-g-* as in Engl. *wagon*. Rather, with the IE theory, they all stem from IE *\*weg'h-tor-*. (All of this is neglected, monolaterally, by Misra 1992).<sup>131</sup> In sum, the well-known rules of IE sound changes explain the development of the root *vah* (IE *\*weg'h*) without problem, while any OIT theory would have great difficulty to get from *voḍhar-* to any Avestan, Latin, English, etc. form.<sup>132</sup>

(Old) Iranian, which has kept the older sound sequences, allows for a relative and even for absolute dating: *\*aždh* > *oḍh* is parallel to *\*sazd-* > *sed*, that is, both are post-Indo-Iranian and even post-Mitanni, which keeps the sequence *azd*. In other words, Rgvedic is younger than the Mit. words preserved at c.1450–1350 BCE. At any rate, RV *-ed-* is definitely younger than the Mit. forms because the IIr form *\*sazdai* > Ved. *sede* (3 sg. perf., cf. Avestan *hazde* ‘he has sat’) has already spawned a number of analogical formations in the RV that are *not* conditioned by *-azd-*. These are found even in the older sections of the RV.<sup>133</sup>

In all these cases the retroflex is late and localizable, that is, Ved. *innovation* (in the Hindukush area?) that is not shared by Iranian and the other IE languages. In short, this innovation is rather *low down* on the “family pedigree,” in cladistics. Any biologist would classify a similar development in biological materials as a clear indicator of a late development, as an *innovation*, – in this case, one that separates Ved. IA/OIA from the rest of IA, IIr, and IE.<sup>134</sup> In other words, Vedic Sanskrit does *not* represent the oldest form of IE, as autochthonists often claim.

The same conclusion can be reached when studying local Panjab loan words in the RV (Witzel 1999a,b) and their lack in Old Iranian texts.

### 11.18 Absence of local Indian words and grammatical innovations in Iranian

The *hypothetical* emigrants from the subcontinent would have taken with them a host of “Indian” words – as the Gypsies (Roma, Sinti) indeed have done. But, we do not find any typical Old Indian words beyond South Asia, neither in the

closely related in Old Iranian, nor in Eastern or Western IE, except for the few, commonly borrowed words of culture (*Wanderwörter*), such as recent imports into English (*orange, tea/chai, or curry, punch, veranda, bungalow*), or the older ones of the type *rice, beryl, hemp*, etc.<sup>135</sup> In an OIT scenario, one would expect “emigrant” Indian words such as those for lion, tiger, elephant, leopard, lotus, bamboo, or some local Indian trees,<sup>136</sup> even if some of them would have been preserved, not for the original item, but for a similar one (e.g. English [red] squirrel > North American [gray] squirrel).

There should be at least a few terms of *tropical* plants that would have been exported (north)westwards,<sup>137</sup> perhaps with changed meanings. This is not the case. Designations for typical Indian plants and animals that should be found in IE and especially in Iranian, do not even appear in Iran, not to speak of Central Asia or Europe.<sup>138</sup> Nor do we find *retained* Indian names for plants/animals, although at least some of them are actually *still found* in Iran: the lion,<sup>139</sup> the tiger,<sup>140</sup> the lotus (seen on Behistun sculptures), etc. Other words that have occasionally been used for the autochthonous argument, such as *kapi* ‘monkey’, *simha* ‘lion’ or *ibha* ‘elephant’ are rather dubious cases.<sup>141</sup> Instead of Indian words we find, for example, for *simha* ‘lion’, other words such as Iran. *šer*, Grk. *līs*, Lat. *leō(n)* (Witzel 1999a,b, forthc. b), and similarly, Grk/Latin ones for ‘tiger’, ‘lotus’, etc. Many of them come from a Mediterranean/Near Eastern substrate, but not, as expected in any OIT scenario, from the South Asian one visible in Ved.

In sum, no typical Indian designation for plants or animals made it beyond the Khyber/Bolan passes. The only clear exception possible *would* be the unlikely case of the birch tree, found in India only high up on the mountain ranges of Kashmir, whose IE name *\*bhrg’ho-* is found all the way from India<sup>142</sup> to Europe: Ved. *bhūrja* (Kātha Samhitā); Ir. Pamir dial. *furz*; Shugni *vāwzn* < *\*barznī*; Osset. *bærs(æ)*; Lith. *bėržas*; Serbo-Croat. *bréza*; German *Birke*; Engl. *birch*, etc. (cf. Section 11.22, n. 175). The other “European” trees that are found in the northwest of the subcontinent and beyond up to Russia/Urals, are *absent* from Sanskrit vocabulary<sup>143</sup> (Section 11.23).

This situation has always been well explained by the assumption of IE linguists that these European/Caucasus/Ural tree names were remembered (sometimes, in the Central Asian steppes and deserts, only in old sayings or in poetry?) down to the very doorsteps of South Asia in Afghanistan. Or, they were applied to similar items but were utterly forgotten in the tropical South Asia as there were no similar trees for which these IE names could be used.

The autochthonous theory again must introduce the improbable *auxiliary* assumption that *all such temporate climate words* have been forgotten *inside* the subcontinent after, or even as soon as, the Iranians (and other IEs) *supposedly* crossed the Suleiman Range and the Khyber/Bolan passes into Afghanistan and Iran.

On the other hand, many if not most of the typical South Asian plant and animal names have clear, non-IE, local origins. In other words, they are loan words into Ved. from the local South Asian languages<sup>144</sup> (e.g. RV *mayūra* ‘peacock’, *vrihi*

‘rice’, etc.). Others are new formations, built on the basis of IE words, for example, ‘elephant’: *hastin* (+ *mṛga*) ‘the (wild animal) with the hand’<sup>145</sup> or perhaps *vyāghra* ‘tiger’.<sup>146</sup> These new formations must have been introduced when the *immigrating* speakers of IA (*not* the Iranians!) were first faced with them in the Greater Panjab. Autochthonists (Elst 1999; Talageri 2000; etc.) denounce such cases as poetic or descriptive formations, or as dialect designations which can happen at any stage in the history of a language (e.g. Vulgar Latin *caballus* > French *cheval*, etc. for older *equus*). However, such monolateral critics once again overlook the wider context, the *complete absence* of original IE/IA words for *South Asian* plants/animals built with clear IE roots and/or word structure.

The absence of IE/IA words for local plants and animals clearly militates against any assumption that pre-IA, Proto-Ir, or PIE was the *local* language of the Panjab or even of Uttar Pradesh during (pre-)Harappan times. This also agrees with the fact that most of the South Asian loan words in the R̥gveda, excluding some Central Asian imports (Witzel 1999a,b, forthc. b), are *not* found in Iran and beyond.<sup>147</sup> These words include Kuiper’s (1991) c.380 ‘foreign words’ in the RV. Again, not all of them could have been “lost” as soon as the *hypothetical* IE or Iranian emigrants crossed over into Iran and beyond. One would at least expect a *few* of them in the “emigrant” languages. They could have survived in the west and could have acquired a new meaning, such as British Engl. *corn* ‘wheat’ > ‘maize’ in America. The Gypsies, after all, have kept a large IA vocabulary alive, over the past 1000 years or so, during their wanderings all over the Near East, North Africa, and Europe (e.g. *phral* ‘brother’, *pani* ‘water’, *karàl* ‘he does’).

No amount of special pleading will convince an independent (linguistic) observer of a scenario that relies on the total loss of all *typical* South Asian words in Iranian and *all the other* “emigrant” IE languages. Again, Occam’s razor requires to scrap the theory of an IE emigration from the Panjab to the West.

### 11.19 Absence of local Indian influences in Indo-Iranian

As has been indicated earlier, Avest. and Old Persian share many innovations with Ved., when compared to Eastern (Satem) IE or the rest of PIE. This was, of course, the initial reason to set up the Ir group of languages as a separate branch of IE. The occurrence of common innovations *always* indicates a split off from the core group, which obviously is *later* than the core (see earlier).

Some innovations, stemming from the Ir period, are met with in Old Iranian (pronoun *ah-am* ‘I’, Avest. *azəm*,<sup>148</sup> Nom.Pl. *aśvāsa-as*, Avest. *aspāṛhō* ‘horses’ etc.). This is attributed to the common source language rather than to OIA influencing the neighboring Old Iranian dialects (as clearly witnessed in the examples given earlier).

On the other hand, while we can observe some changes common to all Iranian languages (*s* > *h, p, t, k* + consonant > *f, θ, x* + cons., etc.), Avest. often is quite

archaic, both in grammar and also in vocabulary, while Ved. seems to have progressed much more toward Epic and Classical Sanskrit (loss of injunctive, moods of the perfect, aorist, etc.). The Avest. combination within a sentence of neuter plural nouns with the singular of the verb is hardly retained even in the other older IE languages. The Old Avest. of Zaratuštra, thus, is frequently even more archaic than the RV and therefore simply too old to have moved out of India *after* the composition of the RV (*supposedly*, before 2600–5000 BCE).

In other words, Iranian simply lacks the many *innovations* that characterize Ved., innovations that are not found among the other IE languages either, for example the absolutives in *-tvā*, *-ya*, ntr. pl. in *-āni*,<sup>149</sup> *jabhāra* for *jahāra*, *Jamadagni* (= Avest. *jimaṭ*) next to the innovative RV *gamad*, or the generalization of the R̥gvedic *e*-perfects, derived from IIr *\*sazdai* (Avest. *hazde*) > Ved. *sede*, spawning many analogical formations such as *mene*. Since sound changes and grammatical changes are not random these Ved. innovations must have occurred well after Ved. had separated from late IIr/pre-Iranian, thus: IE → E. IE → IIr → Ved., namely, IIr → Iranian.

It would be against all rules of comparative linguistics in IE or in any other language family (and of general cladistics, as in biology), to assume that such late R̥gvedic developments would represent old IE ones (Misra 1992) and that cladistic branching should *not apply just in the single case of IA*.<sup>150</sup> Vedic Sanskrit may be regarded as *devabhāṣā* but it is subject to the same developments as any other spoken language. One can only conclude that Proto-Iranian (> Avest., O. Persian) split off from IIr and thus, from pre-Old IA (> Ved., Mit. IA, etc.) at an *early* date. Because of the early split, Old Iranian preserved some archaic features, while also developing innovations on its own.

All of this points to a separation of Proto-Iranian and Proto-OIA at some time *before* the RV and before Mitanni-IA. It cannot have happened *inside* South Asia as the even the close geographical neighbor, Avest. (spoken in most of Afghanistan, Witzel 2000) lacks all those typically South Asian words that are local loans into Vedic (Section 11.5, Witzel 1999a,b).

In sum, Proto-Iranian was never spoken in the Panjab and the many linguistic archaisms in Old Iranian cannot readily be explained by a *supposed* early Iranian emigration from India.

How can the autochthonists then deal with archaisms found in Iranian that are *not* found in Vedic? In an autochthonous scenario, such archaisms ought to have been preserved in the Panjab, side by side with the RV (where there is no trace of them). They must have been forgotten, miraculously, by peoples *all over* the subcontinent (just like names of trees and other examples mentioned earlier, Section 11.15 sqq.)<sup>151</sup> once the Iranians *supposedly* left it (Elst 1999: 122, 124 sqq.), taking with them and retaining these very archaic features. However, when and where should this exodus have happened? Southwestern, Central Southern and Northern Iran was occupied, in the third millennium BCE, by non -IE peoples.<sup>152</sup> Iranian, IIr, or IE influences are nowhere to be seen.<sup>153</sup> Further, Iranian does not show any typical local Indian elements (see earlier).<sup>154</sup> Again, the required

collective amnesia, surprisingly one restricted just to *certain archaic* items just *inside* India, does not make for a good case. It is, again, one of very special pleading.

While all such emigration schemes are possible in a purely *theoretical* scenario, there are a number of arguments that render it impossible. Some of them, notably the question of separate innovations, have been listed by Hock (1999). The actual distribution of IE (and IIr) dialect features simply does not allow for all-IE innovations *after* a supposed Iranian/IE exodus from India.<sup>155</sup>

One can add the early close links of IIr (and, later, early Iranian) with Uralic in Southern Russia and in the Ural and Western Siberian regions (see Section 11.13), and the new terminology coined for the horse-drawn chariot (*ratha/raṭa*), first introduced in the Southern Russia/Ural area *c.*2000 BCE (see Section 11.20). This list, which could be extended, clearly points to the areas *north* of the ancient Near East, and strongly militates against the assumption of an original Indian homeland of OIA, IIr, and, worse, of IE (see Sections 11.21–11.23).

Further, if the Iranians (and IEs) emigrated from India, why we do not find “Indian bones” of this *massive* emigration in Iran and beyond? Indian skeletons are, as Kennedy informs (1995, 2000), remarkably different from Near Eastern ones.<sup>156</sup> Again, autochthonists would have to argue that mysteriously only *that* section of the Panjab population left westwards which had (then actually not attested!) “non-Indian” physical characteristics, – very special pleading indeed. Thus, to adopt an Indocentric OIT stance *precisely mirroring* the IA immigration theory based on “trickling in” is not possible as this “trickling out” would comprise *all subfamilies* of IE, from Tocharian to Celtic, and would constitute a much more *massive* emigration, or “invasion” as Misra (1992) calls it, than any type of IA influx *into* India.

The IE theory can explain the materials found in the various languages much more satisfactorily. In one phrase, *the Iranian languages simply miss the Indianization of IIr*, with all its concurrent innovations in grammar and vocabulary.

## 11.20 Dating Indo-Aryan and Iranian innovations

As could be seen, it is sometimes difficult to argue against some of the autochthonists’ assumptions purely on *general* linguistic grounds as language changes cannot easily be tied to certain areas, unless there is evidence from inscriptions and clearly localizable texts.

However, a good indicator of the time frame of IIr and its daughter languages, O. Iran. (Avest.) and OIA (Ved.), is found in the word for the horse-drawn chariot, Sanskrit *ratha*, O. Iran. *raṭa*. This word is attested in the oldest IIr texts, in the RV and in the Avesta, also with the secondary formation Ved. *rath-in-*, O. Avest. *raṭ-i* ‘the one who has a chariot, charioteer’. Even more tellingly, it appears in the inherited archaic compound, with a locative case ending in its first member, RV *rathe-ṣṭha*, Avest. *raṭaē-ṣta-* ‘charioteer’ (cf. also *savye-ṣṭha* ‘warrior’).

