

## 2. FORMATION AND DISTRIBUTION OF THE GERUND

The formation of the (past) gerund in *-tvā(ya)*, *-tvī* and *-(t)yā/-(t)ya* has been described in detail by Debrunner (1954) in *Altindische Grammatik* II:2 (pp. 652-663 §§ 484-487; pp. 781-789 §§ 635-640. Less circumstantial accounts including the non-past gerund in *-am* have been furnished by Whitney (1889, p. 355ff.) and Renou (1930, p. 124ff.; 1935). What has not yet been considered in sufficient detail, however, are the interparadigmatic relations and lexical constraints on the formation of the gerund.

### 2.1. SYNOPSIS OF THE FORMATION OF THE GERUNDS

The previous morphological accounts need not be repeated here, although it may be convenient to include a brief résumé of the basic formal features of the gerund(s), especially in relation to other non-finite forms. (Etymological aspects of the allomorphs will not be dealt with until chapter 6.)

The non-past gerund is formed by adding the suffix *-am* (< *-a-m*) to the accented and typically prefixed or compounded verbal root or stem, which appears in roughly the same non-reduced form as in the passive aorist in *-i* (cf. Renou 1935, p. 359ff., p. 368ff.). The root vowel has thus the *guṇa* grade, but a final vowel or medial *-a-* before a single consonant takes the *vṛddhi* grade, e.g. *nāma+grāh-am* (<  $\sqrt{\text{grah}}$ ) 'mentioning by name', *ni+lāy-am* (<  $\text{ni}+\sqrt{\text{lī}}$ ) 'hiding oneself'. After a final *-ā-*, the glide *-y-* is inserted before the suffix, e.g. *aṅga+sam+ā+khyā-y-am* 'naming the limbs', *pā-y-am* *pā-y-am* (<  $\sqrt{\text{pā}}$ ) 'while continuously drinking'. A final velar usually retains its point of articulation (as mostly in thematic action nouns; cf. Wackernagel 1896, p. 155; Debrunner 1954 = Ai. Gr. II:2, p. 91ff.), but in analogy with the radical infinitive in *-am* (*-Ø-am*), it is occasionally palatalized, e.g. TS 6.1.9.4 *utsárgam* : MS 3.7.4 (80, 2) *utsárjam* (Renou 1935, p. 381f. fn. 1; cf. chapter 6.Ø).

The past gerund is mostly formed from either the zero-grade root or a secondary verb stem by adding the suffix *-tvā* (in the Veda also *-tvī* or *-tvāya*) if the root or stem is uncompounded, and *-(t)ya* (in the Ṛgveda alternatively *-(t)yā*) if the root or stem is "prefixed" or compounded with a nominal stem or adverb. (The privative particle *a[n]+*, which attracts the accent, is not treated as a preverb, but later there are exceptions, e.g. TU

2.4 = 2.9 = TĀ 8.2.4 = 8.2.9 *aprāpya* 'without having attained', Horsch 1966, p. 187.)

The two classes of allomorphs of the past gerund are thus essentially complementary, although the distributional rule became gradually relaxed, especially in non-standardized texts (starting with the generalization of *-tvā* after compound causative stems to obviate the less transparent sequence *-ayya*; cf. Fürst 1916, p. 72; Renou 1937, p. 20f.; Debrunner 1954 = Ai. Gr. II:2, p. 661 § 487).<sup>1</sup> By the Middle Indo-Aryan period the complementarity is entirely lost, reflecting, as it were, the natural tendency to uniform symbolization in morphology (cf. Mayrthaler 1981). Of the free variants, only *-tvā* (after the Ṛgveda also *-tuā*) and *-(t)ya* are used in both the Vedic and Classical (incl. Epic) language. The variant in *-tvī* is obviously a (north-)western dialectal allomorph, which occurs one and a half times as often as *-tvā* in the Ṛgveda. Elsewhere it is mostly replaced by *-tvā* without any perceptible change of meaning (cf. Bloomfield & Edgerton 1930, p. 281). The variant in *-tvāya* occurs only nine times in the Ṛgveda, and a dozen times in the rest of the Vedic literature. The suffix *-tvīnam*, which was probably a dialectal or stylistic variant interchangeable with *-tvā* and *-tvī*, is given as a Vedic form in P 7.1.48 (Kās.: *pītvīnam* < *√pā* 'drink'; *iṣṭvīnam* < *√yaj* 'sacrifice'), but its accent and exact use or stylistic value are unknown. Its reflexes are found in Middle and New Indo-Aryan (cf. 6.3).

