

BERTIL TIKKANEN

ON BURUSHASKI AND OTHER ANCIENT SUBSTRATA
IN NORTHWESTERN SOUTH ASIA*

1. Introductory remarks

Within the past two or three decades a considerable body of literature on the subject of South Asian linguistic convergence has emerged. The alleged areal features relate mostly to Indo-Aryan, Dravidian and Munda, and occasionally also to Tibeto-Burman and the language isolate Burushaski, which is sometimes supposed to have played a more important role in the past. They include items such as the opposition between retroflex (or postalveolar) and dental consonants, the word order features: SOV, Postpositions and Adjective/Genitive/ Numeral + Noun, direct discourse with a postposed quotative particle, (productive) echo compounds, second grade causative derivatives, 'dative subjects' in non-volitional experience clauses, onomatopoeic reduplicative structures, copulative vs. existential 'be', proximate vs. intermediate vs. remote deictic bases, noun classifiers used in counting, copulative-adverbial past gerunds or conjunctive participles, and (construed with the latter) aspectual or explicative auxiliaries.¹

A closer examination of the facts has shown, however, that apart from the retroflex non-nasal stop(s), these features are usually either not universal in South Asia (especially if this is taken to include the northernmost and similar peripheral parts of the Indian subcontinent) or not immediately confined to South Asia in their respective families (cf. especially Heston 1980, 1981 and Hock 1975, 1982, 1984). Accordingly, South Asia would not qualify as a 'linguistic area' in the rather narrow sense in which Emeneau defined this concept in 1956.²

Recently, Dasgupta (1984) has pointed to 'co[n]textually given object omission'³ in connection with the lack of obligatory 'definiteness marking' (by means of a definite article system) in nominal structures and certain other syntactico-pragmatic idiosyncrasies

* I am indebted to Asko Parpola for pointing out an error in the manuscript of this article. The responsibility for any remaining errors remains my own.

¹ Cf. Emeneau 1956, 1974, 1980, 1983; Kuiper 1967; Èdel'man 1968; Vermeer 1969; Masica 1976; Abbi 1985; see also the articles in *IJDL* 3 (1974) and Krishnamurti & al. 1986.

² "An area which includes languages belonging to more than one family [or more properly: *genetic stock or branch of a stock* (Masica 1976: 4)] but showing traits in common which are found not to belong to the other members of (at least) one of the families [*genetic stocks or branches of a stock* (ibid)]." (Emeneau 1956: 16, fn. 28).

³ E.g. Bengali: *diechen?* 'Have (you) given (it) (to them)?' with a possible (third party) reply: *na, na, uni dEn ni, ami diechi* 'No, no, he/she hasn't given (it) (to them), I have given (it) (to them)' (Dasgupta 1984: 41, transcription maintained).

relating to the extrinsic vs. intrinsic 'decidedness' of NPs in South Asia.⁴ But this feature or feature complex is obviously lacking in those South Asian languages that obligatorily mark the (direct or indirect) object on the verb (e.g. Burushaski, Munda, and some contiguous Tibeto-Burman, Dravidian and Indo-Aryan languages). It would also appear that 'given object omission' and other features allegedly connected with 'extrinsic deciders' have a rather wide and varied distribution in Central and East Asia, the former feature not being entirely lacking even in normal definiteness-marking western Indo-European languages either (as readily acknowledged by the author).

In this article I intend to discuss the distribution and historical implications of some (sub)areal linguistic features in the northwestern frontier region of the Indian subcontinent (Hindukush-Pamir-Karakoram-Kashmir). Separating Central Asia from South Asia proper, this rather inaccessible area constitutes the highly stratified meeting place of several language stocks or groups, including three Indo-Iranian (= 'Aryan') branches (viz. Nuristani or "Kafir", Indo-Aryan Dardic, and East Iranian, in chronological order), West Tibetan (now represented by Balti), and the pre-Aryan language isolate Burushaski (with the dialect Werchikwar or Yasin-Burushaski). To the north, this area borders on (and has been temporarily invaded by) Central Asian Turkic and (more distantly) Mongolic. In pre-historic times its southern and eastern boundaries may have been inhabited by Dravidian and Austroasiatic speakers, while there are also some indications of one or more ancient unidentified substrata in Hindukush and the Upper Indus region. While my main focus of interest lies in the sub- or adstratum role of Burushaski and other ancient languages (once) spoken in north(west)ern South Asia, it does not seem that the earliest and most striking innovations of the Indo-Iranian languages of this region can be fully understood on the basis of the present languages in Hindukush and the Upper Indus valley.

2. Extent of Burushaski influence on early Indo-Iranian and vice versa

Burushaski is nowadays spoken by some 40,000-50,000 people in the Hunza, Nagir and Yasin river valleys in the western parts of the Karakoram range. Though Burushaski shows some typological and lexical affinity with both Basque and the Caucasian languages (for a discussion with references, see Klimov & Èdel'man 1970: 11ff.), there seem to be some cultural connections with Northern or Northeastern Asia as well (cf. Jettmar 1975, 1980). Archaeologically the (original) Burushaski-speakers have sometimes (cf. Parpola 1974: 92) been connected with the Kashmir neolithic at the type site Burzahom from the middle of the third millennium to the late second millennium B.C., which shows many affinities with the (near-)neolithic cultures of south Siberia and north(west)ern China (Allchin & Allchin 1968: 158ff.). But the toponymy, vocabulary and phonological and grammatical structure of the present language of the Kashmir valley show comparatively little affinity with Burushaski. In fact, Kashmiri is the only Dardic

⁴ The alleged 'extrinsic decidedness' of South Asian NP:s is further exemplified i.a. by a process called Possessive Release, i.e. the discourse conditioned option of a possessive modifier to move out of the NP in which it is a satellite to become a co-constituent of the entire clause, e.g. Bengali *or ami lekha poRechi kintu chobi dekhi ni* lit. 'his/her I writing have read, but painting not seen' = 'His/her writing I have read, but I have not seen his/her painting'.

language that has not adopted the vigesimal system, which is an areal feature characteristic of Burushaski and most of the Hindukush and Pamir languages. Kashmiri is also the only language in the whole of South Asia except for Austroasiatic Khasi with a basic SVO word order, which is characteristic of the Austroasiatic and Sino-Tibetan languages *outside* South Asia. Asko Parpola has suggested to me that the linguistic and cultural ancient substratum of Kashmir could in fact be Sinitic or Proto-Tibetan, and this alternative is certainly worthwhile investigating e.g. by studying the alien toponymy and vocabulary (approx. 25% in Kashmiri; Schmidt 1981) in this area.

Whatever the northern extensions of the Burushaski-speaking area, the fact that it must have extended further south than it does now is revealed by the toponymy and linguistic and cultural substratum in the Shina-speaking area in Gilgit, possibly also in Baltistan and Kohistan. There are indications that Burushaski-speakers were present in the ancient multilingual state of Bolor (5th to 8th centuries), which stretched from Baltistan (Great Bolor) to at least as far as Gilgit (Little Bolor) in Dardistan (cf. Jettmar 1980). Burushaski possesses some early Tibetan loan-words (e.g. **bras** 'rice' = Classical Tibetan **bras** 'id.', see Lorimer 1935-1938: Vol. III: 532ff.) that are not present in Shina, which is a fairly recent arrival in Gilgit (cf. Jettmar 1980: 25ff.). Interestingly, the Burushos claim that they acquired their whole material culture from Baltistan (Lorimer 1935-1938: Vol. I: 1), but the common contention that there is an ancient Burushaski substratum in *most* of the Indo-Iranian-speaking Hindukush and Pamir area dating from the time of the advent of the Indo-Iranians (cf. LSI VIII 2: 6, 551; Klimov & Èdel'man 1970: 14; etc.) seems to me somewhat exaggerated.