The autochthonous theory would have the RV at *c.*5000 BCE or before the start of the Indus civilization at 2600 BCE. Therefore, the Iranians or other IEs *should have exported* the chariot from South Asia at that early time. But, the chariot is first found in a rather archaic form (“proto-chariot”), betraying its origin in an oxen-drawn wagon (Ved. *anas*, PIE *\*weg’h-o-*, wagon, *veh-icle*), at *c.*2000 BCE, in Ural Russia and at Sintashta, West and East of the Urals. As its invention is comparatively late, the western IE languages retain, not surprisingly, the older meaning of the IE word, *\*roth<sub>2</sub>o-*“wheel” (Lat. *rota*, Germ. *Rad* ‘wheel’); they simply have moved away, from the original, central IE region (such as the Ukraine/Ural steppes) westwards into Europe<sup>157</sup> before this particular development took place.

An autochthonist counterargument could maintain that the newly introduced chariot spread quickly from the Near East or Central Asia all over the Iranian and Indian world, along with its IIr name, *\*ratha*. It would thus belong only to a secondary historical level (after that of the earlier “Panjab Indo-Europeans”). This argument, however, would again run into a number of difficulties. Strangely, the word in its new meaning of ‘chariot’ never reached the neighboring Proto-Slavic tribes, nor the other European “emigrants” on the western side of Eurasia,<sup>158</sup> while it is known to the close neighbors, the (Northern) Iranians and the Mitanni-IA. Worse, the word and the object are found already in the RV (*supposedly*, pre-Indus, 2600 or *c.*5000 BCE!), well *before* its invention.<sup>159</sup> In short, multiple insurmountable contradictions emerge.

The word *cakra* ‘wheel’ may be a much older adaptation from Sumerian, *gil-gul* ‘wheel’ and GIŠ*gigir* ‘wagon,’ to IE *\*k<sup>w</sup>e-k<sup>w</sup>l-o-* > IIr *cakra*, taken over from the Near East at the time of invention of the wheel and the wagon (Littauer and Crouwel 1996). However, IE *\*roth<sub>2</sub>o*, in the newly specialized meaning *ratha* ‘chariot’, is restricted to IIr and its early archaeological attestation puts PIir, again, close to the Urals. On the other hand, there are common PIE words in Ved. (and O. Iran.) for the cart or four-wheeled wagon (*anas*) and its constituent parts, such as *akṣa* ‘axle’, *ara* ‘spoke, pin’, *nabhya* ‘nave’, *yuga* ‘yoke’, *raśmi*, *raśanā* ‘reins’, etc. (for details see EWA, s.v.) They are much older, PIE, as they refer to the more primitive technology of solid wheel, oxen-drawn wagons and carts that was developed (from sledges) in Mesopotamia during the late fourth millennium.

If according to the autochthonous theory, the Iranians had emigrated westwards out of India well before the RV (2600–5000 BCE), how could both the Indians (in the Panjab) and the Iranians (from the Ukraine to Xinjiang) have a common, inherited word for the – not yet invented – horse-drawn chariot as well as a rather ancient word for the charioteer? Both words must have been present at the time of the IIr parent language: as the linguistic evidence shows, the technical innovation was already IIr (note Proto-IIr *\*th* that regularly developed to > Ir. *θ*, as in O. Iran. *raθa*), and it must have happened at the place of its invention,<sup>160</sup> in the steppe plains near the IIr River *Rasā* (Volga).

Consequently, the occurrence of *\*ratha* in IIr at *c.*2000 BCE shows that its *import* was carried out, along with many other IIr items of culture and religion, from the South Russian/Central Asian steppes *into* the subcontinent, and not

vice versa. *This is one of the few clear cases where we can align linguistic innovation with innovation in material culture, poetics and myth, and even with archaeological and historical attestation.*<sup>161</sup> Therefore, we have to take it very seriously. The various revisionist or autochthonous dating schemes that circumvent the important innovation in technology and language dealing with the quick horse drawn, spoke-wheeled chariot at *c.*2000 BCE are doomed to failure.<sup>162</sup>

After this review of “systematic absences” in non-IA languages belonging to the IE family of grammatical and some cultural items that must have been present in India in any autochthonous scenario,<sup>163</sup> we can now turn to (predictable) items that further delineate IE, IIr, and IA in time and place.

### 11.21 Linguistic innovations and migrations

The relative dating of OIA can be further specified if we take into account older, western IE (Centum) versus younger (Satem) innovations. Terms that are *old* in IE include PIE \*g<sup>w</sup>ow- ‘cow’, \*dyew- ‘heaven’ and their archaic accusative forms \*g<sup>w</sup>ōm, \*dyēm with PIE dissimilation of -w- (i.e. instead of an expected, regular \*\*g<sup>w</sup>ōwm, \*\*dyēwm). They should have existed already in a hypothetical “IE Panjab.” However, the dissimilated PIE forms are reflected in various old IE languages, as Ved. *gām* ‘cow’, Hom. Grk. *boun/bōn*, Ved. *dyām* ‘heaven’, Grk *zēn*, etc. (EWA I 479, 752). In any autochthonous theory, this archaic dissimilation would either be due to pre-split PIE dialects *inside* India (already refuted by Hock 1999, earlier) or to the extremely unlikely subsequent, *individual* development of the *same* traits outside India, after the IE languages would have left the subcontinent.<sup>164</sup> Just like the supposed “individual” innovations in *dyām* and *gām*, such eastern IE developments (cf. Hock 1986: 451 sq.) would have to be *re-imports* from their focus in Eastern Europe/Central Asia back into India – all convoluted cases of very special pleading.

To correlate such relative dates (e.g. PIE \*g<sup>w</sup>ō- > IIr *gā-* > Ved. *gā-*, or PIE *k<sup>w</sup>mtom* > IIr *c<sup>w</sup>ata* > Ved. *śata*), with other early IE languages, we can take a look at their first traces, with Hittite *c.*2000–1600 BCE in Anatolia, Mycenaean Greek at *c.*1400–1200 in Crete, Mitanni-IA. in North Syria/Iraq at 1450–1350 BCE. All PIE and IIr terms and forms must precede these dates by a *large* margin as even archaic languages, such as Vedic and Hittite, are separated from each other by *several* levels of subsequent innovative developments. The date of the dispersal of the earliest, western IE languages (including Tocharian, eastwards) can be estimated in the early third millennium BCE.

Further dates can be supplied by a study of important cultural features such as the common IE reconstructed word for copper/bronze, or the vocabulary connected with the heavy oxen-drawn wagon (see later). They point to the end of the fourth or the beginning of the third millennium as a date *ad quem*, or rather *post quem* for the last stage of commonly shared PIE.

The autochthonous theory would, again, have to assume that all Indian (Ved.) innovations mentioned earlier would have been carried out *after the speakers of*

*Iranian (and/or all other IE languages) had left the subcontinent.* In this Indocentric scenario (Talageri 1993, 2000, etc.), the Centum languages (Celtic, Germanic, Latin, Greek, etc.), then the Satem languages (Slavic, etc.), would have followed each other by a time span of at least a few hundred years. Iranian would have been the last to emigrate from India as it is closest to Vedic. It should have left well before c.1000 BCE, when West Iranian is first found on the eastern borders of Mesopotamia.<sup>165</sup>

The relative dates discussed earlier allow to put such claims into a distinct relief, especially when such extraordinary early dates as 5000 BCE are claimed for the RV (Misra 1992). Granting this for argument's sake (though impossible on text-internal, cultural grounds), the *hypothetical old* RV would have the comparatively *modern* form of OIA (derived < IIr < PIE); nevertheless, it would *precede* that of the very archaic Hittite (c.2000–1600 BCE) by a margin of some 3000 years. We know, of course, that Ved. is not *earlier* than Hittite but clearly *later*, that is, lower in the cladistic scheme, than the 'family tree'. It is also *later* than Eastern IE (Satem innovations, *RUKI*, cf. Hock 1986, 1999), *later* than Proto-Indo-Iranian (*e, a > æ, k' > c', o > ā* in open syllables), and even later than pre-Vedic (*c' > ś, or zd(h)* and *j' > Ved. h*, which still preserved as š [ž] < *j'h* in Mit. IA at 1400 BCE, see later in Section 11.16, n. 111). In short, all of the above indicates that neither time nor space would agree with an OIT scenario.

In other words, all linguistic scenarios that assume such hoary dates for the RV and an IE emigration out of India (such as Misra 1992; Talageri 1993, 2000; Elst 1999) are not just badly deliberated but plainly impossible: PIE, while still in the Panjab, would *not* yet have developed all the traits found in non-OIA languages (Satem, etc.), while their close neighbor, the "old" RV, would *already* have gone through all Satem, IIr, pre-Vedic and RV innovations some 7,000 years ago – an unlikely scenario, to say the least. Still, as such, the "old", R̥gvedic OIA would miraculously have exercised early influences on the rather distant Uralic languages in South Russia/Urals/West Siberia,<sup>166</sup> while the close non-IA IE neighbors of Uralic (O. Iran., Baltic, etc.) would *not*. All of this is obviously impossible on grounds of space and time. Misra *et al.* have not thought through their idiosyncratic and *ad hoc* scenarios.<sup>167</sup> To do so and to think *for* them is really not *our* job, but that of the proponent(s) of the new theory. They should have done their homework.

## 11.22 Culture and migrations

The matter can still further be elucidated by observing some cultural and natural features found in PIE. According to the autochthonous theories the various IE peoples (the "*Anu, Druhyu*" of Talageri 1993, 2000) and their languages *hypothetically* left India (c.5000–4000 BCE). If put to a test by archaeology and linguistics, these "emigrations" would *rather* have to be set at the following latest possible dates.<sup>168</sup>

- At c.3000–2500 BCE, West IE leave westwards, possessing 'copper/bronze' (Ved. *ayas*, Lat. *aes*; etc.); with the wagon, but not yet possessing the chariot: Lat. *rota* 'wheel', Grk *kuklo-* 'wheel', Tocharian *kuköl, kokale* 'wagon', etc.

(note the *new* formation Grk *hárma(t)*- ‘chariot’, Pokorny 1959: 58); all parts of the heavy, solid wheel-wagon drawn by oxen (*ukṣan*, etc.) are IE: *akṣa*, *ara nābha* ‘nave’; Germ. *Rad* Lat. *rota*; domesticated horse, used for riding: *\*h<sub>1</sub>ek’wo* > Lat. *equus*, O. Irish *ech*, Toch. *yuk*, *yakwe*.

- At c.2500–2000, East IE, with Satem characteristics (*\*h<sub>1</sub>ek’wo*, O. Lith. *ašvà*), but still no chariots: Lith. *ratas* ‘wheel, circle’, Slav. *kolo* ‘wheel’.
- At c.2000, IIr unity, with the new *ratha* ‘chariot’ introduced from Volga/Ural/North Caucasus area; and with *cakra* ‘wheel, chariot’; the domesticated horse (and the chariot) enter India after 2000 BCE, probably about 1700 BCE; innovative Asura (*Āditya*) gods, with artificial formations (*Arya-man* = Avest. *Airiia-man*, etc.).
- At c.1500–1000, Iranians move southwards into Iran: with chariot, Asuras, but keep archaic traits in grammar.
- At c.1000, West Iranians are attested beyond the eastern borders of Mesopotamia, in Media and later in the Persis (Assyrian inscriptions).

According to this list, again, all Ved. linguistic innovations (with the RV set at 5000 BCE by the autochthonists) and some East IE innovations, such as the IIr chariot, would have happened *before* the supposed emigration of the Iranians, etc. from India. This is linguistically and archaeologically impossible, unless one uses the auxiliary, equally unlikely hypothesis that some IIRS left India before 2000 BCE and *reimported* the chariot into India (Elst 1999). All such arguments need very special pleading. Occam’s Razor applies.

### 11.23 Nature, plants, animals, and migrations

The autochthonous scenario of an IE emigration from the Panjab also contradicts all we know about PIE material culture (e.g. horse, wagon, the late chariot) as well as climate-based vocabulary, all of which traditionally have been used to indicate a temperate PIE homeland with cold winters, somewhere in Eastern Europe–Central Asia,<sup>169</sup> in an area that included at least *some* (riverine?) tree cover and partially overlapped with the Russian/Siberian *taiga* woodlands (note PIE *\*medhu* ‘honey’, Pre-IIR *mekše* ‘bee’).

Generally, the PIE plants and animals are those of the temperate climate: animals include the otter, beaver, wolf, bear, lynx, elk, red deer, hare, hedgehog, and mouse, and plants include birch, willow, elm, ash, oak, (by and large, also the beech<sup>170</sup>) juniper, poplar, apple, maple, alder, hazel, nut, linden, hornbeam, and cherry (Mallory 1989: 114–16).

Typical IIR words indicating a temperate climate, all with an IE root and suffix structure, include, among others: ‘wolf’,<sup>171</sup> ‘snow/winter’,<sup>172</sup> ‘birch tree’ (*bhūrja*,<sup>173</sup> Pamir Dial. *furz*, Osset. *bærs(æ)*, etc.) which is found on the northwestern borders of the subcontinent (highlands of Kashmir) while some weaker arguments can be made for the willow (> Ved. *vetasa* ‘cane, reed’, see earlier n. 142), maybe the fir (*pītu?*) or the aspen (*varaṇa?*). But why are all the other IE trees those of

a colder climate that are non-existent in Indian languages, even when the neighboring Iranians have some of them, for example, in the eastern Afghan mountains (fir, oak,<sup>174</sup> willow, and poplar)?

It is *theoretically* possible that these words belonged to the *supposed* original IE/IA vocabulary of the northwestern Himalayas. Even if we take into account that the Panjab has cool winters with some frost and that the adjoining Afghani and Himalayan mountains have a long winter season, neither snow nor birch are typical for the Panjab or the Indian plains.<sup>175</sup> Therefore, words such as those for ‘wolf’ and ‘snow’ rather indicate linguistic memories of a colder climate than an export of words, such as that for the high altitude Kashmirian birch tree, to Iran, Central Asia, and Europe.

Assuming, for argument’s sake, the autochthonous scenario, one should rather ask: how *did* the IE tree names belonging to a cooler climate ever get exported out of India where these trees do *not* exist? One would have to use the auxiliary assumption that such trees were only found in the colder climate of the Himalayas and Pamirs, thus were part of the local South Asian vocabulary, and that they would then have been taken along, in the westward movement of the emigrants.