The root tends to take the same (reduced) form before the *tv*-suffixes as before the past participle *-tā/-nā-*, e.g. *grh-ī-tvā* : *grh-ī-tā-* (< *√grah* 'grasp'). The union-vowel *-i-* (*-ī-*), which tends to cause strengthening of the root, is occasionally added in analogy with the *-tu*-infinitives or present stem, especially if formal analogy with the past participle would produce a form of the pattern *C√r/n/Ø-tvā/i*, e.g. *jan-i-tvī* (\**jā-tvī*) : *jān-i-toḥ* : *jā-tā-* (< *√jan* 'beget'); *nart-i-tvā* (\**nṛt-tvā*) : *nart-i-tum* : *nṛt-ta-* (< *√nṛt* 'dance'). Sometimes there is vacillation between a fuller and a weaker form of the root, e.g. *sya(n)t-tvā* : *syant-tum* < *√syand* 'flow' (P 1.1.40, 1.2.18-26). As the infinitive, but less often, and mainly in later texts, the gerund (and occasionally also the past participle) is sometimes formed from (or influenced by) the present stem. Thus already in the Ṛgveda: *dat-tvāya* < *√dā* 'give' (pres. stem *dad-*), cf. *dat-ta-* past pple, but *dā-tum* infinitive.

The variant *-(t)ya*, which is found outside the Ṛgveda only sporadically *metri causa* (e.g. in the *gāthā* AĀ 2.3.8 (3) *viyūyā* [< *vi* + *√yu* 'separate'], Horsch 1966, p. 149), is more than twice as frequent as *-(t)ya* in the Ṛgveda, occurring often even when the metre does not require it (cf. Benfey 1879, p. 32ff.; Bloomfield & Edgerton 1932, p. 226 § 456; Debrunner 1954 = Ai. Gr. II:2, p. 781 § 635b). The accent is always on the root or verb stem, which mostly takes the weakest form. Vocalization of the semivowel in *-(t)ya/ā* (> *-(t)ia/ā*) is quite common in the Ṛgveda and the addition of the *t*-increment after a short

<sup>1</sup> On the other hand, occasionally it is the ending *-ya* that has been generalized to simplexes, especially in Epic and Buddhist Sanskrit, and frequently when the gerund has an adposition-like function, e.g. *grhya* 'having taken; with', *uśya* 'having dwelt, spent', *cintya* 'having thought; seeing that' (cf. Whitney 1889, p. 355 § 989a; Debrunner 1954 = Ai.Gr. II:2, p. 789 §640).

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root vowel or vocalized final nasal occurs under roughly the same conditions as for root nouns and gerundives in -(t)ya-, e.g. √tan 'stretch' > +tatya. Alternatively the short final of the root is lengthened, or, especially in the later language, the final nasal is preserved (in analogy with the present stem or infinitive), e.g. √guh 'hide' > +guhya/gūhya; √yu 'yoke' > +yutya/yūya; √gam 'go' > +gatya/gamya; √tan 'stretch' > +tatya/tāya.

The conjugational or causative formative -ay- is usually dropped before -(t)ya (e.g. vi+cint-ya < vi+√cint-ay 'think'), except when the preceding syllable is short. Hence the more transparent suffix -(i-)tvā is often used after prefixed causative stems. Roots ending in -ā mostly retain the final vowel, but some roots have alternative weakened forms in -ī- or (-Ø)-i- before the gerundial suffix -(t)ya/ā, e.g. √pā 'drink' > +pā-ya/+pī-ya. Benfey (1879) and Zubaty (1889) operated with -āya as a special ending of the gerund for roots ending in -ā, but this is unnecessary, since final -ā is not always lost before -ya, cf. infinitive like pra+khyāi < +khyā-e; Durr 1951, p. 15). Also -(t)ya/ā is sometimes added to the present base, e.g. +dadya < √dā 'give'. In the Ṛgveda there is some analogy with the gerundive in -(t)ya-, which, however, has the full grade of the root more often.