Apart from a few stray items such as **čumar** 'iron'⁵ and **ju** (Yasin: **zü**) 'apricot' or **juro:ṭi** (lit. 'unripe apricot'),⁶ as found in some more or less archaic form as far west as in certain Nuristani and Dardic dialects along the Kunar and Kabul rivers, Burushaski loan-words have so far mainly been *verified* only in neighbouring Shina, Khowar, Wakhi and Balti (cf. Morgenstierne 1935: xxi ff.; 1947: 92ff.; Lorimer 1937: 95; Fussman 1972).⁷ It would therefore seem that Burushaski borrowings are in the main comparatively recent in the surrounding Aryan languages. An exception suggested already by Burrow ([1946] 1968: 286f.) might be Sanskrit **kīlāla-/kilāta-** denoting some kind of milk-product (cf. Burushaski **ki:la:y** 'curds made from beestings'), as attested already in the Atharvaveda (AV 12.1.59; VS 30.11; etc.) and surviving to this day in most Dardic and Nuristani languages (CDIAL 3181). On the other hand, the genetic isolation and lack

⁵ This word is obviously ultimately connected with Turkic-Mongolic **temir/temür**, but the Hindukush languages show the same (secondary) palatal initial as Burushaski, whence they may have borrowed it at a very early period.

⁶ Cf. Shina **joroṭi**, **zūri**, Khowar **zūji**, Gawar-Bati **zū/izorī**, Sau **zizorī**, perhaps also Kashmiri **čēr**, Ashkun **čērē**, Kati **čirō**, Prasun **čirē**, Munji **čirī**, etc. The corresponding Indo-Aryan words derive from **āśāḍhikā-** and are confined mainly to Pashai and the Kohistani group (Fussman 1972: II: 37ff.)

⁷ Fussman (1978) has found a few unidentifiable names and words in the Gilgit Kharosthi inscriptions (approx. 100-200 A.D.), for which he suggests a pre-Burushaski origin. Some of them do contain retroflex sibilants and stops (incl. retroflexes in initial position), characteristic of modern Burushaski, e.g. **Ḍamṭhoṣaṇu** < **Ḍamṣṭrāsena** (?). However, the same also words contain *retroflex nasals* and *voiced aspirates* (cf. **dhadasu** and **bhajru**, the reading of which is not entirely certain), which phonemes are specifically uncharacteristic of Burushaski.

of any systematic documentation of the older phases of Burushaski as well as the large-scale diffusion of later Indo-Aryan and Iranian loan-words in this area makes it *a priori* difficult to study and ascertain the extent of early Burushaski influence on the Indo-Iranian lexicon and the toponymy of this area.

Prehistoric contact with Indo-Iranian peoples is nevertheless corroborated by a small number of (pre-)Vedic Indo-Aryan loan-words in Burushaski itself, e.g. *me:ṣ* 'skin-bag' (note the *retroflex* sibilant, lost in this word in Shina), cf. Vedic *meṣa-* 'sheep, fleece' (basic meaning) < **meṣa-*, cf. Slavic *měxŭ*, Lithuanian *maišas* 'skin-bag'; Morgenstierne 1935: xxii).

2.1. Phonological convergence between Burushaski and early Indo-Iranian

It has been suggested that a prehistoric Burushaski sub- or adstratum could explain the preservation of the affricative pronunciation of some of the Nuristani reflexes of PIE **k̑* (> *č*, alternatively *š*, as elsewhere in Indo-Iranian; cf. Morgenstierne 1929b: 199ff.). Burushaski has a dental affricate (*č*), which contrasts with a pair of palatal affricates (*č̣*, *j*) and a pair of palatal sibilants (*š*, *j = ž*), as well as with the corresponding retroflex series (*č̣̣*, *ṣ̣̌*, *j = ẓ̣̌*), and thus it could indeed have contributed to ***k'* > PN **č* [ts], rather than ***k'* > PN **č̣* [tʃ] (which arose by secondary palatalization of PIE **q*, **qʷ*) or even ***k'* > **š* (which arose through the palatalization of the dental stops after *r*, *u*, *k* and *i*). On the other hand, dental affricates are quite common in the world's languages, being found in phonemic opposition to palatal affricates even in Central India (in Indo-Aryan as well as Dravidian). They constitute an ancient areal isogloss of the whole northwestern South Asian region (cf. Nelson 1986: 41), being also widespread in Sino-Tibetan, where they do not originally always contrast with palatal affricates.

Prehistoric Burushaski influence has also been sought behind the emergence of retroflex affricates by way of combinatory developments in Nuristani, Dardic and East Iranian (cf. Èdel'man 1963). Corresponding to Burushaski *č̣̣*, *č̣h* and *j̣̣*, we find *č̣̣* in two Nuristani languages (Kati and Waigeli, cf. Nuristani *č̣̣*, *č̣̣̣*, *č̣̣̣* < **k̑s*, **cr*; Nelson 1986: 82f.), in most Dardic languages (except i.a. Kashmiri and Maiyan), and in three Pamir Iranian languages (Wakhi, Ishkashmi, and Sanglechi), while *j̣̣* has developed secondarily in two Nuristani languages (Ashkun and the Kamviri dialect of Kati) and in some Dardic and Pamir Iranian languages (mainly Shina, Torwali, Phalura and Wakhi). Considering the comparative rareness and uneven distribution of retroflex affricates in the world's languages,⁸ the chances of direct or indirect Burushaski influence on the development of such phonemes in Indo-Iranian are, despite certain discrepancies in detail, (even) better than in the case of the dental affricates.

As for the (earlier) development of the Indo-Iranian retroflex sibilants, which are still found in the Nuristani, most Dardic and some East Iranian languages, and in all Burushaski dialects, it will be recalled that Proto-Nuristani and Proto-Indo-Aryan dental

⁸ Nelson (1986: 41) mentions a survey by Maddeison of 316 languages, of which only 7 display this type of phoneme, viz. Ostyak, Mandarin Chinese, Mazatec, Tacana, Jaqaru, Basque. If anywhere, it is tolerably common only in the North Amerindian languages (cf. Pinnow 1964: 39).

sibilants were regularly palatalized and then cerebralized after **r**, **k**, and, with some exceptions (mainly for Nuristani, occasionally Indo-Aryan, cf. Burrow 1976), after **i** and especially **u**. A synchronic and possibly even diachronic parallel to these developments could now be seen in that Burushaski does not allow the sequences **r** + dental sibilant and **k** + sibilant, whereas it does allow a retroflex or palatal sibilant or fricative after **r**, just as it tends to substitute retroflex affricates for **kʂ** in Indo-Aryan loan-words. In fact, the generally more conservative Werchikwar dialect has in many cases **rç**, **rč** for Hunza Burushaski **ç**, **ʂ** (cf. Lorimer 1935-1938: Vol. I: § 504).

But apart from some exceptional cases or perhaps early dialectal loans, such as **māṣa-** (AV+) m. '[black] bean' (CDIAL 10097) < ? Proto(-Indo)-Iranian (loan-word?) ***marṣa-** (cf. Shughni **maṣ**, Persian **māṣ**, and Turkmenian **burčak**, a loan-word pointing to Iranian ***maršaka-**),⁹ the sequence **r** + sibilant yielded a cluster (**rʂ**/***rz**) in Proto-Indo-Aryan, not a *single* palatal or retroflex sibilant as in Proto-Nuristani (cf. also Pre-Proto-Nuristani ***śr** > **ʂ**). By contrast, the peculiar early Indo-Aryan change PIE ***ḷt** > PIIr. ***št** > PIA **ʂt**, which in analogy with PIE ***[r/u/k/i]st** > PIIr. ***št** > PIA **ʂt** introduced an alien and perhaps already phonematized distinctive feature [+retroflex] into the assimilated cluster, was not regularly carried out in Proto-Nuristani (cf. Nelson 1986: 89; 97). This combinatory sound change seems to have no parallel in Burushaski phonotax, but it could be understood on a Dravidian-type phonotactic basis (cf. below § 5). At any rate, the fact that this change must have occurred in separation from the Nuristani group on the Indian subcontinent (the Mitanni documents show no [unambiguous] signs of retroflexion in Indo-Aryan words, cf. e.g. **miṣtanu** < ***miṣdha-** 'reward' = Skt. **mīdhá-**) places it within a different, more southeastern areal framework, i.e. in the Upper Indus region rather than in the Hindukush mountains or Kabul valley.