But, even this special pleading does not work: some of the typical temperate PIE trees are *not* found in the South Asian mountains. Yet, they have good Iranian and IE names, *all* with proper IE word formation. Interestingly, these words have not always been formed from the same stem, which reflects normal (P)IE linguistic variation and is not due to *completely new*, individual, local formation in one or the other IE language. Rather, the PIE variations in the name of the beech,<sup>176</sup> fir (and resin), and oak (see earlier) use the same roots and several of the available PIE suffixes. In other words, these cool climate, temperate trees and their names are already PIE.

If the indigenous theory of an emigration Out of India would apply, *one* or *two* typical “Indian” PIE (dialect) forms of tree names should have been taken and spread westwards, such as is the case with the two loans from Chinese, *chai* or *tea*. The opposite is the case. The individual IE languages have the *same* PIE word, or they have slightly innovated within the usual PIE parameters of ablaut and suffixes.

In short, whatever way one turns the evidence, all points to some original IE tree names of the temperate zone that were exported southwards. Some of them therefore exhibit a slight change in meaning; a few others possibly are applications of old, temperate zone names to newly encountered plants, such as ‘willow’ > ‘reed, cane’. Again, this change in meaning indicates the path of the migration, from the temperate zone *into* India.

The countercheck, the search for Indian plant names in the west, such as lotus, bamboo, Indian trees (*aśvattha*, *bilva*, *jambu*, etc.), comes up with nothing. Such names are simply not to be found, also not in a new meaning<sup>177</sup> (see earlier Sections 11.16 and 11.23). The lack is significant, as the opposite case, import into South Asia, is indeed found. Again, this evidence points to an *introduction* of the IA language into India, not an export “*Out of India*.”

The same kind of a scenario is found with the typical PIE animals; they, too, belong to a temperate climate. While some of them such as the wolf or bear occur in South Asia as well, albeit in slightly different species (such as the South Asian black bear), others are found, just as some of the tree names, only in new, adapted meanings. For example, the beaver is not found inside South Asia nowadays. It occurs, however, even now in Central Asia, its bones have been found in areas as far south as Northern Syria and in mummified form in Egypt, and it is attested in the Avesta (*baβri*),<sup>178</sup> which is related to the descriptive term, IE *\*bhebhru* ‘brown, beaver.’ This is widely attested: O. Engl. *bebr*, *beofor*, Lat. *fiber*, Lith. *bēbrus*, Russ. *bobr*, *bebr-* (Pokorny 1959: 136). The respective word in Vedic, *babhru(-ka)*, however, means ‘brown, mongoose’ (Nenninger 1993) as there is no Indian beaver. While the mongoose is not a water animal, some Indian types of mongooses vaguely look like a “beaver”, and clearly, the IE/Ilr term for “beaver” has been used, inside South Asia, to designate the newly encountered brown animal, the mongoose, cf. American Engl. (*mountain lion* for *puma*). The mongoose occurs in the subcontinent, but in Greater Iran only in its southeastern-most corner, in Baluchistan.<sup>179</sup>

The opposite direction of the spread of the word, “Out of India,” is not possible as it is not Ved. *babhru* (or Avest. *baβri*) that spread westwards (following Misra 1992), but its regular derivatives of the original (and traditional) IE source, *\*bhebhru*. The hypothetical export of Ved. *babhru* would have to suppose subsequent individual sound changes, mysteriously resulting in the various attested IE forms that simply cannot occur if one starts from Ved. *babhru*. The same applies to the meaning. All “emigrating” IEs would mysteriously have agreed to substitute the beaver for the Indian mongoose.<sup>180</sup>

Other South Asian animal names are not “exported” either. Occam’s razor applies: all things being equal, it is easier to assume import into South Asia of animal names of the temperate zone.

All of the above is not favorable for an emigration scenario. Rather, PIE has a number of temperate/cold climate plants and animals which never existed in South Asia but which can be reconstructed for all/most of PIE; their names follow IE rules of word formation (root structure, suffixes etc.) and exhibit the typical formational possibilities of IE (ablaut, exchange of various suffixes).

A few of them that designate flora and fauna actually occurring inside South Asia have been retained in Ved. (such as bear *ṛkṣa*, wolf *vṛka*, otter *udra*, birch *bhūrja*, etc.) and their designations have been used for the *local* form of the animal or plant in question. But most of the IE plants and animals are *not* found in India and their designations have either been adapted for the animals or plants of a tropical climate (as is the case with the beaver > mongoose *babhru*, ‘willow’ > ‘reed’), or they have simply *not* been used any longer and died out.

According to the autochthonous theory, these temperate climate, non-Indian plant and animal names would have to be new words that were coined only when the various IE tribes had already emigrated out of India. However, again, all of them are proper IE names, with IE roots and suffixes, and with proper IE word

formation. It would require extraordinary special pleading to assume that they all were created *independently* by the various emigrant IE tribes, at different times, on different paths, but always from the *same* IE root in question and (often) with the *same* suffixes. How could these “emigrants” know or remember exactly which roots/suffixes to choose on encountering a new plant or animal? Occam’s razor applies again, and the opposite assumption carries: IE words of the flora and fauna of the temperate zone were adapted to a tropical climate wherever possible. We see immigration into, instead of emigration “Out of India.”

### 11.24 Summary of the evidence

On the whole, all of the linguistic data and the multitude of proposed or possible autochthonous scenarios based on them lead to the same kinds of *culs de sac* or *Holzwege*.

There is *no evidence* at all for the development of IE, IIr, and even of pre-OIA/Vedic *inside* the subcontinent. It is contradicted, among other items, by the Iranian and Mit. evidence. An *emigration* of the Iranians and other IEs<sup>181</sup> from the subcontinent, as supposed by autochthonists, is *excluded* by the linguistic evidence at large. To maintain an Indian homeland of IE, IIr, and Pre-OIA requires multiple special pleading of a sort and magnitude that no biologist, astronomer, or physicist would tolerate.

Simply put, *why should we allow special, linguistic pleading just in the case of India?* There is nothing in the development of human language in India that intrinsically differs from the rest of the world. Occam’s razor applies.

So far, most of the linguistic evidence presented in the previous sections has been largely neglected by the autochthonists,<sup>182</sup> and if it has been marshaled at all, it has been done so *ad hoc*, in a monolateral fashion, and while disregarding linguistic counter evidence as well as the larger picture supplied by related sciences. This unfortunately is the case even with the lone, autochthonously minded Indian historical linguist, Misra. His *rewriting* of IE linguistics remains incidental and idiosyncratic, and it results in multiple contradictions, just as the rest of the theory. Autochthonists must do a lot of homework in trying to contradict the linguistic data discussed earlier (Sections 11.13–11.23) before they can hope to have any impact on linguistic discussions.

Conversely, the data derived from linguistic study are consistent throughout: they clearly indicate that an Eastern IE language, the Ved. branch of IIr, has been *Indianized* and has phonetically and grammatically *innovated after* its arrival in the Hindukush and the Panjab, while Iranian has escaped this influence as it did not enter the subcontinent then.

Exactly how the IA language *and* the *IA spiritual and material culture* of the archaeologically still little traced IA speaking tribes – as expected for people on the move! – was introduced, that is still an open and very much debated question. It can be traced securely, so far, only in the evidence coming from the texts (horses, chariots, religion, ritual, poetics, etc.), perhaps in the Gandhāra Grave

Culture (starting c.1700–1600 BCE, Allchin 1995: 50), and from the features of the language itself that have been discussed here at length. Possibly, genetic evidence, especially that deriving from studies of the male Y chromosome, may add to the picture in the near future. It indicates several major movement of bearers of the Y chromosome types IV, V, VI, and some later intrusions, such as types IX, X (Francalacci 2001).

### 11.25 The autochthonous theory in context

The autochthonous theory, in its various forms, leaves us with many *monolateral* assertions and, consequently, with multiple internal contradictions as far as time frame, cultural content, archaeological, zoological, astronomical, mathematical, linguistic, and textual data are concerned.<sup>183</sup> If such contradictions are noticed at all by the revisionist and autochthonist writers – Elst (1999); Frawley (1994); Klostermaier *et al.* (1997) do not! – they are explained away by new, auxiliary assumptions and theories, that is, by *special pleading*, and frequently by *extraordinarily* special pleading. In short, all things being equal, the new, disjointed Indocentric theory falls prey to Occam’s razor.

If we would in fact assemble all the monolateral autochthonous “evidence” (as has been attempted here and in Witzel 2001b) and think it through, torturous as it may prove to be, we would have to rewrite not only Indian history, but also many sections of archaeology, historical linguistics, Ved. literature, historical geography, zoology, botany, astronomy, and so on. To apply the new Indocentric “theory” consistently would amount to a “paradigm shift” in *all* these fields of study. But biologists, for example, would not be amused. In other words: *why should there be “special rules” in all these sciences only as far as evidence from South Asia is concerned?*

Such features make the autochthonous theory particularly unfavorable as a replacement of earlier explanations.<sup>184</sup> A “paradigm shift” can be maintained, as has been shown time and again in the preceding sections, only by using very special pleading. If the model of a transhumance type immigration or trickling in of speakers of OIA, and subsequent steadily increasing acculturation, is to be replaced, then such a new revisionist/autochthonous model has not yet been found, and it has certainly not yet been shown to be probable. The burden of proof squarely rests on the shoulders of the advocates of the new autochthonous theory.

To conclude, even when neglecting some individual quirks,<sup>185</sup> the various autochthonous proposals simply do not present a coherent and cogent picture. Rather, they consist of monolateral, disjointed fragments, disproved by other evidence that is taken from the contemporaneous local context. They almost completely neglect the linguistic evidence, and they run into serious chronological and geographical difficulties: they have horse-drawn chariots in South Asia before their actual invention, horses in South Asia before their introduction from Central Asia. They have the use of iron tools at 1900 BCE before its first use at c.1200–1000 BCE. They have the Ṛgvedic Sarasvatī flowing to the ocean while the

RV indicates that it had already lost its main source of water supply and must have ended in a terminal lake (*samudra*), just like its East Iranian namesake, the *Harax<sup>v</sup>a'tī* which flows in to the Hamum Lake. They must also distort, against philology, the textual evidence of the RV to make it fit supposed Harappan fire rituals, the use of the script, a developed town civilization and its stratified society of traders and artisans, and international maritime trade. And, they must rewrite the literary history of the Vedas to fit in improbable, hoary dates for the composition of its texts, so that they agree with *supposed contemporary* astronomical *observations* – when everything else in these texts points to much later dates.<sup>186</sup>

Finally, they have the OIA, or even the IE Proto-language, developing in the Panjab or even further east in northern India while all non-IA<sup>187</sup> linguistic and historical evidence, including that of linguistic paleontology, clearly points to areas further northwest and west. They maintain, in Indocentric fashion, an Indian homeland for IE while the expected early South Asian loan words are entirely missing in all non-IA IE languages, including even the neighboring Old Iranian. Conversely, such loans are already copious in (R̥g)Vedic and are traceable to South Asian substrate sources.

Curiously, even the alleged historical development of the Aryan “invasion theory” is not correct as it is usually narrated.<sup>188</sup> It was *not* developed and formulated in the nineteenth century to show that the Vedas were composed before the “Aryans” mixed with the indigenous “races” and to underline that the British conquest was similar to the “Aryan conquest.” In fact, during the early period of IE linguistics the home of the IE language was thought, in the typical Romantic fashion of the day, to be in India or in innermost Asia. The concept of the IE language family, though first formulated, and not yet scientifically, by two late eighteenth-century British citizens (Lord Monboddo and William Jones), was *not* developed by British imperialists but by Danish and German scholars of the romanticism era, such as F. Bopp (1816); it was further developed in the later nineteenth century by German linguists such as the Leipzig *Junggrammatiker* school whose members had no interest at all in British imperial designs (cf. Kennedy 1995; Trautmann 1999). The theory of an immigration into or invasion of South Asia by speakers of IA, based on the familiar concept of the Hunnic and Germanic invasions of the Roman empire, and the idea of an IE “race” emerged only later in the nineteenth century and they were not even generally accepted; for example, the concept of an “Aryan race” was *rejected* by the now-maligned Oxfordian Indologist Max Müller (1888) or, at length, by the German Indo-Europeanist Hermann Hirt (1907).

Present day non-Indian scholars, however, no longer have any colonialist or “Eurocentric” agendas and scholars, anyhow, do not feel the need to defend “traditional” Western conclusions and theories of the nineteenth or twentieth centuries.<sup>189</sup> Present day “western scholarship” (which is not restricted to Occidental countries) is very much aware of its own historical situation and theoretical position; yet, it is firmly rooted, (postmodernism by and large excluded) in the enlightenment tradition.

Notwithstanding the internal social and political reasons for the clash between recent Indian historiography (locally, now often termed “Marxist”) and the new wave of revisionist and nationalistic writing that culminates in the Indocentric “Out of India Theory,” it is its very emergence and increasing popularity, as late as two generations after Indian independence, that must surprise. The revisionist Indocentric project, with the *exact (anti-colonialist) opposite*<sup>190</sup> of the “Aryan Invasion Theory,” certainly is not guided by the principles of critical theory but takes, time and again, recourse to pre-enlightenment *beliefs* in the authority of traditional religious texts such as the *Purānas*. In the end, it belongs, as has been pointed out earlier,<sup>191</sup> to a different “discourse” than that of historical and critical scholarship. In other words, it continues the writing of religious literature, under a contemporary, *outwardly* “scientific” guise.<sup>192</sup>

The revisionist and autochthonous project, then, should not be regarded as *scholarly* in the usual post-enlightenment sense of the word, but as an apologetic, ultimately *religious* undertaking aiming at proving the “truth” of traditional texts and beliefs. Worse, it is, in many cases, not even scholastic scholarship but a *political* undertaking aiming at “rewriting” history out of national pride or for the purpose of “nation building” with “one people, one nation, one culture.” *Am ind’schen Wesen soll die Welt genesen?*

If such writings are presented under a superficial veneer of objective scholarship they must be exposed as such,<sup>193</sup> at least in the context of critical post-enlightenment scholarship. Alternatively, they could simply not be taken seriously as historiography and could be neglected (which seems to be the favorite attitude of most scholars in Indology/Indian Studies). In both cases, however, they must be clearly *understood* and described as traditional, (semi-)religious writings. Therefore, they should be regarded and used, not as scholarly contributions, but as *objects for the study* of the traditional mind – uncomfortable as this might be for some of their proponents, many of whom combine, in facile fashion, an education in science with a traditional mindset.<sup>194</sup>

Now, more than fifty years after Indian independence, one would expect scholars to have gained some distance from colonial times and it should not be regarded as a *scholarly*, but simply as a political undertaking to “rewrite” history for the purpose of national pride or “nation building.” We know to what such exercises have lead during the past century.