The interparadigmatic relations of the gerundial forms are illustrated in the table below.

| Root     | pres. stems       | infinitive        | past pple            | ya-gerundive       | gerund                          |
|----------|-------------------|-------------------|----------------------|--------------------|---------------------------------|
| man-     | mānya-/manu-      | māntave           | matá-                | +manya-            | matvā,+matya/+manya E+          |
| han-     | hán/ghn-/jighna-  | hántum            | hatá-                | +ghnya-/ghātya-    | hatvā,+hātya                    |
| gam-     | gám(a)-/gaccha-   | gántum            | gatá-                | gamyā-             | gatvā,+gātya/+gamya U S         |
| pā-      | pā-/pība-         | pātum             | pītá-                | péya-              | pītvā,+pāya/+pīya E             |
| hā-      | jāhā/ī/Ø-         | hātum             | hīnā-/hātá-          | heya-              | hitvā,+hāya                     |
| dā-      | dādā/dad-/dā-     | dātum             | dattá-               | déya-              | dattvā,+dāya/+dāya AV           |
| i-       | e/i-/āya-/īya-    | étum              | itá-                 | itya-/īya-         | itvā,+itya,+āya B/+īya C        |
| sī-      | še-/saya-         | sayitum           | sayitá-              | +séyya-            | sayitvā,+sāya                   |
| śru-     | śṛṇó/ṇu-          | śrotum            | śrutá-               | śrútya-/śravya- E+ | śrutvā,+śrútya                  |
| stu-     | stáva-/stau/stu-  | stotum            | stutá-               | stútya-/stavya- E  | stutvā,+stútya/+stúya E+        |
| kṛ-      | kṛṇó/u-/karó/kur- | kártum            | kṛtá-                | kṛtya-/kārya-      | kṛtvā,+kṛ'tya                   |
| stṛ-     | stṛṇā/ī-/stṛṇó/u- | stártave          | stṛtá-/stīrná-       | stṛtya- B+         | stṛtvā/stīrtvā,+stī'rya/+stṛtya |
| tṛ-      | tár/tir/tur-      | tar(i)tum         | tīrná-/tūrṇá-        | +tū'rya- ?         | tīrtvā,+tū'rya/+tīrya E+        |
| kram-    | kra/āma-          | krami-/krāmtum E+ | krāmtá-              | kra/āmya-          | krām-/kramitvā E+, +krāmya      |
| car-     | cára-             | cáritum           | caritá-/cīrná-U+     | cárya-             | car[ī]tvā/cartvā/cīrtvā,+cārya  |
| vas-     | vása-             | vas(i)tum         | uṣitá-/uṣta-/vasita- | uṣya-              | uṣitvā/uṣtvā,+úṣya              |
| sās-     | sās/śiṣ-          | sās(i)tum         | śiṣta-/śās(i)ta-     | sāśya-/śiṣya-B+    | sāsitvā/*śiṣtvā,+śiṣya/+sāśya   |
| sya(n)d- | syānda-           | syánttum          | syānná-              | ?                  | syā(n)tvā,+sya(n)dya            |
| nṛt-     | nṛ'tya-           | nart(i)tum        | nṛttá-               | ?                  | nartitvā                        |
| mṛj-     | mār/mṛj-          | mā/arṣtum/rjitum  | mṛṣtá-/mṛjita-       | -mārjya            | mṛṣtvā/mārjitvā,+mṛ'jya/+mārjya |

(The accent is noted when attested and variant forms are mostly given in chronological order; the abbreviations are as in Whitney (1885): AV = Atharvaveda, B = Brāhmaṇa, C = Classical, E = Epic, S = Sūtra, U = Upaniṣad, \* = grammarians' form.)