In addition, we may note that Proto-Nuristani had obtained single retroflex stops and affricates through combinatory developments such as ***rt** > **ɽ**, ***rd** > **ɽ**, and ***cr** > **ç** (cf. Kati **wot**, Waigeli **wāt**, Ashkun **wat** 'stone', but Sanskrit **varta-**, Khovar **bort** = CDIAL 11348; see Nelson 1986: 88, 95), which changes are also typical of the Dardic and East Iranian (and West Tibetan) languages. By contrast, Old Indo-Aryan **rt(h)**, **ɽt(h)** and **rd(h)** tended to remain intact in the chief literary dialects, yielding **ɽt(h)**, **ɽ(h)** and **ɽɽ(h)** mainly only in the eastern and *southwestern* Prakrits.

We may thus conclude that the early Nuristani and Indo-Aryan (incl. Pre-Dardic) retroflex systems have evolved on rather independent lines, and to that extent they cannot be explained by the same substratum or evolutive processes.¹⁰ But although Nuristani, and secondarily Dardic and East Iranian agree with Burushaski on several details and general characteristics in their retroflex and other phonological subsystems, there are also

⁹ Even if we accept the Indo-European etymology proposed by Burrow (1970: 94): *PIE **māg̃-so-**, cf. Albanian **modhullë** 'pease', the treatment of the group ***ks**, which normally yielded **kʂ**, is irregular in this word.

¹⁰ Note also the lack of retroflex affricates in Proto-Indo-Aryan (and Dravidian) and the lack of a retroflex lateral in Proto-Nuristani (as against Vedic and (South-)Western Indo-Aryan and Proto-Dravidian). Retroflex consonants can be shown to be of mainly secondary origin not only in Indo-European, but also in Dravidian, Munda and Sino-Tibetan (cf. the large-scale development of retroflex stops, fricatives and affricates due to a following medial **-r-** in Archaic Chinese; Li 1983: 397).

cases where both the Nuristani and Indo-Aryan systems contrast with that of Burushaski. Such is, for example, the presence of a retroflex nasal, which especially as an allophone ($n > n/\{r, \text{ʃ}, \text{ʒ}\} [-\{\text{dental, palatal, retroflex}\}] _ _ -\{r, \#\}; [+dental] > [+retroflex]/[+retroflex]_$), was just as crucial as the retroflex sibilants in the proliferation of retroflexion in early Indo-Aryan. Another paradox is that Burushaski conforms sometimes better to (Pre-)Proto-Indo-Aryan than to Proto-Nuristani, e.g. in having retroflex and palatal voiced sibilants (absent in Proto-Nuristani and lost with the voiced sibilant in Proto-Indo-Aryan) and a laryngeal fricative (h).

Apart from the fact that neither Nuristani nor Indo-Aryan retroflexion can be explained by a Burushaski-type substratum alone, there are indications that Burushaski cannot have been the only, or perhaps even the first, substratum affecting Nuristani phonology. I refer mainly to the early loss of not only the voiced but also the *voiceless aspirates*, which is the most striking (and earliest?) phonological innovation of Nuristani phonology and which cannot be explained by a Burushaski-type substratum. At this point one is also reminded of the many peculiar phonological and grammatical innovations of Prasun, which is located in the centre of the Nuristani area, and which reveals a strong linguistic and cultural, yet unidentified substratum (cf. Nelson 1986: 65).

Unless the voiceless aspirates of Burushaski are recent innovations and the loss of voiced aspirates in Proto-Dardic due to ancient Sino-Tibetan or Austroasiatic influence (which is very unlikely), quite a *different substratum* (to the west of the Burushaski substratum) must have been at work to explain the complete deaspiration in Proto- or early Nuristani. This change has no immediate areal parallel, because even Old Iranian maintained the distinction between voiceless non-aspirates and voiceless aspirates by turning the latter into fricatives. The nearest (though possibly much later) areal parallel to this development would be Central Asian Tocharian, where, on the other hand, the distinction between voiced and voiceless stops was also lost, possibly due to early Finno-Ugric influence (cf. Krause 1951 and for early Samoyedic-Tocharian contacts, Janhunen 1983).¹¹

The many general similarities in the phonological typologies of Nuristani, early Indo-Aryan, East Iranian and Burushaski (e.g. partly allophonically/combinatorily derived retroflex sibilants) may, in fact, be due to more complex mutual patterns of convergence, which might have involved or even emanated from other sub- or adstrata of the north-western region. The more specific similarities (e.g. partly combinatorily derived retroflex affricates in Nuristani, Dardic, Pamir Iranian and Burushaski and the deaspiration of voiced aspirates in parts of Dardic), which could ultimately be traced to a specifically Burushaski-type substratum, are found only in a rather limited region. Whether it is due to more recent areal convergence or not, Burushaski conforms on many points to the Pamir Iranian and West Tibetan languages rather than to the majority of the (pre-Iranian) Nuristani and Dardic languages, which lack e.g. a series of uvular consonants (secondary in Tibetan) characteristic of the former groups (Toporov 1970: 645). But although it is obvious that Burushaski was once spoken further north and west of its present location,

¹¹ It will be observed that there were no aspirates nor (initial) voiced stops in Proto-Dravidian either, but in the absence of demonstrable lexical and structural Dravidian influences on Nuristani as distinct from Dardic, we can hardly assume early northwestern Dravidian influence on Proto-Nuristani phonology.

the lexical evidence does not, however, despite some Middle and Modern Iranian loanwords, point to very close contacts even with the East Iranian languages of Pamir and Hindukush (cf. Morgenstierne 1935: xxiv; Lorimer 1935: xxxiv).

2.3. Grammatical convergence between Burushaski and early Indo-Iranian

Of the early northwestern grammatical innovations that have been attributed to Burushaski influence, the most conspicuous is the vigesimal system, which is absent only in Kashmiri and part of West Tibetan (but present in Balti). The formation of the higher numerals by adding units to tens (10+1, etc.) constitutes another fairly common innovation in most Nuristani and Dardic languages (except in Waigali, Prasun, Kohistani and Kashmiri), but this feature is characteristic of, e.g., Turkic, Mongolic, Uralic and Sino-Tibetan as well.

Èdel'man (1976, 1980, 1984) has argued that the overt distinction by morphological or syntactic means between expressions of alienable vs. inalienable possession in some Dardic, Nuristani and Pamir Iranian languages¹² is due to a "Burushaski-type substratum". But considering that this kind of differentiation is universal enough to include Tibeto-Burman, Austroasiatic and Dravidian, it would seem arbitrary to define it in terms of a specifically Burushaski-type substratum, unless we can circumscribe the latter by means of more exclusive typological features connecting the northwestern languages with Burushaski.

The most fundamental syntactic innovation in Proto-Indo-Aryan (and possibly also Proto-Nuristani) is the coreferential copulative-adverbial past 'gerund' or 'conjunctive participle' (-tvā/-tvī, -(t)ya, etc.), which is derived from a complementary set of instrumental infinitives/verbal nouns, and which contrasts formally and syntactically with non-coreferential constructions based mainly on absolute participles or finite constructions. Like the retroflex consonants, this innovation separates Indo-Aryan and Nuristani from (early) Iranian, and must have occurred somewhere in northwestern South Asia, as the gerund is present in its semantically, if not operationally, fully developed form already in the Rigveda (for a synchronic and diachronic analysis, see Tikkanen 1987).