If the present wave of apologetic, revisionist, and nationalistic writing should continue unabated, and if it should remain unchecked by post-enlightenment scholarship, future historians will look back at these excesses of the end of the twentieth century and the beginning of the twenty-first century in the same way as some now like to do with regard to the nineteenth century. And they will criticize the present generation of scholars for having looked the other way – for whatever reason.

It remains for us to hope<sup>195</sup> that the recent spate of revisionist, autochthonous, Indocentric, and chauvinistic writings will not lead to similar, real life consequences as those that we have witnessed during the twentieth century.

**Abbreviations**

AV	Atharvaveda Saṃhitā
Avest.	Avestan
BŚS	Baudhāyana Śrautasūtra
DEDR	Burrow and Emeneau 1984
Drav.	Dravidian
EJVS	Electronic Journal of Vedic Studies (Boston, 1995–)
EWA	Mayrhofer 1956–76
Germ.	German
Grk	Greek
IA	Indo-Aryan
IE	Indo-European
Iir	Indo-Iranian
Iran.	Iranian
KEWA	Mayrhofer 1986–96
Lat.	Latin
Lith.	Lithuanian
MIA	Middle Indo-Aryan
Mit.	Mitanni
MT	Mother Tongue (Boston: ASLIP 1995–)
NIA	New Indo-Aryan
O. Engl.	Old English
OIA	Old Indo-Aryan
O. Iran.	Old Iranian
OP	Old Persian
O. Pers.	Old Persian
Osset.	Ossetic
PIE	Proto-IE
Pkt	Prakrit
RV	Ṛgveda Saṃhitā
Skt.	Sanskrit
Toch.	Tocharian
Ved.	Vedic
Ved. Index	Macdonell–Keith 1912

**Notes**

- 1 A first, 120 pp. version of this chapter has appeared in 2001 (*EJVS* 7–3) which may be consulted for many of the more technical details. Some very recent publications are necessarily not yet included for discussion in this update, such as the summary and discussion of the problem by E. Bryant 2001 or J. V. Day 2001. However, many of Bryant's points are already included here as we both have discussed them intensively at Harvard while he was preparing his book for publication. See also the recent, quite critical update by a *non-occidental* scholar, Toshiki Osada 2000 (in Japanese).

- 2 Due to consideration of space, this chapter is by and large restricted to linguistic features. For deliberations on texts, philology, archaeology, history, and the various natural sciences see Witzel *EJVS* 7–3, 2001b.
- 3 For details on texts, their localization and linguistic levels see Witzel 1987a, 1989, 1997.
- 4 Archaeological dates for iron had been creeping up over the last few decades; however, according to Possehl and Gullapalli 1999, and Agrawal and Kharakwal (in press) the introduction of iron in Northwest India is close to 1000 BCE. Occasional use of meteoric iron predates that of smelted iron.
- 5 For autochthonous dates, placing the RV thousands of years earlier, see later Section 11.13 sqq., n. 73. Talageri (2000, see later, n. 74) introduces traditional legendary data to achieve such hoary dates; for a critique, see Witzel 2001a.
- 6 See later Section 11.16, n. 111, on *vašana* [*važana*], and *-az- > e*.
- 7 Maximally, but unlikely, 1900 BCE, the time of the disintegration of the Indus civilization. The IA influx must be pre-iron age (1200, or even 1000/900 BCE).
- 8 Max Müller had come to a similar chronology. Nowadays this is misrepresented by the autochthonists, especially Rajaram (1995), who accuses Müller to have invented this chronology to fit in with Bishop Usher's biblical calculations!
- 9 Y. Avest. *Bāxdi* 'Bactria', which corresponds to AV *bahlīka*, indicates a lower limit for Zarathustra of c.1200–1000 BCE (Witzel 1980).
- 10 Tribal groups: Saka, Yue Ji (Tukhara, Kushana, Abhīra, Gurjara; large armies: Darius' Persians, Alexander's, and the Bactrian Greeks; Chinese via Tibet, Ladakh, and Nepal; Arabs to Sindh; Ahom Tai to Assam; Huns, Turks, Moghuls, Iranians, Afghans via the northwestern passes, and so on.
- 11 See Section 11.7. Constant interaction of "Afghan" pastoral highlanders and Indus plain agriculturists could have set off the process (see Witzel 2000). After the collapse of the Indus civilization, many of its people moved eastwards (Shaffer 1999), leaving much of the Indus plains free for IA style cattle breeding.
- 12 See Balkan 1954. However, many wrong data are found with the following authors: Elst (1999: 183), Rajaram and Frawley (1997: 123). (Kikkuli's) manual is not at all "written in virtually pure Sanskrit" (Rajaram and Frawley 1997: 123). Elst (1999: 184) has the [Aryan] Kassites immigrate "from Sindh to Southern Mesopotamia" as a "conquering aristocracy" in a "planned invasion." Actually, the Kassite language belongs to an altogether unknown language group (Balkan 1954). From what sources did these writers derive their innovative insights?
- 13 Speaking of other areas of Eurasia; in the case of South Asia, however, he thinks of elite dominance achieved through IA immigration/invasion.
- 14 *Nahali*, a small IA language spoken on the Tapti river in Madhya Pradesh, has at successively "lower" levels of vocabulary, 9 percent Drav., 36 percent Korku (Munda), and some 24 percent without any cognates (Kuiper 1962: 50, 1966: 96–192; *Mother Tongue II-III*, 1996–97); these low-level words belong to the oldest language so far traceable in India (Witzel 1999a,b).
- 15 For example, England with numerous IE immigrations and invasions (Celts, Romans, Anglo-Saxons, Vikings, Danes, and Normans – and now Caribbeans and South Asians). There is a strong non-Indo-European substratum in English, with common words as *sheep*. All of Europe has been subject to the same kind of Indo-European "invasions,," read: 'immigration and/or acculturation'.
- 16 That is, of the Bactria-Margiana area and even from further afield: river names (Witzel 1987a, 1999a,b; Hintze 1998), mountains and mountain passes, and tribal names. Such names retain pre-Old Iranian forms and all are aligned along the *expected* route of immigration *into* the subcontinent, from the northern steppes via Margiana/Bactria to Herat/Arachosia and Eastern Afghanistan. Individuals such as the great *R̥ṣi Vasiṣṭha* and his clan (RV 7.33.1–3), and whole tribes such as the *Bharata* and *Ikṣvāku* (*Jaiminīya Brāhmaṇa* 3.327–8: Caland §204), are described as crossing the Sindhu or the

- Satlej/Beas (RV 3.33). Later Vedic texts continue to report such movements; for details see Witzel 2001b. (Incidentally, nowhere in the Vedas do we hear of an out of India, *westward* movement (see n. 72; Section 11.12), as some “Out of India” proponents would have it nowadays). The Iranian textual materials on immigration are even more meager but they provide similar indirect reminiscences. However, *Aṛiianam Vaejah* (Vīdēvdād 1), usually understood as the “original” (northern, e.g. Choresmian) home of all *Aṛiia* of the Avesta is “the best of all places and settlements” in the highlands of central Afghanistan (Witzel 2000), right in the center of all the “Iranian” lands of the Avesta, a region typical for transhumance pastoralism. *Aṛiianam Vaejah* is certainly *not* located inside India (Misra 1992: 39; Elst 1999: 197 sq.; Talageri 2000), nor does it have any bearing on the original home of all Iranians, or even of the speakers of Indo-Iranian (Witzel 2000).
- 17 Kuiper 1955, 1991; Thapar 1968; Southworth 1979, 1995; Witzel 1995.
  - 18 Witzel 1987a, 1995. Talageri’s claims (2000) of a hoary RV with some two thousand years of composition are impossible in any version of textual and linguistic history, see below, n. 74 and Witzel 2001a.
  - 19 Based on the archaic suffix – *tu*, as in *gatvā*, a calque formed from the old IE stem – *tu* which then became fossible (-*tvī tum*, *tave*, etc.), see Kuiper 1967.
  - 20 The speakers of IA and the local population must have interacted on a bilingual basis for a long period, *before* the composition of the present RV hymns with their highly hieratic, poetical speech (Kuiper 1991, 2000). A relative date can be inferred from Mitanni-IA (at c.1400 BCE), predating the extant RV (see Section 11.16).
  - 21 Such as the absolutes, or the use of *iti* (Kuiper 1967); perhaps also some Prakrit-like forms (*vyotiṣ*, *muhur*, etc.) which have been disputed as such, see Kuiper 1991: 2, 27 sq., 79; 2000, aan de Wiel 2000.
  - 22 Rajaram, a scientist, engineer, and mathematician by training, speaks of “unproved conjectures” (1995: 219), etc., and regards comparative linguistics as “unscientific,” – strange, for a science that can make correct *predictions*! See later, Section 11.10.
  - 23 With the – only very partial – exception of Elst 1999 and Talageri 1993, 2000. Surprisingly, Talageri (1993: 205) finds that “the overwhelming majority of Sanskrit names for Indian plants and animals are derived from Sanskrit and Indo-European” (Bryant 1999: 74). A brief look into KEWA, EWA (Mayrhofer’s “unclear” etc.), never used by him, would have convinced him of the opposite. But, linguistic arguments are “hairsplitting” (2000: 248, 299) or just “a linguistic ploy.”
  - 24 Especially when the underlying language is not one of the known ones (IA, Proto-Drav., Proto-Munda, Proto-Burushaski, etc.) but one of the unknown Gangetic languages (such as “Language X,” Masica 1979) or from the Panjab-based prefixing Para-Munda language (Witzel 1999a,b); cf. Bryant 1999: 73.
  - 25 In the heavily Anglicized *Massachusetts*, for example, place names such as *Massatoit*, *Massachusetts*, *Wachusets*, *Montachusets*, *Cohasset*, *Neponset*, *Mattapoisset*, *Mattapan*, *Mashpee*, *Chicopee*, *Nantucket*, *Pawtucket* are without English etymology and immediately recognizable.
  - 26 Entirely misunderstood by those autochthonists (quoted by Bryant 1999: 72) who merely delight in pointing out the differences in etymological proposals by IE, Drav., or Munda proponents. Further, Drav. and Munda linguistics are not yet as developed as IE/IA. There always will be cases that *allow* multiple interpretation, even after application of the structural rules of IA/IE, Drav., Munda, described below; for details see Witzel forthc. a.
  - 27 *Pace* the non-specialist, out of hand dismissal by Talageri 2000: 248, 299; see, rather, Anttila 1989: 156 for a detailed discussion.
  - 28 With the exception of the onomatopoetic *\*kik* in ‘magpie’, Skt *kiki-* in *kikidivī* (EWA 1349); *\*mag/meg* does not exist in IE.
  - 29 C = consonant, M = voiced/mediae, T = unvoiced/tenuae, R = resonants = *y/w/r/l/n/m*; not allowed are the types Rce- or Rse- (Skt *\*ṛka*, *\*usa*, etc.), and the types: *\*bed*, *\*bhet*,

- \*tebh*, *\*pep*, *\*teurk/tekt* (Skt *\*bad*, *bhat*, *tabh*, *tork*). See Mayrhofer 1986: 95, Szemerényi 1970: 90 sqq. In short: (S) (T) (R) e (R) (T/S) where T = all occlusives, R = resonant; forbidden are M – M (*\*bed*), M – T (*\*bhet*), T – M (*\*tebh*), same occl. in one root, such as: no *\*pep* (except *\*ses* ‘to sleep’), final 2 occl. or final 2 sonants, no: *\*teurk*, *\*tekt*; but *s-Teigh*, etc. are allowed.
- 30 The basic Drav. word structure (ə = long or short vowel) is (C)ə(C), and suffixes have the structure: -C, -Cə, -CCə, -CCCə; after a root -C the vowels -a-, -i-, or -u are inserted.
- 31 This contradicts those autochthonists (cf. Bryant 1999: 80) who simply reject the notion of an unknown (lost) language as a source. But it does not deter linguistic amateurs such as Talageri (1993: 200) who speaks of “a twilight zone of *purely hypothetical* non-existent languages.”
- 32 IA etymologies are now discussed with a complete explanation of all of their constituent parts, of related roots and of suffixes employed. For the complexities of establishing a proper etymology see the thirty-six items in Hoffmann 1992: 761–66. However, the Drav. *DEDR* is only a list of related words without further explanation; a Munda etymological dictionary is only in collection stage, not to speak of other languages of the subcontinent.
- 33 Cf. the discussion by Bryant 1999: 75. If the IAs would have been autochthonous to the Greater Panjab, these “local” words should be IA, while in fact they are “foreign,” non-IE/IA (see Witzel 1999a,b). It is quite a different problem (Bryant 1999: 76) that many plant names in IE do not have a clear etymon. Still, they are IE, IA in phonetics and *word structure* and as such, *inherited* from PIE into IA. PIE is of course not the “first language,” and many such names (their “root”) must have been inherited into PIE, from Nostratic, for example; still, they can be reconstructed for PIE and conform to its structure. Talageri (1993: 206) simply does not understand how the language developed over time, from pre-PIE to Iir, to IA, when declaring such words simply as Aryan colloquial or slang. *All remain within the fold!*
- 34 For the problems of the root *sā* ‘to sow’, *sītā* ‘to furrow’, *sīra* ‘plough’ see EWA II 733.
- 35 Details in Witzel 1999a, cf. Bryant 1999: 78. Significantly, there is a cluster of non-IA names in eastern Panjab and Haryana (including the local name of the Sarasvatī, (*\*Vi<šam>bal/ž!*), where the successor cultures of the Indus Civilization continued for a longer period of time.
- 36 Due to the surprising neglect by Iranists of etymological studies of Old Iranian (not to speak of Middle Iranian where we even do not have comprehensive dictionaries).
- 37 Witzel 1995, 1999a,b, in detail: forthc. b; Lubotsky, forthc; Bryant’s proposal (1999: 77) that the non-IE loanwords in Iranian must come from the Proto-Iir that was spoken in Eastern Iran before the Iranians moved in cannot be substantiated. The individual P-Iran. and P-IA forms of such loans often differ from each other (Witzel 1999a,b, forthc. b, Lubotsky, forthc.) which is typical for repeated loans from a *third* source.
- 38 The remnants of the Huns, for example, have been found only recently in some Hungarian graves; otherwise we would only know about them from the extensive literary and historical record (and the name of “Hungary”). Similarly, the Huns in India are only known from historical records and from the survival of their name as (*Hara*)-*Hūṇa* in the Mahābhārata or *Hūṇ* in some Rajasthan clans and *Hūṇdeś*, just north of the Indian border, in Western Tibet.
- 39 For agriculture, Kuiper 1955, 1991; for washing, Witzel 1986, and especially for pottery, Rau 1983.
- 40 However, with sponsors of sacrifice that bear strange names: *Vayiyu*, *Prayiyu*. One may also think of part of the assemblage of the Cemetery H culture of the Panjab.
- 41 Some archaeologists simply restrict themselves to report the findings of archaeology and *intentionally* neglect all the linguistic and spiritual data of the texts; in fact, some denounce them as “linguistic tyranny” (Shaffer 1984). This is not helpful in approaching a *complete* picture of the early history of the subcontinent.