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It can be seen that the gerund conforms prosodically more closely with the past participle in *-tá-/-ná-* (and so also with the *ti-*derivatives) than with any other verb-form. This is especially conspicuous in the case of the simplex *-tv-*forms, although the (compounded) gerund does not follow the preverbal accentuation of the (compounded) past participle.

A good illustration of the impact of the past participle is the form *at-tvāya* (<  $\sqrt{ad}$  'eat'), which after the Atharvaveda is replaced by *jag-dhvāya* (<  $\sqrt{jaks}$  'eat') obviously due to the lack of a past participle from  $\sqrt{ad}$  (Debrunner 1954 = Ai. Gr. II:2, p. 659). On the other hand, in the later period, the gerundial suffixes tend to be added to the present stem. The formal vacillation and confused interparadigmatic relations of the gerund thus reveal its innovative character and comparatively recent incorporation in the Old Indo-Aryan non-finite paradigm.

### 2.2. OCCURRENCE AND LEXICAL CONTEXTS OF THE GERUND

Though not very frequent in the oldest documents, the past gerund is found to be formed from a large number of mostly primary roots already in the Ṛg- and Atharvaveda. In the Brāhmaṇas its frequency as a verb-form is already about three times greater than in the Ṛgveda, while in the Epic and Classical literature it is, relatively speaking, about ten times as common as in the Ṛgveda. By contrast, the non-past gerund shows a decreasing frequency after the Middle Vedic period (cf. Renou 1935, p. 371).

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The past gerund occurs with rather uneven distribution about 175 times in the Ṛgveda, i.e. on an average only once per 60 stanzas ('ṛcas').<sup>2</sup> However, nearly half of the occurrences are concentrated to only 30 hymns, while 17 are contained in only 8 sentences (1.104.1c, 2.37.3c, 3.32.1cd, 3.48.4cd, 10.15.6ab, 10.65.7c, 10.109.7, 10.162.5ab).

By contrast, the non-past gerund is extremely rare at this stage (according to Delbrück 1888, p. 404f. only RV 4.17.3, 10.165.5 and AV 10.7.42, 4.16.2), being more or less indistinguishable from an adverbial accusative (cf. Whitney 1889, p. 360 § 995a).

The past gerund is attested from some 65 primary or secondary roots in the Ṛgveda. The Atharvaveda adds only about 30 new roots to this lot. In the Ṛgveda approximately every third occurrence of the gerund is thus from a different root, while the corresponding

<sup>2</sup> Earlier accounts based solely on Delbrück (1874) and Arnold (1897) give too low numbers, e.g. 167 occurrences in the Ṛgveda according to Renou (1940).

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ratio in the Atharvaveda is a little less.

The following is a comprehensive list of the simplex or compounded verbs that form the gerund in the Ṛgveda (the superscript numeral indicates number of occurrences if greater than 1; repetitions are not counted):