Now the Indo-Aryan past gerund certainly has a structural-typological parallel in the Burushaski past active conjunctive participle ([n-(u/-i-/pron.pref.)]+ ROOT ±[i]n), which is approximately as widely used as the former in expressing a temporally/causally modifying or non-modifying (i.e. purely additive) antecedent (occasionally simultaneous or complementary) action performed by the actor/topic of the governing clause/phrase. This grammatical category contrasts syntactically and/or semantically with the dative, ablative or instrumental-locative infinitive or static participle, which constructions are either not coreferentially constrained or not indicative of anterior action (Lorimer 1935-1938, Vol. I: § 365ff.; Berger, in press: § 14.17ff.). E.g. *n-i-ki:rat huru:t-as-ar Munulum Da:du-e y-u:s-mu-r sen-imi* (Lorimer 1935-1938, Vol III: 182, l. 6; non-phonemic transcription somewhat simplified) 'when he [Darbešo] had danced and sat down, Munulum Dado said to his wife', lit. ≈ 'upon sitting down (huru:t-as-ar: infinitive of *huru:ṭ-/huru:s-* 'sit down' with suffixed dative marker) his having

¹² Cf. Shughni *tar mu čid* 'in my house', but *mu tar δust* 'in my hand'.

danced (**n-i-ki:rat**: past active participle of **girat-/giraš-** 'dance' with infixed intransitive subject marker for 3. sg. non-fem. = subject of **huru:t-as-ar**, which governs the participle), Munulum Dado said to his wife'. All these non-finite constructions conform moreover with the basically non-finite clause linkage typology (implying also preposed non-finite relative clauses) and SOV/Modifier+Head word order of Burushaski.

But apart from not being derived as an instrumental or otherwise oblique verbal noun/infinitive (with which forms it actually contrasts syntactically and/or semantically), but instead being conjugated for the intransitive subject or (transitive) object almost like a finite verb or an adjectival participle, the Burushaski past active participle is subject to certain idiosyncratic constraints not present in the Old Indo-Aryan gerund, e.g. lack of negation (Berger in press: § 14.19). On the whole, its morphosyntactic features would make it a rather poor model for the functional reinterpretation of the Pre-Indo-Aryan instrumental infinitive(s) as a past gerund or active conjunctive participle.¹³

Considering, furthermore, that the long presence of Indo-Iranian speech in South and Central Asia has had little or no impact on the areo-typologically quite aberrant gender-class system as well as complex pre-, in- and suffixing polysynthetic morphological method of Burushaski, we can only confirm our previous conclusion based on the phonological evidence that there are no substantial reasons for assuming any large-scale convergence between Burushaski as we know it in its *present-day forms* and the northwestern Indo-Iranian languages during the proto-stages of these languages. This does not exclude the *possibility* of some unknown, less isolated earlier dialect(s) or forms of Burushaski having influenced the early northwestern Indo-Iranian languages.

3. Convergence between Burushaski, modern Indo-Iranian and Tibetan

It cannot be denied that modern Burushaski displays a considerable degree of linguistic convergence with its immediate neighbours. This is manifested on all linguistic levels in Shina, Khowar, (non-Dardic) Dumaki, Tibetan Balti, Iranian Wakhi, and perhaps some other Pamir Iranian languages. Structural features often assumed to have spread to these languages from Burushaski have been treated by Lorimer (1935: xvii ff.; 1937) and Èdel'man (1976, 1980) and they include i.a. the use of the numeral 'one' as an enclitic indefinite article in Shina, the use of the infinitive as a relative participle in Shina (also an ancient feature of Tibetan), the prefixation of the numeral 'two' in designations of paired parts of the body in Wakhi,¹⁴ the use of various case markers in combination with finite or semi-finite verb forms in temporal clauses in Shina (also an ancient feature of Tibetan), the forming of the reciprocal pronoun by repeating the numeral 'one' in Shina, Khowar and Balti, etc. In the following I wish to discuss some of these as well as some further areal features that involve and in some cases may have emanated from Burushaski.

¹³ Note also the very restricted set of explicative/aspectual auxiliaries with the Burushaski past active participle, e.g. **ḍus ḍimi** 'coming out he arrived' = 'he turned up'; **ḍimašume nimi** 'folding went' = 'went on folding' (Varma 1931: 278).

¹⁴ E.g. Wakhi **brin** < ***ḍba+rūn(a)**- 'knee', cf. Burushaski **+It-umal** 'ear' (Steblin-Kamenskij 1979). According to Klimov & Èdel'man (1972) this feature is shared by Basque and some Caucasian languages.

3.1. The locative-instrumental case in South Asia

Lorimer (1937: 77f.) observed that in Burushaski, Dumaki and sometimes Khowar, the suffix or postposition which essentially means 'on', 'upon', is used to denote the instrument or manner 'with' or 'by' which something is done. E.g. Burushaski *taxt-aṭe huru:ṭimi* 'he sat *on* the throne', *tobaq-aṭe delimi* 'he shot (him) *with* a gun', cf.: Khowar *taxt-o so:ra niṣistæi*, ?*thu.'ek-o so:ra ma:ristæi* (Lorimer 1937: 77f.).

Now it appears that Tibetan Balti, Nuristani Prasun and Iranian languages (including Pamir Sanglechi and Yidgha-Munji) also provide both immediate and more distant, though partly independent, areal parallels.¹⁵ Thus, in Balti the postposition (-i)-*kha* signifies either 'on, upon' or 'with/by means of' (Read 1934: 68), which meanings are also reported for the Sanglechi preposition *ka* 'in, on, by means of' (LSI X 481; Varma 1972: 500). Cf. Balti *dyui-i-kha* 'on this', *an-i-kha* (= *an-na* 'abl.-instr.') 'with force' (Read 1934: 81, 32), *dē-khā-nā that-kyi-khā khoskhating-ngi-khā sō-sē* 'after that living gladly (lit. 'with pleasure') on the husks' (LSI III 1: 39). Since Shina lacks this construction, Khowar may have obtained it through Yasin-Burushaski (alternatively Pamir Iranian), implying that unless it arose spontaneously in Balti, it must have spread there from Burushaski before the intervention of Shina.

The origin of the case markers concerned can mostly be traced to words meaning 'up', 'above', 'top', cf. Burushaski *yate* 'up', Dumaki *ṭsi* 'up', Khowar *so:r* 'head' > loc. *so:ra* 'on top', Tibetan *kha* 'surface, outside' (Jäschke [1881] s.v. #4; cf. also Balti *di-kha* 'here', *e-kha* 'there', etc. (Read 1934: 28). In the Iranian languages, on the other hand, the pre- or postpositions in question go back to the Old Iranian 'dative-locative' adposition and preverb **pati*, cf. Avesta *paiti*: 'against, in, on, to(ward), by, for, by means of, in the manner of', or similar spatial adpositions or nouns.

This semantic syncretism should not be confused with the (partial) syncretism of the instrumental and locative cases due to the *prosecutive* or *prolative* use of the *instrumental* already in Vedic and Classical Sanskrit in expressions signifying the space or time *through* or *within* which an action takes place or reaches its completion (e.g. RV *divā [yānti]* '[they go] through, by way of the sky/during the day' [distinguished accentually], cf. Delbrück 1888: 128-130).¹⁶ Being first used with *dynamic* locative meaning in adverbial complements (cf. Haudry 1978: 96f. and 1970), this syncretism occurred when the prolative instrumental was extended to *static* temporal expressions as well. These continue in, e.g., Gawar-Bati (cf. *rōce* 'in the morning'; Morgenstierne 1950: 16), Khowar (cf. *ḥuien* 'by night'; Morgenstierne 1947b: 14), Lahnda and Gujarati (LSI VIII 1: 250; LSI IX 3: 340). Somehow it seems to have been carried over into North Dravidian Brahui as well, because here the sociative case is sometimes used with locative meaning in temporal expressions such as *shām-ato* 'at dawn' (Bray [1908] 1986: I:

¹⁵ Somewhat similar, but much more restricted or idiomatic usages have been reported for Dardic southeastern Pashai (Laghman district) with the locative in -a 'in(to), on, at' (cf. *la:m-a* 'in the village', *topay-a ani:ikam* 'I shoot with a gun', Morgenstierne 1967: 260), northwestern Pashai (Panjshir river) with the postposition *je*: 'in(to)' (ibid., 157), and IranianOrmuri (Logar district, East Afghanistan) with the locative postposition *nē* 'on, in' < **antar(y)a* 'inside, within' (cf. *i-puṣṭi nē* 'on the back', *bēṣi nē* 'with a rope'), the normal instrumental preposition being *pa* < *paiti* (cf. *pa cimī* 'with the eyes', Morgenstierne 1929a: 344).