- 42 J. Lukacs asserts unequivocally that no significant population changes took place in the centuries prior to 800 BC; see now Kennedy 1995, 2000.
- 43 The remnants of the Harappan Cemetery H people etc., all are physically very close to each other, while the people of Mohenjo Daro stand somewhat apart. "Aryan bones" have not been found. (Kennedy 1995, 2000; cf. Meadow 1991, 1998; Meadow and Patel 1997).
- 44 Similarly, Anthony and Vinogradov (1995);

Language shift can be understood best as a social strategy through which individuals and groups compete for positions of prestige, power, and domestic security... a linkage between language and access to positions of prestige and power... A relatively small immigrant elite population can encourage widespread language shift among numerically dominant indigenes in a non-state or pre-state context if the elite employs a specific combination of encouragements and punishments. Ethnohistorical cases... demonstrate that small immigration and concurrent language takeover is absent, the texts often allow such deductions, e.g. for Mesopotamia.

(W. von Soden 1985: 12)

- 45 Aurobindo, Waradpande 1993; Kak 1994b, etc., see Elst 1999: 119; Talageri 2000: 406 sqq.; Lal 1997: 281 sqq.
- 46 S. S. Misra 1974, 1992, 1999; Talageri 1993, 2000; Frawley 1994; Elst 1999; Klostermaier 1989, 1997, 1998, 2000 etc.
- 47 For summaries see Hock 1999; Talageri 2000. The exact opposite is seen in deriving Skt. from Arabic in a book published in Pakistan: Mazhar 1982.
- 48 The list of such internet and printed publications waxes by the month. There now exists a closely knit, self-adulatory group, churning out long identical passages, copied in cottage industry fashion. A "canonical" list would include, among others: Choudhury 1993; Elst 1999; Danino 1996; Feuerstein *et al.* 1995; Frawley 1994; Kak 1994a,b; Klostermaier (in Rajaram and Frawley 1997) 1998, 2000; Misra 1992; Rajaram 1993, 1995; Rajaram and Frawley 1995, 1997; Rajaram and Jha 2000; Sethna 1981, 1989, 1992; and Talageri 1993, 2000, where Choudhury stands somewhat apart by his *extreme* chauvinism. They and others frequent the internet with letters and statements ranging from scholarly opinions and prepublications to inane accusations, blatant politics, and hate speech; such ephemeral "sources" are not listed and discussed here.
- 49 Nobody explains *when* that should have been, after the exodus from Africa now put at 50000 BCE.
- 50 Elst disingenuously insists on calling any migration or even a "trickling in" an "invasion." However, immigration/trickling in and acculturation obviously are entirely different from a (military) invasion, or from overpowering and/or eradicating the local population. Incidentally, the idea of *Indra* destroying the "fortification walls" of the Indus towns was not created by Wheeler but his collaborator at the time, V. S. Agrawal (Witzel 2001b).
- 51 The underlying but unexpressed assumption is that late Neolithic Baluchistan is somehow typical or instrumental for all of subcontinental civilization of the following millennia. While the origin of wheat agriculture in the Indus Valley is to be sought in the eastern hills of the Baluchistan/Afghanistan ranges, the South (millet, see Science Magazine, Volume 294, 2 November 2001: 989) and the East (rice) stand apart in this and in many other aspects of early culture. The famed "continuity" thus is only a very partial one. Then, as now, the subcontinent was a mosaic of cultures.
- 52 Talageri, though mentioning the value of linguistics (2000: 415), merely compares some words in look-alike, Nirukta fashion, without any apparent linguistic background. Elst is better prepared philologically and linguistically, yet still lacks linguistic sophistication and his linguistic evaluation (1999: 118 sqq. 137) is lacuneous; instead, we find numerous speculations of when and how the *hypothetical Indian* IEs emigrated from India.

- 53 His (only?) trip to an international meeting in Dushanbe in 1977, duly noted in the introduction to his 1992 book, provided him with some contacts, unfortunately not always the right ones, see his rather uncritical use of Harmatta's materials (Section 11.13, n. 95). At this time, however, he still advocated a (more or less) conventional time scheme (Drobyshev 1978: 89–90) with PIE at 5000–3500 BCE, “Satem stage” 3500–2000, IA 2500–2000, ancient IA languages 2000–1000, middle IA languages 1000–200 BCE. His “conversion” to an Indocentric view came only in 1992 (see Section 11.13 sqq.).
- 54 Bryant (1999) reports that he found, already in 1994–95, that a majority of Indian scholars “had rejected the Aryan invasion/migration completely, or were open to reconsider it.”
- 55 However, one should also not confound the autochthonous theories of the past two centuries (Dayanand Sarasvati, B. B. Tilak, etc.) with the present wave of Indigenism.
- 56 The only exception so far is a thin book by the Indian linguist S. S. Misra (1992) which bristles with inaccuracies and mistakes (see later), and some, though incomplete discussion by Elst (1999). Elst (PhD Leuven, Belgium) typically delights, in his “Update” (1999), in speculating about an Indian *Urheimat* of IE and a subsequent emigration, with “Indian” invasions of Europe, neglecting that linguistic (and other) data speak against it, see Hock 1999 and Section 11.15 sqq. (and cf. n. 81!). Others such as Rajaram (1995: 144, 217, 2000 *passim*) or Waradpande (1993), though completely lacking linguistic expertise, simply reject linguistics as “a petty conjectural pseudo-science” with “none of the checks and balances of a real science.” They overlook the fact that a good theory *predicts*, for example, in predicting pre-Greek \**k*<sup>w</sup> or the IE laryngeals (see Section 11.10); both of which have been shown to be correct upon discovery of new languages (Mycenean Greek, Hittite).
- 57 This has been tradition ever since the *Brāhmaṇa* texts (*Rudra* from *rud* ‘to cry’, *putra* from the nonexistent word \**put* ‘hell’, *bhairava* from *bhī*+*rav*+*vam*, etc.).
- 58 Even within ten years, according to a recent East Coast study; or note that speakers of (educated) London English early in the twentieth century pronounced ‘but’ as [bət], now as [bʌt], or more recently, ‘has’ [hæz] as [hāz], etc.
- 59 Or the unattested, early Greek/pre-Greek \**k*<sup>w</sup>, which was discovered in writing when Mycenean Greek was deciphered in 1952, see earlier.
- 60 Though Talageri (2000) even refuses the link of Vedic with Iranian.
- 61 As will be seen later (Section 11.18), there are a number of features of Old Iranian (such as lack of typical South Asian substrate words, Section 11.16 sqq.) which actually *exclude* an Indian origin. Such data have not been discussed yet, in scholarly fashion, by the autochthonists.
- 62 Generally, against its use, Zimmer (1990) and cf. Cowgill (1986: 66–8); but note its usefulness, when not used in single or isolated cases but in larger context, such as in the discussion of plants and animals (Section 11.23).
- 63 Waradpande 1989; Kak 1994b; Talageri 2000, etc.; discussion in Bryant 1999, cf. Elst 1999.
- 64 Note, for example, the discussion among scientists about the *various* paleo-channels of the Sarasvatī (Sarsuti-Ghaggar-Hakra), in Radhakrishnan and Merh (1999), or the first appearance of the horse in South Asia (Meadow 1998), both discussed in Witzel 2001b.
- 65 Such absolute skepticism is always welcome as a hermeneutic tool; but, it has to be relativized: one may maintain that linguistic paleontology does not work (Zimmer 1990), but how then is it that IE words for plants and animals *consistently* point to a temperate, not a tropical climate and to a time frame *before* the use of iron, chariots, etc.? The few apparent inconsistencies can be explained easily (e.g. “elephant,” etc., see later n. 127, 149).
- 66 Elst 1999: 159 sq. stresses, like many other autochthonists, that “India was the best place on earth for food production” and that “a generous country like India must have

- had a large population,” both unsubstantiated articles of faith. The Indus Valley has only gradually been settled from the Baluchi/Afghani hills, and the Gangetic plain remained very sparsely settled for much longer. (Cf. also the negative description of the Panjab by Eastern Iranians, in *Vīdēvdād*, see n. 52). For Elst, however, “the ancient Hindus colonized the world” while India in reality, by and large, has been a *cul de sac*. Autochthonists also wonder why a “large population” could take over IA language(s) brought in by a few tribes. They should note, for example, that a trade language, the coastal Swahili, by now covers most of Eastern Africa (largely, without Islamization!).
- 67 In fact, most of the factors just mentioned were *not* present during the early Ved. period which saw the introduction and spread of IA all over the Greater Panjab.
- 68 For details see later; for example, note that even the typical Panjab features of climate and geography would not agree with a supposed “tropical” PIE language in the Gangetic Basin (see Section 11.22). For the distribution of prehistoric languages in India see rather Witzel 1999a,b, 2001b.
- 69 That is “the Dravidian languages being spoken in the south, Austric in the east, the Andamanese languages in the Andaman Islands, the Burushaski language in Northern Kashmir, Sino-Tibetan languages in the Himalayan and far eastern border areas, and the IE languages certainly in more or less their present habitat in most of northern India.”
- 70 He continues: “where they differentiated into three groups: the Pūrus (in the Punjab), the Anus (in Kashmir) and the Druhyus (in the northwest and Afghanistan)”;
- cf. Talageri 1993: 196, 212, 334, 344–5; 2000: 328, 263.
- 71 Talageri 1993: 407 “... major sections of Anus... developed into the various Iranian cultures. The Druhyus spread out into Europe in two installments.”
- 72 Actually, based on one misrepresented passage given by Talageri 1993: 368 and 2000: 260 sq., typical for several autochthonists, twice in *untranslated* form, which makes it easy to impute any meaning desired, in case: a “first historical emigration... of the Druhyu into the areas to the north of Afghanistan (i.e. into Central Asia and beyond).” See, with variants, *Brahmānda* 2.74.11, *Brahma* 13.152, *Harivamśa* 1841, *Matsya* 48.9, *Vāyu* 99.11, cf. also *Viṣṇu* 4.17.5, *Bhāgavata* 9.23.15, (see Kirfel 1927: 522): *Pracetasaḥ putraśataṃ rājānaḥ sarva eva te // Mleccharāṣṭrādhipāḥ sarve udīcim diśam āśritāḥ*, which means *not* that these ‘100’(!) kings conquered the “northern countries” way beyond the Hindukush or Himalayas, but that all these ‘100’ sons of Pracetās (a descendant of a ‘Druhyu’), kings of Mleccha kingdoms, are ‘adjacent’ (*āśrita*, or ‘inhabiting’) to the mountainous “northern direction,” – which since the Vedas and *Pāṇini* has signified Greater *Gandhāra* and its many local “Rājas” of one valley or the other (Dir, Swat, Bannu, etc.); *contra* Witzel 2001a.
- 73 “The first series of migrations, of the Druhyus, took place... with major sections of Druhyus migrating northwards from Afghanistan into Central Asia in different waves. From Central Asia many Druhyu tribes, in the course of time, migrated westwards, reaching as far as western Europe. These migrations must have included the ancestors of the following branches... a. Hittite. b. Tocharian. c. Italic. d. Celtic. e. Germanic. f. Baltic. g. Slavonic... The second series of migrations of Anus and Druhyus,... took place much later, in the Early Period of the Rigveda [*sic!*], with various tribes migrating westwards from the Punjab into Afghanistan, many later on migrating further westwards as far as West Asia and southwestern Europe. These migrations must have included the ancestors of the following branches (which are mentioned in the *Dāśarājña* battle hymns [Nothing of this is actually found in the battle hymn, RV 7.18, and is pure fantasy based on ‘P.N. Oak type’ etymologies such as *Alina* = *Hellenes*, – MW]: a. Iranian. b. Thraco-Phrygian (Armenian). c. Illyrian (Albanian). d. Hellenic. Talageri, thankfully, even has the solution of the enigma of the Indus language (Parpola 1994; Witzel 1999a,b): “The Indus Valley culture was a mixed culture of Pūrus and Anus” (1993: 408), in his view, Ved. and Iranian speaking people.

