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Internal reconstruction and comparison with Iranian and other Indo-European languages support the theory that the Old Indo-Aryan past gerund originated as a temporally unmarked suppletive instrumental deverbial noun (in *-ya-/-tu-*) with verbal rection and infinitival or complemental function (6.1-6.4). Despite the archaic forms and etymological connection with (mainly) Indo-Aryan infinitival paradigms (esp. *-tu-*), there are, however, few, if any, clear traces left of its assumed prehistorical function even in the oldest Indo-Aryan documents (3.2-3.3, 4.1-4.7).¹

This suggests that the syntactico-semantic reanalysis of the gerund as a basically past verbal adverb or conjunctive participle overlapping mainly with the more cumbersome conjunctive perfect participle and contrasting with the less productive accusative non-past gerund was completed already in the prehistorical period. Appearing in the (early) *Ṛgveda* basically as a means for expressing backgrounded circumstantial and temporal qualifications, the gerund became toward the later Vedic period an increasingly productive and operationally unconstrained means for sequencing propositions with identical Actor or topical Undergoer and mood. At the same time its use in adverbial complementation and periphrastic constructions increased (4.7, 5.3). Parallel to this development there was a general proliferation of partly innovative non-finite structures in clause linkage, especially such that conform with the inherited Dravidian typology of clause linkage.

The very fact that an originally weakly productive instrumental verbal adverb or germinal infinitive was selected for functions otherwise performed by declinable preterital participles and finite clauses can hardly be seen as a case of filling a gap in the inherited system (6.4.G-H). To the extent that the gerund became productive and functionally differentiated from its internal and external parallels, it came to develop those features that are prototypical for its ancient and modern South Asian counterparts (6.5-6.8).

It is probably not a coincidence that the specifically Indo-Aryan changes in the emerging retroflex system occurred roughly at the same time and in the same area, to the southeast of the oldest Aryan settlements in the Hindukush region. The coupled areal implications of these innovations are thrown in relief, when we consider that modern Romany (which probably descends from the pre-Aśokan Central Indo-Aryan group, cf. Turner [1926] 1975) has lost the retroflex segments (6.5.A) and transferred the functions of the past

¹ Possible exceptions being the 'cognate gerunds' in AV 6.135.2 and AV 6.135.3 (187-188) and the final gerunds in AV 9.6.53 and AV 5.20.5 (211-212); cf. 3.3.A, 3.3.B, 4.7.H, 4.7.I. In the post-Vedic period 'non-preterital uses' of the gerund reappear in different and more productive constructions, which are less likely to be inherited or indicative of the original instrumental value of the gerund.

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gerund to participial and finite constructions.

The indisputable existence of several waves of Aryan migrations to the Indian subcontinent, the rather close dialectal relationship between the language of the Avesta and early Ṛgveda, the northwestern/Ṛgvedic variant in *-tví* (which formationally presupposes the more easterly variant *-tvā*), and the tendency for the gerund to cluster in certain hymns/contexts of the Ṛgveda without showing traces of its original value even in the oldest hymns, make it reasonable to assume that the inherited past gerund was reinterpreted in the language of the pre-Ṛgvedic acculturated Aryans (probably to be identified as the *Dāsas/Dasyus*), which had longer been exposed to non-Aryan influence in the north-western parts of the Indian subcontinent after the separation from the early Indo-Iranian community. Since the past gerund cannot be reconstructed to proto-Nuristani, the pre-historical gerund must have been reinterpreted in the more easterly pre-Ṛgvedic Indo-Aryan dialects from whence it spread as such as a dialect loan to the Ṛgvedic dialects (6.4.H).

Of all the extant South Asian non-Aryan languages only Dravidian has an inherited *indeclinable* coreferentially constrained non-finite verb-form with operationally unconstrained additive-sequential and somewhat more constrained modal-instrumental function (6.5-6.8). The existence of Dravidian loanwords in early Vedic and the possibility of Dravidian influence during some stage(s) in the development of the retroflex system and the postposed quotative *iti*-construction (6.5.A) support the possibility of Dravidian substratum influence on the syntactico-semantic development of the Old Indo-Aryan gerund.

However, convergence with the Dravidian past verbal participle can be attested only for the post-Ṛgvedic period. Developments that can best be explained in this way are the exponential increase of gerundial clauses instead of finite clauses in additive-sequential linkage in post-Samhitāic prose (2.2.C-D, 5.2.A, 5.3), the gradual relaxation of the coreferential (4.2), relative temporal (3.3) and operational (4.3, 4.7, 5.3) constraints of the gerund in the later Vedic period, and the use of the gerund in periphrastic verb-forms with perfective (and not only stative-habitual) auxiliaries after the Old Indo-Aryan period (6.3.B, 4.4.D).

These changes are typically first met with in non-orthodox or non-regularized texts of especially southern or late provenance. They generally coincide with an increasing influx of Dravidian lexical and syntactic loans in Sanskrit and Pali² texts and are not paralleled by similar changes in the use of the more stable Old Dravidian past verbal participle.

By extrapolation we could then hypothesize that also the prehistorical syntactico-semantic development (in particular the basically past relative tense and additive-sequential function) of the gerund was due to early North Dravidian substratum influence on the pre-

² An obvious Dravidian syntactic calque in Middle Indo-Aryan is the embedding of a participle in a temporal or spatial noun phrase/adverb, e.g. Ceylonese Pali *tassa āgatakāle* 'at his having come-time', i.e. 'when he came', cf. Tamil *avan vanta poiutu*. For other syntactic and semantic convergent developments especially in the New Indo-Aryan period, cf. Gumperz & Wilson (1971), Gair (1986), Masica (1986), Kachru (1986), Kanittanam (1986), Pandharipande (1986a), etc.