ā+ac- 'bend', ā+av- 'favour', ava/pra+as- 'throw off/forth', api/abhi<sup>3</sup>/ā/prati+i- 'go on/against/forward/towards', prati+iṣ- 'search for', pra+arpaya- (< √ṛ) 'set in motion', kṛ-<sup>7</sup> 'make', akhkhali+kṛ- 'make a croaking/jubilant (?) noise', aram+kṛ- 'prepare', vi+kṛt- 'rend asunder', abhi+kram- 'attack', abhi+ khyā-<sup>2</sup> 'behold', gam-<sup>2</sup> 'go', ava/ā<sup>3</sup>/pari/sam+gam- 'go down to /come/surround/come together', apa/abhi+gur- 'threaten/welcome, extoll', guh- 'conceal', prati/sam<sup>3</sup>+gra(b)h- 'receive/seize', karṇa/pāda<sup>2</sup>/hasta<sup>2</sup>+grah- 'grasp the ear/foot/hand', anu+ghuṣ- 'announce', abhi<sup>2</sup>/prati<sup>2(23)</sup>/vi/(?sam)+cakṣ- 'look towards/perceive/survey/behold', ni+cāy-<sup>2</sup> 'perceive, regard', jakṣ- 'eat', jan- 'give birth to', juṣ-<sup>3</sup> 'find taste for', pari+tap- 'heat up', vi+tṛ- 'pass across/through', dā- 'give', ā<sup>3</sup>/pari+dā- 'take/give away', punar+dā- 'give back', ati+div- 'play higher/ahead', ā+dṛ-<sup>2</sup> 'direct one's attention to', dṛṣ- 'see', anu+dṛṣ- 'look after', abhi+pad- 'fall upon', pā-<sup>11</sup> 'drink', pū- 'purify', pra+pruth- 'snort', vi+bādḥ- 'drive away', bhaj- 'partake of, share', bhid- 'split', vi+bhid- 'split into pieces', bhū-<sup>5</sup> 'become', abhi+bhū- 'overcome', ā+bhṛ- 'fetch', mā- 'fashion', vi/sam+mā- 'measure out/equally', sam+mīl- 'close (one's eyes)', vi+muc-<sup>2</sup> 'release', ā+mūṣ-<sup>2</sup> 'rob', mohaya- (< √muh) 'confound', anu+mṛṣ- 'grope for', ā/ni/vi+yu- 'draw to oneself/fasten/separate', yuj-<sup>6</sup> 'yoke', (a+)yudh- '(not to) fight', ā/sam+rabh- 'grasp/take hold of', ni+rudh- 'repress', abhi+vap- 'scatter over', viṣ-<sup>3</sup> 'busy oneself', vṛ-<sup>2</sup> 'encompass', vṛj- 'turn (down)' (or: vṛaṣ- 'cut down'), abhi/ā+vṛt- 'get the better of/turn hither', vṛṣ- 'rain', abhi+vlag-<sup>2</sup> 'seize (by the throat?)', sam+śā- 'sharpen', śru- 'hear', ā<sup>5</sup>/upa/ni<sup>14</sup>+sad- 'sit down (at ± ā)', vi+sah- 'conquer', ava+sā- 'unyoke', skabh- 'support', upa+sthā- 'go up to', snā- 'bathe', ud+snā- 'swim up', han-<sup>9</sup> 'slay', vi+han- 'smite away', hā-<sup>7</sup> 'leave', ati/sam+hā- 'miss/pull oneself together'.

(For a complete list of all the occurrences of the gerund in the Ṛgveda, see appendix 1.)

The majority of these verbs are transitive and primarily punctual or telic by aspect, which are features particularly amenable to the expression of succession (rather than co-occurrence or temporal overlap) of action.

On the other hand, there are also some stative and durative atelic verbs, e.g. prati+viṣ 'search for' (ex. 138), anu+√mṛṣ 'grope for', which are heuristically more valuable, since they should provide contexts amenable to the expression of concomitant action. In other words, if the gerund is temporally unmarked, it *should* express a concomitant action at least when formed from such verbs (cf. 2.3.B and 3.2-3.3).

In all these forms, the root appears in the reduced grade, except when it ends in -ā(-ya)

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or when the union-vowel (-i-) intervenes, e.g. **mohay-i-tvā** 'having confounded' (caus. < √**muh** 'be confused', cf. **prārp-ya** 'having set in motion', caus. < √**r** 'go') and **jan-i-tvī** (vs. **skabh-i-tvī**). The semivowel in -tv- is consonantal, while the one in -(t)y- is vocalic in ten cases, due to a preceding long syllable (cf. Debrunner 1954 = Ai. Gr. II:2, p. 781 § 635a).

The quantity of the final vowel of -(t)ya can be determined in 80 cases. In more than half of the cases (≈ 50) it is long contrary to metrical requirements, suggesting that the short vowel is secondary (cf. Benfey 1879, p. 32ff.; Bloomfield & Edgerton 1932, p. 226 § 456; Debrunner 1954 = Ai. Gr. II:2, p. 781 § 635b).