¹⁶ With emphasis on the point of completion: '(just) after' (cf. Burston 1977: 205).

56). I know of no similar locative usages of the sociative in other Dravidian languages.

On the other hand, the corresponding semantic extension of the (prolative) instrumental as a (fairly) productive locative case not only in static temporal but also in static *spatial* expressions (e.g. Pali **yena ... tena** 'where [be] ... there [be/go]') is a specifically late Old or early Middle Indo-Aryan development, first attested in Pali and Epic and Buddhist Hybrid Sanskrit (see Edgerton 1953: 44 § 7.30), being almost unparalleled elsewhere in Indo-European, except for certain adverbialized expressions (e.g. Vedic **amā** 'at home', Avestan **kū** 'where', cf. Pobožniak 1965: 136, 144). In the modern languages it might be present in highly archaic Dardic Torwali, cf. **payim diše-de** 'on the opposite side', **jabal hat-te gina-gā** 'he took the pick-axe with/into his hand' **khē-de gan** 'bind with a rope' (Grierson 1929: 28f. § 23f.), and it seems to go together with a gradual differentiation of the sociative and instrumental cases (cf. also Kalasha, where according to Morgenstierne (1965: 207) the old instrumental case in **-an** is only used with inanimate nouns).

The typological contrast is that Burushaski, Balti, Khowar, Sanglechi etc. have a combined *non-sociative locative-instrumental* case resulting from the semantic extension or intrinsic vagueness of their (adessive) locative cases, whereas Torwali and many other Indo-Aryan languages have an originally combined *sociative-instrumental-locative* case, resulting from the semantic extension of the sociative-instrumental/prolative case.¹⁷

An independent typological parallel to the Burushaski situation is provided by the equally isolated Nahali in Central India (Nimar, Amraoti, Buldana), where the same post-position **ki/ke** (cf. dative **ke/ki/ge**) is used with both (outer and inner) local and instrumental meaning, e.g. **nāni-ki beken** 'to whom shall I give', **ḍongor-ke erka** 'going to the hills', **ī biya-ki kalṭo beṭe** 'there is no Nahal in this village', **cakoṭo-ki aḍḍo beribe** 'cut wood with an axe' (Bhattacharya 1951: 249). Drake (1903) does not mention any similar case in neighbouring Kurku (Munda), but since there does seem to be a parallel in Santali (LSI IV 1: 40), the said feature could be due to ancient Munda influence in Nahali.

The semantic identification of the static locative and (non-sociative) instrumental is not, in fact, unparalleled in Indo-European, cf. Germanic *bei/by* and Greek $-\phi\tau < *bhi$ (Pobožniak 1965). A similar typology is also displayed by Finnish, which has a combined adessive-instrumental case in **-lla**, but a different case for the sociative, cf. **kāde-llä** 'on the hand'/'by hand', but **kāsi-ne-en** 'together with his/her hand(s)'.¹⁷

3.2. The 'embracing quotative construction' in South Asia

In some instances it is hard to determine the direction and time of influence in convergent developments in northwestern South Asia. For example, both Burushaski and Shina as well as Tibetan Balti make use of a postposed quotative or reportative marker derived from a verb meaning 'say' or 'do' (literally 'saying/doing', 'having said/done'), cf. Burushaski **gučaiyasar e:yenumtse qau manimi Darbešo Darbešo nusen**

¹⁷ Note that the Burushaski locative-instrumental is also used with the infinitive in the sense of 'at the time of, while V-ing'. In connection with the finite perfect tense, it has the sense of 'after V-ing'.

(Lorimer 1925-1938, Vol III: 180 l. 4-5) 'having lain down and gone to sleep, a call came saying: "Darbesho! Darbesho!"; Balti **khyang musulmān in zere nga la hrtakḥpa yod** lit. 'you are a Muslim saying to me is known' (= 'I know that you are...'; Read 1934: 67).

Although many unrelated and areally non-contiguous languages do have similar de-verbal or pronominal postposed quotative markers (cf. Hock 1982),¹⁸ few languages allow a "discontinuous" constituent order, where the quotative marker is dissociated from the clause or verb introducing or projecting the said or perceived words in the following manner: PROJECTING VERB + QUOTE + QUOTATIVE MARKER. This is, however, precisely the innovatory constituent order ('the stranded *iti*-construction') that occurs already in the Rigveda. It is hardly found among the non-Aryan languages of South Asia (in Dravidian it is restricted to Kuvi; cf. Hock 1982: 75), and what is intriguing is that it does occur in Burushaski (1-2) and, of all the modern Indo-Aryan languages, in its neighbour Shina (3-5).

Burushaski (Lorimer 1935: §§ 367, 468; non-phonemic transcription simplified):

- (1) **Šahri Ba:nue senumo taq aiyetin, čei ja:le bi nusen, do:numo**
lit. 'Shahri Banu said, "Don't break it, the key is with me" saying, [and] she opened it'
- (2) **Buzur Jamhu:rar esuman Abdul Mutalibe i:en dimanimi nuse**
[= ...*nuse* esuman]
'to Buzur Jamhur they said: "To Abdul Mutalib a boy has been born" having said'
= 'they said to B. J.: "A boy has been born to A. M."'

Shina (Bailey 1924: 76; transcription maintained):

- (3) **sābsē hūkm thégūn falani diṣhēt buzha thēṭ**
lit. 'the sahib has given an order "go to a certain place" saying'
= '... an order to the effect that you should go...'
- (4) **ō pārūdūn ḍaṣ shāhrēr Fārāni hāna thēṭ māgār āchī gi nē paṣhīgūn**
lit. 'he will have heard "in the city there are Europeans" saying, but he has not seen them with his eye' = '... heard that there are...' cf.:
- (5) **āshpi fāṭakēt valam thēṭ lamīgās**
'"I will take the horses to the pond" saying (= thinking) I seized them'

The question is: Does the Shina embracing quotative construction represent a relic which has influenced neighbouring Burushaski, or has it survived (or been revived) only because of the similar Burushaski construction, which could then be old enough (directly or indirectly) to explain the Vedic stranded *iti*-construction as well? It will be remembered

¹⁸ Compare e.g. Old Tamil **nuūkō yār eṇa** [= *eṇru*] **viṇavin** "'who is your king?" saying/having said I will inquire' (PN 212.1); Santali (Munda) **gapa uni theniñ calak'a menteye metadiña** "'tomorrow I will come to your place" saying/having said he said to me' (MacPhail 1953: 68); Sanskrit **yaḥ indrāya sunavāma iti āha** 'who to Indra "let us press" thus said' (RV 5.37.1) = 'who said to Indra: "let us press [soma]"; Classical Tibetan **des dbyig-pa-can la smras-pa rta rgod-ma ma btang zes smras-so** 'he said to Dandin: "don't let go (my) mare" thus (he) said'.

that the earliest possible Burushaski loan-word in Old Indo-Aryan is recorded in the Atharvaveda, which in part originated in Kashmir, and if the stranded *iti*-construction is a Burushaski calque, the Burushaski-speaking area must then have extended as far south as the Upper Indus valley.