- 74 Luckily for us, the author names his two main sources: the *Purāṇas* and the Ṛgveda. The reliability of *Purāṇic* and Epic sources is discussed above (Witzel 2001a,b, 1995, 1990), and the RV does not support his theory either: it simply does not know of, or refer to central and eastern Northern India. Talageri achieves such evidence by twisting the facts his way, see the discussion of Jahnāvi, n. 90, Witzel 2001a.
- 75 Of course, one of the basic requirements of philology (Witzel 1995, 1997). But Talageri's analysis of the RV (2000) is based on two extraneous facts: the post-Ṛgvedic list (of late Vedic times) of authors (*Rṣi*) of the RV hymns and the contemporaneous (Late *Brāhmaṇa*) arrangement of the RV hymns by *Śakalya*. His results, consequently, do not reflect the Ṛgvedic but the Late Vedic situation of, say, 500 BCE (Witzel 2001a), though he refuses to concede the point. Typically, he does not know of the seminal work of the young Oldenberg 1888.
- 76 The Ganges is only mentioned twice in the RV, once directly in a late hymn (10.75.5), and once by a derived word, *gāṅgya* in a late addition (6.45.31). This occurs in a *trca* that could be an even later addition to this *additional* hymn, which is too long to fit the order of the arrangement of the RV, see Oldenberg 1888.
- 77 The context of the RV rivers Sarayu and Gomati sometimes – based on medieval and modern sources – mentioned in secondary literature as of the Ganges Doāb, is one of the western hills and mountains, in Afghanistan (Witzel 1987a:193, 1999, 2001a,b).
- 78 Note Mbh 1.3722 etc., son of *Ajamīdha*, his daughter = *Gaṅgā*. – *Jāhnāvī* at Mbh 3.8211; *Jāhnava* at *Pañcaviṃśa Brāhmaṇa* 22.12; cf. *Jahnu*'s descendants at *Aitareya Brāhmaṇa* 7.18, *Āśvalāyana Śrautasūtra* 12.14, = '*Gaṅgā*' at *BhGītā* 10.31, *Viṣṇu Pur.* 398; cf. Keith and Macdonell, *Vedic Index*.
- 79 Such an "ancestral goddess", next to *Hotrā*, *Bhārati*, *Idā* and *Sarasvatī*, is seen at RV 2.1.11, etc. That *Jahnāvī* refers to a river, the Ganges (Witzel 2001a), is an Epic/*Purāṇic* conceit. The word can simply be derived from that of the *Jahnu* clan.
- 80 Note that the center of settlement in RV 3 is the eastern Panjab and the Sarasvatī area of Haryana, see Witzel 1995: 320.
- 81 See Keith and Macdonell 1912. Settlement in Kashmir by any Ṛgvedic tribe is very doubtful, see Witzel 1994; in the later *Brāhmaṇa* period, Uttara-Madra (however, *not* as often asserted, Uttara-Kuru) *may* refer to Kashmir. As a curiosity, it might be added, that we would expect tribal names such as Druhyu (or Anu) in Europe, but we only find correspondences meaning "ghost" and "apparition" (Pokorny 1959: 276).
- 82 However, the Sarasvatī is the political center in the later RV, in Sudās' time. This common attitude is reflected in Manu's concept of *madhyadeśa* (> mod. Nepali *mades* 'Gangetic lowlands'), in ancient and modern China (*zhong guo*, 'the middle land'), etc. In ritual, too, one often regards one's own location as the center of the universe.
- 83 Witzel 1987a, 1989, 1997. However, the "north," *Gandhāra* and *Uttara-Madra*, (Uttara-Kuru?) are always excluded from such denigration, see Witzel 1989: 101. The Panjabis, however, have been regarded as outsiders since the AV and *Śatapatha Brāhmaṇa*; *Patañjali's Mahābhāṣya* has preserved the oldest "Sikh joke," *gaur bāhīkaḥ* "the Panjabi is an ox."
- 84 Mellowed somewhat with regard to eastern North India (*Aitareya Brāhmaṇa* 7.18), where the *Andhra*, *Pundra*, *Śabara*, *Pulinda*, etc. are – ahistorically – included as *Viśvāmitra's* sons (Witzel 1997).
- 85 If this BSS passage is understood as indicating a Panjab center; for details see Witzel 2001b (EJVS 7–3 and 7–4).
- 86 See earlier, n. 71 (*contra* Witzel 2001a, cf. n. 42, 86).
- 87 Note that the Pashtos, in spite of the East Iranian language and some still clearly visible aspects of pre-Muslim IIR culture, claimed to be one of them – The Gypsies (Roma), who actually *have* emigrated from India, rather claim origins in Southern Iraq (Ur!) or Egypt.
- 88 See his 1993 book "*Aryan Invasion Theory and Indian Nationalism*."

- 89 He has written another small book in 1999 (*The Date of the Rigveda and the Aryan Migration: Fresh Linguistic Evidence*) as an answer to Hock (1999); this is not yet available to me. From the excerpts that I have seen it seems that he continues with incidental, *ad hoc* rewriting of the IE linguistic picture, as discussed below.
- 90 This familiar “principle” used in deciding the *Urheimat*, (Witzel 2000, and later, Section 11.21 sqq.) is: “the homeland is *at*, or *close* to the homeland of the author of the book in question.” Talageri introduces late Vedic and *Purāṇic* concepts (see n. 73, 78; cf. Witzel 2001a); not surprisingly, then, the outcome is a Gangetic homeland.
- 91 Written before I heard of the author’s demise. I am sorry that he can no longer reply to the following points. However, as his book has been quoted in virtually every autochthonously minded publication it is important to point out the facts.
- 92 Note that Talageri’s new book (2000) largely restates Misra (who in part restates Aiyar), with the addition of Epic-*Purāṇic* legends, and thus is a cottage industry exploitation of a now popular trend.
- 93 Adding, for example, “...The Greeks were invaders and came to Greece from outside... there was a vast substratum of pre-Greek languages... before the Hittite invasion to the area [Turkey] it was peopled by another tribe called Hattic... the Hittite speakers might have gone there in very early days from an original home (which was perhaps India)... The Slavonic people... were invaders... at the expense of Finno-Ugrian and Baltic languages...”
- 94 Presented at the Dushanbe conference (Asimov 1978) and reprinted in Harmatta 1992: 360–7. Surprisingly, the *historian* Harmatta is called by Misra “one of the leading Indo-Europeanists.” His paper has been used uncritically by many autochthonists who cannot judge such linguistic materials.
- 95 For example, the development *is* > *iš*, which is already E. IE (Slavic, Ilr, etc.) has been placed at 2000 BCE (as *iś!*), that is 600 years later than the closely related changes *rs* > *rš*, *ks* > *kš*, and the same development *appears again* as PIIr *iś* > *iš* at 1700 BCE.
- 96 Such as Harmatta’s FU *\*aja* ‘to drive, to hunt’, *\*porc’as*, *poršas* ‘piglet’, *\*oc’tara* ‘whip’, *\*c’aka* ‘goat’, *\*erše* ‘male’, *\*rešme* ‘strap’, *\*mekše* ‘honey bee’, *\*mete* ‘honey’ (from Harmatta’s stages 1–7). Most of the acceptable evidence of Harmatta falls right into the P-Ilr period, with the development of PIE labiovelars to velars: *\*k<sup>w</sup>*, *k<sup>w</sup>h*, *g<sup>w</sup>*, *g<sup>w</sup>h* > *k*, *kh*, *g*, *gh*, clearly seen in PFU *\*werkas* ‘wolf’ < PIIr *\*vrka-s* < PIE *\*w<sup>l</sup>k<sup>w</sup>o-s* (which Misra takes as RV Sanskrit!) About the same time, the PIE *\*k’*, *k’h*, *g’*, *g’h* developed to *c’*, *c’h*, *j’*, *j’h*. This stage is clearly seen in the *majority* of the loans into PFU, for example, in *\*porc’as* ‘piglet’. The various representations of PIIr *\*a* by PFU *e*, *ä*, *o*, *a* will be treated elsewhere (Witzel, *forthc.* a, see Rédei 1987).
- 97 The older [ɛ] is still found in modern Nuristani, e.g. *du.c.* [dut<sup>ɛ</sup>] < PIIr *dac’a* < PIE *dek’ś*, but not in the *linguistically already younger*, but actually around 3,000 years old, forms Ved. *daśa*, O. Iran. *dasa!*
- 98 Conversely, there is comparatively little FU in IE, not uncommon in a situation of predominant cultural flow from one side. The reason for the early occurrence of word for bee (FU *\*mekše*) and honey (PIE *\*medhu*) may lie elsewhere, in the usefulness of bee’s wax to produce *cire perdue* metal products, which seem to be earlier in the Taiga woodlands than in the steppes and even further south (Sherratt, *forthc.*) However, these contacts were not as unilateral as usually depicted. The Northern Iranian, Ossetic, for example, has a number of Permian (Wotyak) words, for example, those meaning ‘silver, payment/tax, pawn/rent, pay-off/bribery, fir tree, eyebrow, forehead’ (Rédei 1987: 38).
- 99 A detailed study of Misra’s data from the Gypsy (Romani) language is beyond the scope of the present discussion. It is not correct to simply say that MIA *a* has changed to *e* in an originally open syllable (in MIA, OIA) and in a non-open syllable remaining *a*: the archaic Balkan Romanes has *kar-*, *karáv* etc. “to do” (from *karomi*). Romani cannot be used as a parallel to show that PIE *a*, *e*, *o* derives from an older *a* (Misra 1992: 81), see Hock 1999; Witzel 2001b.

- 100 The very idea of a “pan-Indian Prakrit” is, of course, a *contradictio in se*. As any beginner in Sanskrit or linguistics knows, *Prākṛta* always refers to Middle Indo-Aryan that followed the Old India Aryan (Vedic) stage.
- 101 With the then usual conflation of outward appearance or “race,” ethnicity, and language (contra: Hirt 1907), he found that his native people, the Bengalis, and the inhabitants of his new home, Pondicherry, were not so different after all, and that Sanskrit and Tamil tongues may have been two divergent families derived from one “lost primitive tongue.”
- 102 Rumanian from the Western IE Vulgar Latin; Bulgarian, Macedonian, and Serbian from the Eastern IE Southern Slavic; Greek from the Western IE Old Greek; Albanian from the vague Illyrian/Dalmatian (etc.) subfamily; one should probably add Romani (Romanes), the language of the Balkan Gypsies derived from the MIA form of the Ir subfamily), all are much more different from each other than even modern Iranian and IA.
- 103 For (further) details on the South Asian *Sprachbund* or linguistic area or convergence area, it is useful to consult Hock (1986: 491–512) though it is largely devoted to syntax; cf. also Hock 1996.
- 104 Nostratic, or Greenberg’s *Eur-Asiatic*, are another matter, but even these new theories still do not turn Drav. and IE into Meso-/Neolithic neighbors *inside* India.
- 105 The situation, thus, is not unlike that of modern Europe: with Uralic (Finnish, Estonian, Hungarian, etc.), Basque, Altaic (Turkish, and the Mongolian Kalmyk), Arabic (Malta), and various Caucasus languages, while the rest, the majority, is IE speaking.
- 106 The same applies to Austronesian, with a very dense grouping in Taiwan (and then in South East Asia), but with the wider spread of just one subfamily, Polynesian, all across the Pacific. Elst 1999: 126 sq. points, as “proof” for his Indian *Urheimat* of IE, to some other, asymmetric expansions.
- 107 With the exception of the early “emigrant,” the western-type Centum language Tocharian, which actually is the easternmost IE language, in China (Xinjiang); its speakers might have moved even further east after the Centum/Satem split. We can now add the western IE Bangani substrate in the high H.P. Himalayas which is sometimes close to but by no means identical with Tocharian; its ancient speakers may have crossed the Himalayas from the *north* (Xinjiang) and may originally have occupied just the northernmost, alpine pastures part of the H.P. valleys, a situation often found in other high mountain areas.
- 108 Thracian, Dacian in the Balkans; Hittite, Luwian, etc. in Anatolia; and probably several lost languages in Southern Russia/Ukraine as well (Cimmerian?).
- 109 The center *may* therefore have been situated somewhere between Greek, Hittite, Armenian in the South and Slavic, (North) Iranian (Scythian, Saka, etc.) in the north, in other words, in the Greater Ukraine; cf. discussion by Nichols (1997, 1998).
- 110 Elst (1999) includes a long chapter on links of IE with other language families, with a curious mixture of correct and incorrect data (Witzel 2001b), for example, p. 141: Ved. *paraśu* “axe” is not from Mesop. *pilakku* “spindle” (see EWA II: 87, which he surprisingly does not use!), or (p. 145) the logically/linguistically even more surprising statement that, because Drav. and Munda happen to be *attested later* than Vedic, there is no reason to assume early borrowing from these languages into Ved. (as if these languages did not have their own long prehistory, just as Ved.)! He may not regard himself as an OIT theorist but he constantly reflects and advocates this attitude in his writings (see n. 11, 65, 105, 140, 154, 179); for example, he has a curious speculation of a Manu who would have led his “Indo-Europeans” upstream on the Ganges toward the Panjab, ending with (p. 157): “India as a major demographic growth centre from which IE (*sic!*) spread to the north and west and Austronesian to the southeast as far as Polynesia.” If this is not autochthonist and Indocentric, what is?