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Ṛgvedic dialects. However, the structural differences of the respective formations (suppletive instrumental verbal nouns in Indo-Aryan vs. uninflected past tense-bases in Dravidian), the somewhat different system and distribution of retroflex segments in early Indo-Aryan, the considerable residue of unidentified loanwords (containing e.g. retroflex sibilants) in Vedic and later Sanskrit, and the improbability of Dravidian having been spoken in the most remote and inaccessible areas through which the Indo-Aryans entered, force us to count with the possibility of some non-Dravidian sub- or adstratum as having provided the original model for the early syntactico-semantic (and to some extent formal) development of the Indo-Aryan gerund (6.5.A.2, 6.5.B).

This sub- or adstratum might then also account for part of the pre-Ṛgvedic development of the retroflex system, but it cannot be identified with languages such as Burushaski or Finno-Ugric, which could explain only the (incipient) retroflexion of the palatalized sibilants but not the progressive assimilation of retroflexion to following dentals in the same morpheme nor the retroflexion of dentals after liquids (6.5.A). While this latter set of changes may principally have been due to Dravidian influence, the fact that retroflex sibilants did not play a pivotal role in Dravidian retroflexion makes it precarious to postulate Dravidian influence on this specific point.

Another historical problem is the formation of the past gerund from a specifically instrumental verbal noun. There seems to be no morphosyntactic or semantic basis for such a formation when we compare it with its basic semantic value and syntactic function (6.4.G) or even assumed Dravidian model (6.5.B). The use of instrumental nominal or, in particular, preterital participial stems to form 'past gerunds' with not only adverbial but also additive-sequential function could be historically and/or synchronically understood in Tocharian, Tibeto-Burman and Central Asian Finno-Ugric and Altaic by the alternative 'copulative' function of the instrumental case (cf. Krueger 1973, p. 577). The semantic equation or development 'with' > 'and' in case morphemes and conjunctions is not restricted to Central Asia, being met with also in e.g. Bantu (cf. Givón 1979, p. 261ff.). But this explanation is not possible for Indo-Aryan, where the 'copulative' function of the instrumental is found only in certain archaic *dvandva* compounds.³

In defence of the hypothesis of Dravidian influence on the prehistorical past gerund one might still point to the fact that the Dravidian past verbal participle was an indeclinable verb-form, while the inherited Indo-Aryan system knew of no such formations deriving from other than nominal stems. Moreover, the Dravidian past verbal participle was not temporally fully differentiated for relative past tense, and this might have provided a link for the functional identification of the Dravidian past verbal participle with the prehistorical gerund, given that its etymology had already become obscure, as is indeed suggested by

³ The instrumental absolute has sometimes the sense of 'after V-ing', but only when based on a past participle, e.g. Kath. 10.60.52 *tēna ceḥa praviṣṭena na śarīraṃ na me vanam* 'after he has entered here I cannot call my body nor my wood my own' (cf. Aalto 1979, p. 52).

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the opaque forms *-(t)ya*, *-tvāya* and *-tvī(nam)* (6.5.B, 6.1-6.2). The stricter temporal differentiation of the early Vedic gerund could then have been due to the inherited system of relative tense, in which the gerund was subsumed mainly with the perfect participle. In early Dravidian (relative) tense was more closely connected with aspectual differentiation than in Indo-Aryan (Andronov 1978c, p. 16f.), while aspect rather than relative tense was operative also in the case of the Greek aorist participle (Humbert 1972 p. 172ff.).

But if the prehistorical past gerund could be identified as an instrumental verbal noun/infinitive, there is no reason why it should not have been equated with Dravidian instrumental or sociative verbal nouns, which express specifically concomitant action or attendant circumstances. There is no Dravidian model for the temporal opposition between the past and non-past gerund on the basis of the instrumental vs. accusative case. In fact, the Brahui non-past verbal participle has a specifically instrumental allomorph, whereas, on the other hand, the formally corresponding Tibeto-Burman and Munda formations are basically preterital, in spite of being derived from specifically non-past stems.

Although the instrumental case is a more natural starting point than e.g. the accusative or locative for expressing priority of action or actional sequence (at least by virtue of parasitic temporal implicatures of cause or background), the ultimate factors underlying the re-interpretation of an instrumental action noun as a past verbal adverb or conjunctive participle cannot be fully understood until we have more data about the linguistic prehistory (incl. extinct substratum languages) of the northern parts of the South Asian subcontinent and the adjacent Central Asian regions.

As a result of various convergent developments and dialect loans, all but the most isolated South Asian languages have developed indeclinable non-finite categories that are functionally and occasionally structurally equivalent to the Indo-Aryan past gerund (cf. Masica 1976, p. 108ff.; Vermeer 1969). However, there is a conspicuous regional dichotomy between the mostly instrumental or ablative gerunds of the north and the past tense-based verbal participles of the south (6.5.-6.8). This dichotomy is paralleled by typological differences in the retroflex systems, which are (or have been) characterized by retroflex sibilants in the north(west) as against retroflex liquids in the south. Apparently, both the opposition between retroflex and dental consonants and the use of past verbal adverbs/participles with additive-sequential and modal-instrumental function constitute ancient, but formally rather heterogeneous areal linguistic features of the Indian subcontinent and the adjacent Central Asian regions. These facts support the view that South Asian linguistic convergence goes back to converging tendencies among a number of different linguistic areas in the prehistorical period. Even retroflexion in proto-Dravidian may then have been the result of convergence with some lost sub- or adstratum in the pre-Aryan period, while the prehistorical Indo-Aryan gerund shows functional convergence with the Dravidian past verbal participle perhaps only because of conforming with a pre-Dravidian areal linguistic feature.