3.3. Finite correlative vs. non-finite relative clauses in South Asia

Most South Asian languages possess both non-finite (participial/infinitival) and finite (cor)relative constructions, but the latter are mostly (and, in the case of Indo-Aryan, secondarily) restricted to generic or indefinite referents. These generic or indefinite relative constructions, whether nominal or adverbial, are typically introduced by demonstrative or interrogative pronouns or structures, which are resumed in the apodosis by a correlative form, cf. Tamil *enta payyan motalil varuvān-ō avanukku itai kuṭuttu viṭu* (Bai 1986: 181) lit. ≈ ‘which ever boy should come first, to him give this!’ ≈ Hindi: *jo larkā pahle āegā usko yah de denā* lit. ‘which one boy will come first, to him give this!’. By contrast, relative constructions involving a definite referent tend to be either participial and preposed or finite and postposed (cf. Bai 1986).

The situation in Shina and Burushaski is somewhat aberrant. Shina and many of the Dardic and Nuristani languages have lost their relative pronouns and increased the use of relative participles due to areal pressure, Indo-European and possibly also (Eastern) Austroasiatic being the only families in South Asia with inherited relative pronouns. But Shina has also innovated in its use of the demonstrative pronoun as a generalized resumptive and sometimes also as a cataphoric pronoun in correlative structures, cf:

Shina (Bailey 1924: 62):

(6) *ō mūshā vātūs ō*
 ‘that man come-PRET that one’ = ‘the man who had come’;

(7) *zakhmī bitū ō shūdarēt*
 ‘wounded been that boy-DAT’ = ‘to the boy who was wounded’

Burushaski manifests sporadically the same type of construction, but apparently tends to restrict it to *generic* or *indefinite* relative or adverbial clauses, cf. (8):

Burushaski (Varma 1931: 271; cf. Lorimer 1935: § 463):

(8) *u:e akatum u:e senuman*
 ‘they me-with they said’ = ‘they who were with me, they said’

Like Burushaski, also Balti tends to use its relative participles/infinitives even when the reference is indefinite, cf. (9):

Balti (Read 1934: 18):

(9) *thulkan-po phoqtuk*
 ‘the climber will fall’, i.e. ‘he who climbs will fall’

However, Balti does possess finite correlative structures based on generic or indefinite

cataphoric clauses introduced by an interrogative pronoun and (mostly) resumed by an anaphoric demonstrative pronoun, cf. (10)-(11):

Balti (Read 1934: 18, 16):

(10) **su thul na, do phoqtuk**
 'who climbs, he will fall'

(11) **khiri shida chī yodpo, (yodpo) nga la min**
 'your from what that-which-is, (that-which-is) me-to give'
 = 'whatever you have, give that to me'¹⁹

The question is: Are the Burushaski and Balti finite correlative structures innovations induced by Indo-Iranian influence, or do they represent independent developments or inherited patterns? In the case of Balti, there seem to be some Tibeto-Burman parallels, but the original Burushaski situation cannot very well be reconstructed.

3.4. Ergativity patterns in northwestern South Asia

Unlike the Indo-Iranian languages, which display or have displayed ergative case marking with preterital tenses, Burushaski and most Tibetan languages exhibit ergative case marking more or less independently of tense/aspect. In Burushaski the ergative case is identical with the genitive-oblique case, while in the (modern) Indo-Iranian languages the ergative is typically an independent 'agentive' or 'instrumental' postposition, or identical with the oblique case, as in Sindhi and Lahnda. (For an apt description and diachronic analysis of ergativity in South Asia, see Stump 1983).

Nevertheless, at least Hunza Burushaski does have split ergative case marking for *person in combination with tense*, allowing subjects of the first (less frequently second) person in the nominative-absolutive in clauses with a future, occasionally also present tense main verb (cf. Tiffou 1977, Tiffou & Morin 1982; Berger, in press: § 4.18). A similar type of split ergativity is displayed by no other language in this region, although colloquial Balti does frequently drop the ergative in the present tense (Read 1934: 7). In most of the Pamir Iranian languages, ergative case marking has been abandoned or become optional, while Nuristani Prasun and Dardic Khowar and Kalasha may have remained essentially accusative throughout history (cf. Edelman 1983: 53ff.).

Èdel'man (1976, 1980) has shown that in many New and Middle East Iranian (incl. Sogdian and Khotanese Saka) and Dardic languages there is a tendency for the criterion of animacy to overrun the criterion of transitivity in ergative case marking and that animacy is often reflected in certain differences in case inflection and verbal conjugation in these languages, which are thus characterized by a so-called 'active typology' and semantic gender. These innovatory typological features have been attributed by Èdel'man to a Burushaski-type substratum in the (Western) Himalayan or (adjacent) Central Asian

¹⁹ Note the similar possessive use of the ablative in many Pamir Iranian languages (incl. Pamir Tajik: *az man in kitab ast* 'I have this book'), where it has been unduly (as it seems to me) linked with a Burushaski(-type) substratum by Èdel'man (1984).

region.

But there is a problem with this typological identification: active intransitive verbs denoting bodily activities or sensations that anomalously take the ergative in the said Aryan languages, as e.g. 'sigh', 'sneeze', 'cough', 'smile', 'cry', 'die', 'grow', 'jump', 'run', 'play', do not actually take the ergative construction in Burushaski (although they may take the ambiguous transitive-causative prefix), while in Shina the said verbs tend to be construed as specifically intransitive verbs. And although 'animacy' is criterial in possessive structures in Burushaski, it cannot be said to be *more criterial* than the referential features 'human' vs. 'non-human', 'feminine' vs. 'non-feminine' and 'individualized' vs. 'non-individualized' in the Burushaski gender system, case inflection and verbal conjugation.

Moreover, if a Burushaski-type substratum is supposed to have wielded such a wide influence on ergativity patterns in the Dardic and East Iranian languages, why do we find absence of ergative case marking or a tendency to eliminate it in neighbouring Dardic Khowar and East Iranian Wakhi? (In addition to independent developments, a possible answer could be the influence of Modern Persian or Tajik).

The only Aryan language which shows some signs of convergence with Burushaski (and Balti) in terms of its type of ergativity is again neighbouring Shina, which has extended its ergative case marking to include all tenses and, in the Brokpa dialect of Baltistan, introduced or preserved (?) an additional agentival case suffix for *non-preterital* tenses. Shina, on the other hand, agrees with Burushaski in inflecting the transitive verb for the logical *subject* (topic-actor), whereas Balti lacks any kind of verbal agreement. In spite of the formal similarity, the Shina ergative case marker *-s(ě)*, which is added to the nominative, is not likely to have been borrowed from West Tibetan (cf. Balti *-si*).

4. Patterns of convergence in NW South Asia excluding Burushaski

Many of the above-mentioned local Indo-Iranian and West Tibetan innovations can be explained by assuming an ancient Burushaski sub- or adstratum in Hunza, Gilgit and parts of Baltistan, Dardistan and Pamir. But there are also several typological features which specifically distinguish many of the surrounding Aryan and Tibetan languages from Burushaski. Such is the distinction between inclusive and exclusive forms in the first person of the pronoun in some East Iranian and many North and West Indo-Aryan languages (i.a. Sindhi, Gujarati, Marathi, Sinhalese, which all reveal direct or indirect Dravidian influence), and most Dravidian and Munda languages. Similarly, the derivation of the plural form of the pronoun of the second person by means of a plural suffix added to the singular form is another feature which is common to Tibeto-Burman and Austroasiatic as well as to Dravidian and e.g. Uralic, but not to Burushaski. Then there are features, such as clause-final or clause-initial interrogative particles, which are too universal in the whole Asian context to be areally defining, although we may safely assume that this particular feature was not inherited in the Aryan languages, where it is now quite widespread due to areal diffusion.