- 111 Brentjes' pointing to the peacock motif in Mitanni times art (Drobyshev 1978: 95) is a very weak argument (Schmidt 1980: 45 sq.) The Sumerians imported many items from India (Possehl 1996b) and the peacock motif is attested in Mesopotamia well before the Mitannis.
- 112 Note *-zd-* in *Priyamazdha* (*Bi-ir-ia-ma-aš-da*, Mayrhofer 1979: 47; in Palestine, cf. *Priya-ašva: bi-ir-ia-aš-šu-va*): Ved. *priyamedha*: Avest. *-mazdā*. Or, note retention of Ilr *ai* > Ved. *e* (*aika: eka* in *aikavartana*), and retention of *j'h* > Ved. *h* in *vašana(š)šaya* of 'the race track' = [*važhanasya*] cf. Ved. *vāhana-* (EWA II 536, Diakonoff 1971: 80; Hock 1999: 2). Mit. IA also shares the Ṛgvedic and Avest. preference for *r* (*pinkara* for *piṅgala*, *parita* for *palita*).
- 113 Thus also Cowgill 1986: 23. Note that Ved. has *eva* "only" < *aiva* = O.Iran. *aiva* "one", and that only Mlr. (not O. Iran.) has *ēvak* 'one', with the commonplace Mlr. suffix *-ka*.
- 114 Mayrhofer 1979: 53; cf. RV *maṇi*, Avest. *ma'ni*, Elam. O.P. *\*bara-mani*, Latin *monile*, etc.; cf. also Varuṇa as *Uruna*, and Ved. *sthūnā*, Avest. *stūnā/stunā*, O.P. *stūnā*, Saka *stunā*.
- 115 Varuṇa (EWA II 515 *a-ru-na*, *ú-ru-wa-na*, not found in Iran); Mitra (Avest. Mīθra, Mit. *mi-it-ra*); Indra (Mit. *in-da-ra/in-tar*, Avest. *Indra*, see Mayrhofer 1979: 53; *in-tar-ú-da*, *en-dar-ú-ta* in Palestine, fifteenth century BC; cf. Cowgill 1986: 23); *Indra* is marginalized in Iran; the *Nāsatya* (*na-ša-ti-ya-an-na* = *Ašvin*, Avest. *Nāṛhaiθiia*). Note also the Hittite *Agniš* (cf. Avest. *dāštāryni*, Ved. *Agni*) another Mit.(-type) import (Mayrhofer 1979: 36, 51: *a-ak-ni-iš*).
- 116 Contained in names such as *Artasmara* (*ar-ta-aš-šu-ma-ra*), *Artadhāman* (*ar-ta-ta-a-ma*); Mayrhofer 1979: 54 sqq., Cowgill 1986: 23.
- 117 See now Witzel forthc. b, Staal 2001, Thompson, forthc. (3rd ESCA Harvard Round Table).
- 118 Kikkuli's book: *bapru-nnu*: Ved. *babhru*, *binkara-nnu*: Ved. *piṅgala*, *baritta-nnu*: Ved. *palita*, with Ṛgvedic *-r-* instead of later *-l-*, Mayrhofer 1979: 32, 52–3, cf. Cowgill 1986: 23.
- 119 One to nine "turns": *a-i-ka-*, *ti-e-ra-*, *pa-an-za-*, *ša-at-ta-*, *na-a-[w]a-wa-ar-ta-anna* = [*aika-*, *tri-*, *panca-*, *satta-* (see later, n. 120), *nava-vartana*]; cf. *tušratta/tuišer-atta* = RV *tveṣaratha*.
- 120 Elst sees a confirmation of his belief that the RV is of hoary pre-Indus vintage, with subsequent post-Ṛgvedic Prakrit forms in 1400 BCE. MIA forms in the RV, however, are constantly questioned and further reduced, note *jyotis* < *\*dyaut-is* (C. aan de Wiel 2000).
- 121 Friedrich 1940; Cowgill 1986: 23; Diakonoff 1971: 81; this is under discussion again, but clearly a Hurrite development: "E. Laroche, *Glossaire de la langue hourrite: ...šittanna* ... comments: "... 'sept', d'après l'indo-arien *šatta-wartanna*. – Forme de *šinti/a*?" S.v. *šinti*<sub>2</sub> he says: "Mais *šinti* 'sept' doit encore être séparé ... de *šitta*." He also lists a word *šittaa* (long a) from two (Hittite?) Kizzuwadna texts." (pers. comm. by Bjarte Kaldhol, Nov. 5, 2000).
- 122 Incidentally, this would be *eastern* MIA(!), such as *Māgadhi* (which, however, does not agree with the extreme Rhotacism of Mit.-IA but has *l* everywhere!); western North India has retained *v-*, see Masicca 1991: 99 sq. – Other "MIA" features are due to the writing system (*in-da-ra*, etc.); Misra, instead, sees MIA and even NIA. Norman, too, erroneously points to *pt* > *tt* (*satta*) and a labialization of *a* > *u* after *v* (*\*ašvasani* > *aššuššanni*), see however, Mayrhofer 1979: 52.
- 123 The following passage without comment:

In ancient times in India such *ṛsis* were very powerful. They were great teachers, researchers, philosophers and scientists. If Agastya had some power he might have helped in bringing down the abnormal height of the Vindhya mountains which created a lack of contact of North and South. Thus, at least this much is likely that due to some factor the height of the Vindhya mountains became

abnormally high, so that the path for contact of North and South was blocked and due to the growth of population the people in the North had to spread, naturally farther North. They used the routes like the Khyber pass and left it and lost all contact and were finally lost to their people... as a result the Aryans had to go outside to North-West through the Himalayan passes and this consequently was responsible for the spread of Indo-European language family to the outside world.

(Misra 1992: 70)

- Is this linguistics, prehistory, a ‘scientific’ *Mahā-Bhārata*? Or rather just a reverse, Indocentric version of O. Rosenberg’s *Myth of the Twentieth Century*?
- 124 Explained as ‘sun god’, “*Samaś*,” Mayrhofer 1979: 32; cf. also the war god *Maruttaś* = *Marut-*, and king *Abirattaś* = *Abhiratha*; for details see Balkan 1954: 8.
- 125 Note, however, *timiraś* = Skt. *timira-* ‘dark’, cf. Balkan 1954: 29, also 1954: 27 *laggatakkāś* = *lakta* red?
- 126 The names of some early IA immigrants, according to Harmatta (1992: 374) at c.2300–2100 BCE, A-ri-si(< sa’)-en = *Arisaina* and Sa-um-si(< sa’)-en = *Saumasena*, are based on *wrong* interpretations of common Hurrian words (Bjarte Kaldhol, Nov. 6, 2000, see Witzel 2001b).
- 127 Similarly, the Northern Iran *Parna* (Grk. *Parnoi*, Ved. *Paṇi*) and *Dasa/Dāsa* ~ Avest. (*Aži*) *Dahāka*, ~ Ved. *dāsa Ahiśu*, Lat. *Dahi*, Grk. *Daai*, Avest. *Dāṇha* (: *Airiia*, cf. Dahae:: Arii), would have escaped their supposed *Panjab* IA enemies (RV *Dasa*, *Dasyu*, *Paṇi*:: *ari*, *Arya*, *Ārya*) northwards well *before* the time of the RV, for example, as *Parna*, still *without* retroflexion and accompanying loss of *-r-*. But, the *Paṇi* occur already in the RV, significantly *not* as real life but already as *mythical* enemies and already *with* retroflexion, while the RV authors are supposed by autochthonists not to know *anything* beyond the Panjab and Uttar Pradesh: multiple contradictions emerge.
- 128 The map in Parpola 1994 includes Tibetan, but this development is late, and typical for the Lhasa dialect. However, Khotanese Saka, just north of the Pamirs, has retroflexes.
- 129 But, this does not work vice versa: some of those who move out of India, sooner or later, lose it. However, if this would be taken as proof of OIT, this particular development *cannot* explain words such as Ved. *voḍhar-* which *cannot* turn into Iran. *vaštar-*, Latin *vector*, etc. (see n. 130). The Gypsies (in Turkey, North Africa, Europe) *eventually* lost the retroflexes (when exactly?).
- 130 Interestingly, the c.1000-year-old *Indian* Parsi pronunciation and recitation in Zoroastrian ritual of Avest., while clearly Indianizing as in *xšaθra* > [*kšatra*], still has not developed retroflexes.
- 131 In fact, the case of *voḍhar-* is pre-conditioned by the development of IE *k’*, *g’* > Ilr *c’*, *j’*, which changed to Proto-Iran. and Pre-Vedic *š*, *ž*, then (in the Hindukush?) to late Pre-Vedic retroflex *ṣ*, *ṣ̣*, which *only then* could influence the following consonant (of the *-tar* suffix) to deliver the retroflex “suffix” *-ḍhar-* due to the same (Ilr) retrograde Sandhi as seen in *budh+ta* > *buddha* (*ḡh-da* > *ḡdha*); *then*, the voiced sibilant *ž*. disappeared, normally (as in *lih*: *lizḡha* > *liḡha*) with compensatory lengthening of the preceding vowel; but, in the particular environment of *voḍhar* (*až* > *o*, just as *az* > *e*) represented by *o* + retroflex consonant (*-tar* suffix), in short: IE *\*weg<sup>h</sup> + ter* > Ilr *\*vaj<sup>h</sup>-tar-* > *vaj<sup>h</sup>d<sup>h</sup>ar* > pre-Ved. *\*važdhar-* (note that this stage, minus the *Indian* retroflexion, is still preserved in Mit. IA *vash-ana-* [*vāžh-ana*]) > Ved. *voḍhar-*; as well as Ilr *\*vaj<sup>h</sup>tar-* > Proto-Iran. *\*važdar-* > Avest. *vaštar-*.
- 132 The special pleading that all Ved. innovations happened only *after* the emigration of the Iranians out of India is made impossible by observing innovations such as *raṭ/rāj-*, *ṣoḍaśa*, *voḍhar-*, *sede* and others such as the absolutive.
- 133 For example, *yam* > *yem*: *yemuḥ* 4.2.14, *pac* > *pec*: *pece* 4.18.13 etc.; similarly, examples for the *conditioned* OIA development of retroflexes include: *k’* > *c’* > *ṣ*,

- and  $g' > j' > j$  as seen in: IE *\*wik'-s* > Iir *\*wic'-š* > Avest. *vīš* / > Ved. *viṭ* 'people, settlement'; IE *\*rēg'-s* > Iir *\*rāj'š* > *r*; > Lat. *rēx*, etc.; cf. also Avest. *xšuuas*: Ved. *šaṣ*; Lat. *sex* etc.
- 134 Autochthonists would again have to take recourse to special pleading, but local loan words from the Panjab substrate (Witzel 1999a,b) already have *unconditioned* retroflexes (such as in *vāṇā*, etc.), and these substrate words are, again, missing in Iranian.
- 135 See Witzel 1999a,b for details: *karpāsa* cotton, etc.
- 136 Lion (*siṃha*); tiger (*vyāghra* AV+, *śārdūla* MS+, *puṇḍarīka* lex.), note N. Pers. *bebr*; elephant (*gaja* Manu+, *ibha* RV?, *kuñjara* Epic+), leopard (*prḍāku* AV, *dvīpin* AV+, Ep., *citra-ka*, etc. lex.), lotus (*padma*, *kamala*, *puṇḍarīka*), bamboo (*veṇu*), or some local Indian trees (*aśvattha*, *śamī*, *bilva*, *jambu*). For the Central Asian substrate names of lion and tiger and their respective (non-)role in BMAC religion, see now Witzel, forthc. b.
- 137 Elst (1999: 129 sqq.) simply denies the possibility of IE linguistic paleontology and quotes the always skeptic Zimmer (1990) as his crown witness. However, it is precipitous to dismiss carefully applied linguistic paleontology completely, (cf. n. 61).
- 138 Excluded are, of course, the real exports (*Wanderwörter*) from India such as rice, cotton, beryl, etc., see Witzel 1999a,b.
- 139 See the Old Pers. sculptures at Behistun, Iran. *šer* (Horn 1893: 178).
- 140 Iran. *bebr* (Horn 1893: 42), is still found in the Elburz and Kopet Dagħ, and as late as the 1970s around the Aral Lake and on Oxus islands in Afghanistan; probably derived from a Central Asian loan word, along with the protoform of *vyāghra* (Witzel forthc. b).
- 141 Employed by Ivanov-Gramkrelidze (1984, I 443) as proof for the IE homeland in Anatolia/Armenia. However, the *irregular* sound correspondences (otherwise unattested, such as *ele* –: *i-*, etc.) seen in *i-bha*: *ele-phant-*, or in *kapi*: Engl. *ape*, or *lis*: *leon*, etc. are typical for *loan* words, not for original, inherited PIE vocabulary. Further, Ved. *ibha* (RV) does not even seem to mean “elephant” but “household of a chief” (see later n. 144). For this, and details on *kapi* see Witzel 2001b. Elst (1999: 131), however, incorrectly concludes from the *same* materials that IE came from a *tropical* area, adding (1999: 131–2) a few very unlikely comparisons on his own such as Latin *le-o(n)* from Skt *rav* ‘to howl’(!) – which is in fact IE *\*h<sub>3</sub>reu(H)*, Grk *ōromai*, Lat. *riamor* (EWA II 439), demonstrating his lack of linguistic sophistication (see Witzel 2001b).
- 142 But only higher than 7000 feet in Kashmir. The reason for the survival of the word in South Asia (Panjabi *bhoj*, etc.) may have been export and common ritual use of birch bark, for example for amulets.
- 143 Perhaps with the exception of the willow (Avest. *vaēti*, Grk *itēa*, Lat. *vitex*, OHG *wīda*, Lith. *žil-vitis*; see earlier, n. 118, Schrader 1890: 440, 275), growing and attested in Eastern Iran: Pashto *vala* < *\*vait-īya*, but not found in Vedic/Skt, unless it is retained in (*\*vaita-sa* >) *veta-sa* “reed, ratan, Calamus,” with the expected change in meaning ‘willow > reed’. The oak, though found in various forms in Afghanistan, is *not* attested in Skt, except in myth as the inherited name of the IE weather god, Ved. *Parjanya* (see EWA s.v.), who likes oaks, as still heard even today in the German verse telling to avoid oak trees in thunderstorms, ‘*von Eichen sollst du weichen, Buchen sollst du suchen!*’
- 144 Autochthonists commonly decry the very *concept* of substrate, see Elst 1999 (much as they now begin to decry the various historical levels based on the genetic analysis of the male Y chromosome) as this would necessarily indicate that Vedic had not been present in Northwest India since times immemorial.
- 145 RV 1.64.7, 4.16.13 etc., used for words such as Late Ved. *gaja*, *Śatapatha Brāhmaṇa* 14.4.1.24 *matāṅga*, Epic *nāga*, RV(?) *ibha*. Ved. *ibha* is of dubious meaning and

- etymology (Oldenberg 1909–12). At least two of the four cases in the RV do not refer to “elephant” but rather to the “retinue train” or the “court” of a chieftain. The meaning “elephant” is attested only in Class. Skt (Manu), Pāli, see EWA I 194; cf. also O. Egypt., *abw*, EWA III 28.
- 146 Only, if with Mayrhofer the one “who tears apart?” (KEWA III 274), or “who smells scents by opening [his jaws]”(?) EWA II 593; otherwise, *Vājasaneyi Samhitā śārdūla, puṅḍarīka* (lex.), etc.; rather, N. Pers. *bebr* must be compared, see now Witzel forthc. b.
- 147 For these words of Central Asian origin, see Witzel 1999, forthc. b, Lubotsky forthc.
- 148 For example, Vedic *ah-am* “I” ‘ = Avestan *az-əm*, *az-əm*, O. Pers. *ad-am* have added the additional morpheme Iir *-am* (as in *ay-am*, *iy-am*); it was transferred to the rest of the pronouns: *tvam*, *vayam*, *yūyam* as well. This feature is not found in other IE languages: Lat., Greek *egō*, Gothic *ik* (Engl. *I*), O. Slav. *az<sup>u</sup>*, *jaz<sup>u</sup>*; it clearly separates Iir from the other Eastern and Western IE languages.
- 149 Or, the R̥gvedic normalization in *g-* of the present stems beginning in *j/g-*: IE *g<sup>w</sup>ṛ-sk'e-ti* > Iir *\*ja-šca-ti* > Avest. *jasaiti*∴ Vedic *gacchati*. Note that *j* is retained only in traditional names such as *Jamad-agni* and in the perfect, *ja-gām-a*, etc.
- 150 Autochthonists assume, instead, *early innovation inside* India that would have been exported to Iran. How would that “selection” have been made? Iranian as well as the rest of the IE languages lack all the *typical Indian* innovations found in the RV. Again, too many auxiliary assumptions!
- 151 The lack of South Asian substrate words in Iranian (cf. Bryant 1999) underlines why (hypothetically) the archaic Iranian traits cannot have been preserved in the Panjab, side by side with the RV, before the *supposed* Iranian move westwards. Any other scenario would amount to very special pleading, again: One can hardly maintain that the Vedic “Panjabis” received these local loans only *after* the Iranians had left. Talageri (2000), against all linguistic evidence, even denies close relationship of both groups.
- 152 By the Elamians and Western Iranians (Mede, Persians) only after *c.*1000 BCE (cf. Hintze 1998), and by other non-IE peoples before. In Eastern Iran/Afghanistan, according to stray Mesopotamian, archaeological and a few isolated Ved. sources: non-IE settlements, in Southern Iran: Elamian up to Bampur, Meluhhan east of it in Baluchistan/Sindh, and Arattan north of it in Sistan; on the northern fringe – the Bactria-Margiana substratum, visible in Iir (Witzel 1999a,b, 2000, forthc. b).
- 153 For example, if the Iranians had indeed moved out from the Panjab at an “early date,” they would have missed, the *supposed* “Panjab innovation” of the use of the (domesticated) horse (which is already IE: Latin *equus*, etc., but found in the subcontinent only at 1700 BCE), and they would especially have missed the later innovation of the horse-drawn chariot (Iir *\*ratha*, developed only at *c.*2000 BCE., see Section 11.20). Or, if they had moved out a little later, say, after the Mit. IAs, all of this would have come too late to account for the non-appearance of Iranian tribes in the RV, which has only some (*pre-*)Iranian looking names (Witzel 1999) in book 8, camels (RV 8) and some Afghani rivers (Gomati in the Suleiman Range, Sarayu in Herat, and Sarasvati in Arachosia). One cannot make the Iranians move from India to Iran, say, at 5000 or 2600 BCE, then introduce the innovation of horse pastoralism (not present in the subcontinent then!), and then let them take part, at *c.*2000 BCE, in the innovation of the *already* Iir horse-drawn chariot (*\*ratha*, Section 11.20). As always with such monolateral autochthonous theories, multiple contradictions develop.
- 154 Another auxiliary theory, for example, of a strong local (Drav., etc.) influence on the RV *only*, as opposed to Iranian – while still in India – is implausible. The autochthonists would have the Vedic innovations occur in the Panjab only *after* the Iranian speakers had left the subcontinent.

- 155 The old Satem innovations of course include Vedic. Elst supplies a lot of speculation of how the IEs could have left the subcontinent to settle in Central Asia and Europe (1999: 126 sq.).
- 156 Small, transient and migrating bands and groups such as the IAs or even the larger ones such as the Huns are not easily traced; and, will we ever find archaeological traces of the well attested emigration of a small group such as that of the Gypsies? – Linguistics (see earlier, n. 23) and genetics, however, clinch the case: the Bulgarian Gypsies, for example, have typical Indian mtDNA genes (M type) and Y chromosomes, but these are only to some 30 percent Indian; for the rest they have acquired European genes. This is the exact reversal of the general Indian situation, with some 25 percent of W./C. Asian genes (Section 11.7). How then did the Autochthonists' Indian emigrants "select" their genes on emigration from India, and "export" only 30 percent "proper Indian" ones? Again, this is just as impossible a scenario as the *assumed* earlier (selective) "export" of Indian linguistic features westwards by Talageri's IE = "Druhyu" emigrants (see earlier Section 11.12).
- 157 Change of meaning "wheel(s)" > "chariot" (*pars pro toto*) is a common linguistic occurrence.
- 158 Grk. has *hárma/harmatos*, Lat. *currus, curriculum*, also *rota*, as *pars pro toto* word; O. Slav. *kolo*.
- 159 There have been efforts, of course always on the internet, to push back the dates of chariots and spoked wheels (also implied by Talageri's 2000 years composition period for the RV, see Witzel 2001a,b), to dilute the difference between chariots and carts/four-wheeled wagons, to find horses all over India well before the accepted date of c.1700 BCE, to derive the Indian horse from the early Siwalik horse (2.3 million years ago!); there even has been the truly asinine proposition to change the meaning of Skt *ásva* "horse" (*Equus caballus*) and to include under this word the ass/donkey (*gardabha, rāsabha, khara*, etc., *Equus asinus*) and the half-ass/onager (*Equus hemionus khur*). Here, as elsewhere, it is useless to enter into a discussion.
- 160 Or after its take-over from Mesopotamia, as per Littauer and Crouwel 1996; for the trail of connections see Nichols 1997, 1998 and cf. Drews 1989 for early Near Eastern and Armenian and other trans-Caucasus attestations.
- 161 For the poetics and myth see EWA, KEWA s.v. *sūrya/svar*, with its phrases and *kennings* for chariot, note 'sun wheel' in Ved., Grk., Old Norse in EWA s.v. *cakra*, etc. See now however, Littauer and Crouwel 1996 for a Near Eastern origin.
- 162 Other (theoretically) possible scenarios such as a long-distance import, along with that of the horse, from some (North) Iranians near the Urals into the area of the IAs who had remained stationary in the Panjab, run counter to the archaic formation of the words concerned (*ratheṣṭha, savyeṣṭha*) and the clearly secondary, *inherited* form in Iranian (*raṭa*); all would amount, again, to very special pleading.
- 163 This is *not* the overused argumentum ex nihilo as this absence covers not just one case but *wide ranges* of vocabulary, phonetic, and grammatical innovations found outside India, and as it includes all the relatively recent Indian innovations (see RV *mene* § 19, n. 132).
- 164 Other such unique Satem and Ilr cases involve *\*kw > k, \*k' > c'*, then, *\*ke > \*cæ > ca*; the change *\*e > \*æ* is early in Ilr as it is seen in the *cakāra, jagāma* type palatalization, as well as that of *\*o > ā* in *Brugmann* cases (cf. Hock 1999); finally *\*æ > Ved./Avest. a*. Clearly, several long-term developments are involved.
- 165 However, Iranian has some *pre-RV* features, while it misses all Indian innovations, all of which makes a late emigration impossible, see Section 11.19.
- 166 Which, *pace* Misra, point to loans made during the Ilr and Iranian periods, not in the Ved. period, see earlier.

- 167 In fact, most of the Autochthonists have not even started to learn the linguistic “trade,” and simply reject linguistics out of hand, as mentioned earlier. Misra’s new book (1999) is not yet available to me.
- 168 Note that the following list can be read both in the new, autochthonous/indigenous way, that is of leaving India, or in the “traditional” IE way, of leaving a Southeast European/Central Asian homeland.
- 169 Geiger 1871: 133 sqq.; Schrader 1890: 271; Hirt 1907: 622; Friedrich 1970; Mallory 1989: 114 sqq.
- 170 See summary by Cowgill 1986: 86 sq., Blažek 2000/1.
- 171 Ved. *vrka*: Avest. *vāhrka*; cf. Lith. *vilkas*, O. Slav. *vl’kʷ*, Alban. *ulk*, Grk *lūkos*, Lat. *lupus*, Gothic *wulfs* < \**wl̥kʷos*.
- 172 Ved. *hima*: Avest. *zim/zīiam*, Grk *khiō* ‘snow’, *-khimos*, Lat. *hiems*, Gaul. *Giamon* Armenian *jiun* ‘snow’, etc.
- 173 Only the birch tree is found all the way from India to Europe: *bhūrja* ‘betula utilis’ (differs slightly from the European one), Iran. Pamir dial. *furz*; Shugni *vāwzn* < \**barznī*; Osset. *bær̥s(æ)*; Lith. *bēržas*; Serbo-Croat. *br̆eza*; Germ. *Birke*; Engl. *birch*, etc.
- 174 Cf. the oak/thunder god, Skt. *Parjanya*, Lith. *Perkūnas*, O. Slav. *Perunʷ*, etc., cf. earlier n. 142. However, the Iranian and NIA Himalayan languages have invented *new* formations for local trees such as the oak (from *vana*, \**vañja* ‘tree’), willow, etc. (cf. Blažek 2000/1: 84 sq.)
- 175 This scenario is also contradicted by the evidence of all the other IE “cold climate” words that have *not* been preserved in India, not even in the Northwest or in the Himalayas, and by other, purely linguistic observations, made earlier, Section 11.16 sqq.
- 176 For the distribution of the word, see Henning 1963; Lane 1967; summary by Cowgill 1986: 86 sq. However, Blažek (2000/1) shows new evidence for an ultimate Nostratic origin (“tree with edible fruits”) from Semitic, Egyptian, Berber, Chadic, Dravidian, and Altaic. IE \**bhāg-(o)* ‘beech’ was adapted into various IE languages, for example, with the famous Mediterranean substitution in Greek (due the well-known changing climate in Europe in PIE/post-PIE times) as ‘oak’, but kept as the temperate climate ‘beech’ tree in Lat. *fagus*, Germ. *Buche*, Anatolian (Phrygian) *Bākros* ‘Dionysos’, etc. The word for ‘beech’ etc. is not found, also not by local adaptation for other trees, in Iranian (Blažek 2001: 84 sq.) or in South Asian languages. Elst (1999: 130), while not mentioning historical climate, simply disposes of the beech argument wholesale.
- 177 For example, in a hypothetical case: \*‘fig tree’ > \*‘large tree with hanging twigs’, \*‘willow’. The only exception are certain later cultural loans, plants such as “cotton” or “mustard”.
- 178 The beaver was once actually found south of around 35 degrees North; note a beaver mummy from Egypt (in Paris, Louvre, Witzel 2001b), earlier in Syria, reportedly even in South Asian excavations; however, note Meadow 1996: 404, for the so far generally untrustworthy identifications of mammals in such excavations. Even the supposed early attestation of the beaver in NW South Asia would not matter. First, as this would be a rather isolated example of temperate fauna (or flora) in South Asia, second, as words change their meanings along with changes in environment (see earlier note 176, beech tree): the beaver has in fact died out in all such southern areas (Syria, etc.), after which the word-if *indeed* used in early southern IE languages! – was free for reassignment to other, similar animals (mongoose, etc.), just as the word ‘brown’ has been used in Europe for the bear. In Avest., beaver skins(*baβri*) occur (because of trade?) as dress of the river goddess *Anāhitā* (‘made up of thirty beaver skins’) *Yašt* 5.129: “the female beaver is most beautiful, as it is most furry: the beaver is a water animal.” However, see the following note.
- 179 Interestingly, N. Pers. *bebr* < Phl. *bawrak*, Avest. *baβri* ‘beaver’, is a cat-like, tail-less animal whose skins are used (Horn 1893: 42); the beaver is no longer found in Iran; note also N. Pers. *bibar* ‘mouse’.

- 180 For Elst (1999: 130,132) this is not a problem as he lets the IE *first* live in India and name the mongoose a ‘brown one’. Then, when emigrating westward, *each* IE language would mysteriously have transferred this designation *individually* to the beaver, and always in the *later, correct* post-PIE form, as per individual subfamily or language in question. Occam applies: derivation of the various ‘beaver’ words from Skt *babhru* or an ‘Indian’ PIE *\*bhebhru* ‘mongoose’ is linguistically impossible.
- 181 The much later emigration of the Gypsies and some others into Central Asia are of course excluded here.
- 182 With the (partial) exception of Elst (1999), and Talageri (2000), for which see earlier.
- 183 For more details and some questions not discussed here, see Witzel 2001b, *EJVS* 7–3 and 7–4.
- 184 Except, of course, if the aim is some ‘superior’, religious or political motive.
- 185 Such as Kak’s “astronomical code” (1994a) that is precariously piled on a combination of R̥gvedic brick layers of the still *non-existent Agnicayana* and combined with the structure of the still *non-existent* complete RV collection. Note, that this is not questioned but *favoured* by Klostermaier (1997, 1998, 2000), Elst (1999) and other revisionists and autochthonists.
- 186 For details on all these points see Witzel 2001b.
- 187 Including even that of Mitanni-IA, see earlier; but excluding, obviously, that of the comparatively quite late IA emigrants, the Gypsies.
- 188 The most blatant rewriting of nineteenth-century (European) intellectual history (and much else) has been carried out by the mathematician (PhD 1976) and electrical engineer (B.A. 1965) Rajaram (1993, 1995, etc.) who sees missionary and colonialist designs all over Indology. Even a cursory reading of his many repetitive books and press articles will indicate a *new mythology* of the nineteenth century, written for and now increasingly accepted, by some (expatriate) Indians of the twenty-first century to shore up their claims to a largely imagined, glorious but lost distant past.
- 189 I have clearly pointed to this (1995), when I discussed the various forms of argumentation that have to be avoided in writing ancient Indian history; however, this point has been blatantly disregarded by the autochthonists or believers in the ‘Out of India’ theories: in many web sites (and in Talageri 2000), these writers excoriate me for my critique of present revisionist/autochthonous writing, but they never mention my criticism of past Western or of certain present archaeological and historical writings (often produced by “Westerners”).
- 190 Forerunners of such sentiments are books such as *Ancient Indian colonization in South-East Asia*, and note the contemporary one by Choudhury, *Indian Origin of the Chinese Nation*: (1990). The simple motto seems to be: ‘if you can colonize us, we could do so to others, even long ago!’ In sum, Indocentric one-up-manship.
- 191 Witzel 1995, 1999c.
- 192 Though the ones pursuing this project use dialectic methods quite effectively, they frequently also turn some traditional Indian discussion methods and scholastic tricks to their advantage, see *Caraka* 3.83, *Nyāyasūtra* 4.2.50; the method is used in *Mahābhāṣya*, and still earlier in some *Upaniṣadic Brahmodyas* (Witzel 1987b, 2003).
- 193 Such as Rajaram’s (2000) case of fraud and fantasy in “deciphering” the Indus seals, see Witzel and Farmer 2000a,b.
- 194 In view of this, it might not even seem necessary to “decolonialize” the Indian mind (cf. Witzel 1999c).
- 195 A sign of hope is that recent interviews with Indian College students from all over the country seem to indicate that they have no interest at all in this kind of debate. They are much more practically minded. (“The New Republic,” *Times of India*, January 26, 2001.)

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