A large proportion of the toponymy of Baltistan and Hindukush cannot be accounted

for etymologically on the basis of Burushaski or any other existing South or Central Asian language (Berger 1960: 662; Edel'man 1968: 58). As an obvious example of fairly recent language extinction in this region, it may be mentioned that Classical Tibetan sources give evidence of a mysterious neighbouring country and people, Bruža or Bruča/'Bru-šal (to be identified with Little Bolor or Gilgit), who practised the Bon religion and whose language, of which a short specimen is preserved in the title of a Buddhist translation, cannot be identified with any known language of the region, although typologically it may be of the "monosyllabic" type (Poucha 1959). Some of the peculiar early innovations of the Tibeto-Burman languages such as non-split ergative case marking with a genitive or instrumental agent can hardly be due to Burushaski influence (alone), since the latter feature is widely found also in eastern South Asia, which has a strong Austroasiatic substratum. Similarly, the prolific formation and use of various copulative and temporal/causal gerunds by means of instrumental, ablative-instrumental, dative and locative postpositions added to the root or tense stem constitutes a common Tibeto-Burman development not quite satisfactorily paralleled by early Chinese, and this development could be due to a typologically similar South or Central Asian substratum that led to the formation or syntactico-semantic reinterpretation of the Pre-Indo-Aryan instrumental gerund. Nevertheless, this substratum cannot be identified with any form of Tibetan, the influence of which is chronologically and locally quite restricted.

5. Dravidian influence in northwestern South Asia?

Since neither Tibeto-Burman nor Burushaski seem to have had more than a geographically or chronologically rather limited sphere of contact with the northwestern Aryan languages, one might assume contact with the next nearest pre-Aryan language on the subcontinent, viz. Dravidian.

Typologically Dravidian is in several ways reminiscent of both the Central Asian "Altaic" and the Uralic languages, but apart from the word for 'horse' in Dardic Tirahi (*kuzəra*)²⁰ and such hypothetical Dravidian loan-words as found already in early Vedic documents, there are no demonstrable ancient Dravidian loan-words in the (north)western Aryan languages. Neither are there any clear indications of contact between Dravidian and Burushaski or Dravidian and Tibeto-Burman. This is all the more surprising, since it is generally assumed that Dravidian speakers came to the Indian subcontinent from a (north)western direction.

It is not my purpose to discuss the alleged Dravidian loan-words in the Rigveda (see the summary by Southworth 1979 and the criticism by Hock 1975, 1984), but part of the Proto-Indo-Aryan retroflex system could be understood on a Dravidian-type phonotactic basis. For example, the Proto-Indo-Aryan cluster **st* may have been interpreted by Dravidian bilinguals as **št*, given the natural coarticulatory retraction of the dental after the palatal, and with retroflex assimilation typical of Dravidian this would have yielded *št*, the retroflex sibilant of which cluster could then be identified with the palatalized dental sibilants (occurring after *r*, *k* and other vowels than *a/ā* and yielding **št* > *št*, **zđ* > *ṽđ*,

²⁰ Cf. Tamil *kutirai* 'horse (equus caballus?)' DEDR 1711, vs. *ivūḷi*, Brahui (h)uḷli 'horse (equus hemionus?)' DEDR 500. But cf. also Elamite *kutira* 'bearer' < *kuti* 'carry' (McAlpin 1979: 181).

etc.). On the other hand, retroflex sibilants may have originated already in the prehistoric northwestern Indo-Iranian dialects in loan-words from Burushaski or similar substrata (but note that the retroflex voiced sibilant was lost at a very early stage in both Nuristani and Indo-Aryan). The sound change $*\text{ʃt} > \text{ʃʈ}$ is considered by Vacek (1976: 85) to constitute the point of origin of *Indo-Aryan* retroflexion, and it significantly distinguishes the latter from Nuristani and East Iranian retroflexion, where the *ruki*-rule was not always operative, and even when it was, yielded single retroflexes or palatals, never clusters (cf. 2.1).

The retroflexion (or retraction) of dentals after liquids is even better paralleled by sound changes during all stages of Dravidian (cf. Zvelebil 1970: 102, 129f., 171ff.). These sound changes are analogous to Fortunatov's law (redefined by Burrow 1972), which does not seem to have been operative in the extreme northwestern area, cf. Nagir Burushaski **phalto:čij** 'puttees' < pre-Indo-Aryan (?) $*\text{palta-}$ > Sanskrit **paṭṭa-** 'strip, fillet', cf. Persian **pardah**, etc. (Morgenstierne 1947a: 93). By contrast, the retroflexion or retroflex fusion of a dental with a preceding *r* (e.g. **ṛt, rt** > **ṛ**, cf. 2.1), which is typical of Nuristani and Pamir Iranian is not a common sound change in Dravidian and early Indo-Aryan.

By and large, it appears, in fact, that the Nuristani and (later) Dardic systems and processes of retroflexion conform with and can be explained in their details and general make-up by the Burushaski retroflex system to *roughly* the same extent as the early Indo-Aryan retroflex systems and processes conform with and can be explained by those of Dravidian, suggesting that the said systems and processes are the result of at least partial (and perhaps mutual) convergence in or over two distinct linguistic areas (probably containing other lost substrata) during the early formative periods of these language groups. (For a fuller discussion, see Tikkanen 1987: 280, 284-296.)

As for the copulative-adverbial past gerund, it does have formal parallels in Dravidian, but just as in Burushaski the forms in question are either not coreferentially constrained or specifically non-preterital in sense. Proto-Dravidian evidently derived the past gerund or conjunctive participle from the perfective or preterital tense stem without any suffix, as do some South Munda languages, and as a typologically and structurally well-motivated method in coreferential additive-sequential linkage this was probably the original type of formation of the Turkic and Mongolian past gerunds as well, where the instrumental or ablative case marker was optionally suffixed only at a later stage.²¹

It nevertheless appears that the syntactic and semantic-operational restrictions of the Indo-Aryan gerund were relaxed after the Rigveda in connection with increasing Dravidian and perhaps other external influence on Indo-Aryan lexicon and syntax, cf. the strictly postposed position of the quotative marker already in the Atharvaveda (Kuiper 1967; for the data see Hock 1982: 42ff.) and the increasing tendency especially in and after the late Vedic period for the adjective to follow the standard in *unmarked*

²¹ Past participles used as conjunctive participles are found even in Old Persian, but only from intransitive verbs, which remain active in this form (cf. Payne 1980: 151). For an extensive typological and historical discussion of various non-finite systems and clause linkage patterns in South Asia and adjacent regions, see Tikkanen (1987).

comparative constructions in increasing areal harmony with the *unchanged* basic SOV word order (cf. Andersen 1983: 170ff.).

Leaving aside these and other hypotheses, Dravidian influence on the structure of Indo-Aryan has been indisputably demonstrated only in and after the Middle Indo-Aryan period, which places the influence to the south and east of the Panjab area. In the present situation Dravidian influence can be seen to diminish toward the east, where Austroasiatic and Tibeto-Burman influence increases (cf. Southworth 1974). Conversely, Indo-Aryan influence appears strongest in those Dravidian languages that are spoken in the central and western parts of South Asia (cf. Sridhar 1981).

The possibility of a change $s > \$$ in the (non-literary) Dāsa dialect(s), which might have preceded the Rigvedic dialect (cf. Parpola in this volume) and the merging of the retroflex and dental sibilants with the palatal sibilant not only in the Magadhan Prakrits but also in the Vṛācaḍa Prakrit of Sindh (cf. LSI VIII 1: 9), which often has c for $\$,$ nevertheless increase the possibility of a fairly ancient Dravidian substratum, at least in the lower Indus valley, because Proto-Dravidian $*c-$ [tʃ], the nearest equivalent to a sibilant, came at a very early stage to lose the stop element in many dialects, being still pronounced as [ʃ] in some Tamil dialects (Emeneau 1988). For a similar hypothesis regarding Dravidian $*-c-$, cf. Tikkanen (1987: 295).

6. Austroasiatic influence in northwestern South Asia?

Not far to the southeast of the area under examination, we find the influence and actual presence of Austroasiatic languages. The Rigveda contains words²² that are at least ultimately of Austroasiatic origin, although the actual donor language may have been Dravidian or have belonged to a lost subbranch of the Austroasiatic family. On the other hand, the above-mentioned early phonological and syntactic innovations of Indo-Aryan and Nuristani have previously been clearly shown not to be of the type to be explained by Austroasiatic influence.

An ancient Austroasiatic lexical and structural substratum has, however, been recognized in many of the western Tibeto-Burman and adjacent Indo-Aryan languages as far northwest as Himachal Pradesh (cf. the vigesimal system, objective and subjective pronominal affixes, overt expression of inalienable possession, dual and exclusive vs. inclusive forms of the personal pronouns, etc.).

The ergative construction, which embraces most of the Tibeto-Burman languages and which can hardly have been inherited from Proto-Sino-Tibetan would suggest different (possibly Central Asian) influence, however. The elimination of ergativity in modern Eastern Indo-Aryan is a development that clearly correlates with Austroasiatic typological features, such as the absence or reduction of retroflex segments and grammatical gender, and the presence of noun classifiers.²³

²² E.g. Skt. *lāṅgala-* 'plough', *hala-* 'id.', Pali *naṅgala-*, cf. Čam *la+nal/n/r*, Khmer *a+ṅ+kāl*, Khasi *ka+lynkor*, Malay *te+ṅ+gala*, *ta+ṅ+gāla*, Makassar *naṅkala-*, Santali *na+heI*, Mundari *nāeI* < Austroasiatic root $*kal/*kel$ with varying prefixes; cf. also Tamil *nāñcil* 'id', Kannada *nēgal*, etc. (Burrow [1946] 1968: 313; Bhattacharya 1975: 207; Wojtilla 1986: 30f.; see also Zide & Zide 1976).

²³ With regard to possible Dravidian influence on Eastern Indo-Aryan, Klaiman (1977) has discussed some features shared by Bengali and Tamil, e.g. postpositions with similar derivation and meaning, the

Austroasiatic sub- and adstratum influence can hence be spotted over quite a large area in the northern parts of the subcontinent.²⁴ But a general problem in the study of early language contacts in northern South Asia is the large-scale disappearance or assimilation of pre-Aryan idioms on the subcontinent. E.g. the isolated Central Indian Nahali has often been considered a relic-like offshoot of a lost Austroasiatic (alternatively Tibeto-Burman) branch, but despite many morphological similarities with both Munda and Dravidian, the original vocabulary of Nahali suggests little affinity with Austroasiatic and evidently only casual affinity with Tibeto-Burman and other South Asian language groups (cf. Shafer 1940, Bhattacharya 1951, Kuiper 1966).

7. Concluding remarks

It will have been noticed that whereas Burushaski (as we know it in its present forms) shows indisputable areal convergence with the northwestern South Asian languages (esp. Shina, Khowar and Balti), some of the wider areal features in this region specifically exclude Burushaski or are too universal or typologically different in nature to be ascribed to an exclusively Burushaski-type substratum. On the other hand, there are cases where Burushaski, Tibeto-Burman, Austroasiatic and Dravidian all share a typological feature, which cannot be reconstructed to Proto-Indo-Iranian. The presence of such features enables us in some cases to speculate about a semi-homogeneous 'pre-Aryan convergence area' in northern South Asia, which area has lost much of its potential coherence because of the wedge-like Aryan invasions and gradual diffusion of more complex patterns of mutual convergence.

Despite considerable differences in the morphological method (agglutinative suffixation in Dravidian and Tibeto-Burman vs. more complex pre-, in- and suffixation in Burushaski and Austroasiatic) and basic syntax (e.g. absolutive-ergative case marking in Burushaski and Tibeto-Burman vs. nominative-accusative case marking in Dravidian), there is — with the main exception of clausal complements followed by a postposed quotative marker — a general avoidance of combining more than one finite clause in a complex sentence (cf. Poucha 1947). Instead recourse is had to preposed non-finite structures, which are variously restricted operationally and coreferentially (mainly infinitival or adpositional structures for circumstantial relations and participial or gerundial structures for additive-sequential and relative relations). Accompanying word order features are SOV and, with some exceptions for Tibeto-Burman, Modifier+Head. When *finite* complex structures are used, the construction is usually either correlative (implying a generic or indefinite referent) or asyndetic/serial, then involving clauses rather than verbs in Burushaski (Berger, in press: § 16.18), but verbs or verb phrases rather than clauses in Dravidian (Steever 1987) and Munda (cf. Santali: *sen nāmkedeāñ* 'I went and found him', lit. 'I go- found him'). When a native co-ordinator is used, as sometimes

negative conjugation of the copula (as in Marathi), the clause-final position of negative and interrogative operators, the transfer of word stress to the root syllable and the restructuring of the Bengali gender system into a status system. But cf. also Bhattacharya (1975) on Dravidian-Munda convergence in the same area.

²⁴ It may even be that the word for 'cat' in Burushaski, Dardic, Nuristani and East Iranian (Indo-Iranian forms: *pis-/pīs-/pus-*, Burushaski *bus-*, cf. Fussman 1972: 107f.) has an Austroasiatic root (cf. Proto-Austroasiatic **pusi/u-* 'cat', Zide & Zide 1976: 1317).

in Burushaski, the latter functions primarily as a sentence connective or adverb meaning 'again, then, and so, moreover', cf. Burushaski *i:ne pfu:t bu:t jat bam, da kam deyeljam* 'the demon was very old, *and* he was *also* hard of hearing'; *xura:k ečam da numin ara:m ečam* lit. 'I shall eat *and then*, having drunk, rest' (Lorimer 1935-1938, Vol. I: § 420).

For some time scholars have been faced not only with a large number of unidentified loan-words, some of which are quite old, in the north(west)ern Aryan languages, but also with a number of areally limited phonological and grammatical innovations, which cannot very easily be traced to any known pre-Aryan language (phylum) of South or Central Asia.²⁵ Nevertheless, there has been a general reluctance to admit the existence or relevance of any entirely lost substratum in this area.

It is a sound methodological attitude not to presume extraneous sources of influence on the lexicon and grammar of a language until the intrinsic factors of change have been examined by means of internal and comparative reconstruction and typological comparisons. It is not, however, an *empirically* supportable attitude to assume linguistic homogeneity and continuity rather than heterogeneity and gradual language switch in and over any remote (proto-historical) period in any densely-inhabited region of the earth. Under non-forced conditions, language switch is, and has always been, a slow process, and this increases the rate of stratified mutual interference between languages in contact. Moreover, the closer the contact between an ad- or substratum and another ad- or superstratum, the greater is its likelihood of becoming fully absorbed into the latter.

This is, in fact, the very phenomenon that is actually taking place before our very eyes in e.g. the Marathi-Kannada zone in Central India: A Dravidian language in a bi- or multilingual environment is being absorbed by a superstratum belonging to an Indo-Aryan majority, occasioning heavy creolization of the latter, especially in the lower social strata (cf. Gumperz & Wilson 1971; Southworth 1971). If this kind of situation were to continue indefinitely everywhere in South Asia, it would eventually lead to the complete extinction of Dravidian and all other minority language families in the region. But this extinction would, with the lack of effective secondary regularization, be preceded by considerable structural interferences in the Indo-Aryan superstratum, the effects of which could then no longer be explained in the light of the existing regional languages.

This is also the process that must have been going on in the whole of Northern India even from early Vedic times. As much as 30% of the *agricultural* vocabulary of Modern Hindi cannot be etymologically explained on the basis of any existing Indo-European or non-Indo-European language (Masica 1979). There is a bundle of imperfectly identified lexical and structural isoglosses that demarcate (various parts of) north(west)ern South Asia from the rest of South, West and Central Asia, but while it may seem hopeless to isolate, identify and locate the ultimate sources of many of these ancient isoglosses now, this article purports to have contributed to the view that these areal features may have quite complex origins in the specific languages and cannot all be explained as spontaneous developments or even in terms of the present South Asian sub- and adstratum languages.

²⁵ Cf. especially the lexical and structural peculiarities of Nuristani Prasun as well as Dardic Khovar and Kalasha (see Morgenstierne 1947b, 1965).

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