The number of uncompounded roots forming the gerund is 25, while the number of compound roots is nearly twice as great, approximately 30 verbs never appearing as simplex in this form. Against 69(+1) simplex forms in -tv-, there are 107(+3?) compound forms in -(t)y-, the ratio between simplex and compounded gerunds being ca. 0.7.

In one case (**á+yud-dhvī** 10.108.5c) the privative particle is prefixed to the root, while in eight cases the root is preceded by a nominal or adverbial stem: **karṇa/etc.+grah-** (> **+gḥhya/ā**) 'grasp the ear/etc.', **akhhali+kr-** (> **+kṛtya/ā**) (ex. 186, 3.3.A), **aram+kr-** 'prepare', **punar+dā-** (> **+dāya**) 'give back'. In the Atharvaveda the former type of formation is found only five times, two of which cases are in loans from the Ṛgveda (see 2.2.B.). With the exception of nominal **cvi-**formations (e.g. ŚB **brāhmaṇī+bhūya** 'having become a Brahman') and certain prefixed indeclinables (e.g. **him+kṛtya** 'having uttered *him*'), such compounded forms are subsequently replaced by forms in -am or analytic constructions (cf. Debrunner 1954 = Ai. Gr. II:2, p. 786 § 639bff.).

The variant -tvī (37x) is more than half as frequent as -tvā (23x), while -tvāya (9x) is least frequent and latest in occurrence. These free variants occur in more or less similar contexts. However, the roots **kr-** 'do, make', **juṣ-** 'be(come) pleased with', and **viṣ-** 'apply/busy oneself' take only -tvī, appearing in this form only twice outside the late first, tenth or eighth book: **kṛtvī** (5x), **juṣtvī** (3x), **viṣtvī** (3x). By contrast, of **yuj-** 'yoke', only **yuk-tvā** (4x) and **yuk-tvāya** (1x) occur.

Contrary to Bloomfield & Edgerton's (1932, p. 281 § 598a) conclusion, it does not appear from the Ṛgvedic evidence that -tvā is of any more recent origin than -tvī, because like the latter, it is found twice already in the ninth book (**pītvā** 9.23.7a, 9.108.2a), while the latter is relatively speaking more frequent than the former in the late tenth book.

It may be of some significance from the point of view of the dialectal and cultural differentiation of the Ṛgvedic Aryans that the typically Ṛgvedic variant **pītvī** (vs. **pītvā**) 'having drunk' occurs preferably in collocation with the name for the specifically Ṛgvedic cult-drink *Soma* (cf. RV 3.40.7, 8.76.10, 10.55.8, 10.113.1) vs. the pre-Ṛgvedic cult-drink **madhu-** 'mead', which, nevertheless, stands for the same thing in the said contexts. Similarly, **hatvī** (vs. **hatvā**) is slightly more common with reference to slaying Dasyus or

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Dāśas than other kinds of enemies. But in view of the small number of observations, these collocations are hardly yet statistically meaningful.

In addition to the above ca. 175 certain occurrences of the gerund, there are (at least) three doubtful cases: **samcaksyā** 1.165.12c, **praticaksyā** 1.124.8b and **mithaspfdhya** 1.166.9b. The two last-mentioned forms are preferably to be analyzed as gerundives, the first against Sāyaṇa, Grassmann (1873) and Oldenberg (1909), but with the Padapāṭha-text, Geldner (1951) and Renou (1940), the latter against all authorities except Sāyaṇa and the Padapāṭha: RV 1.124.8b **svāsā svāsre jyāyasyai yōnim āraig āpaity asyāḥ praticaksyeva** ‘the sister has left her place for the elder sister, she moves away from her like one who is to be seen again’; RV 1.166.9ab **viśvāni bhadrā maruto rātheṣu vo mithaspfdhyeva taviśāny āhitā** ‘all blessings, like forces to be vied for, are loaded on your wagons, O Maruts!’ (Sāyaṇa: **balādhikyāt parasparaspardhāviśayāni**). Cf. Geldner: “Alle schönen Sachen sind auf euren Wagen, o Marut, aufgeladen, die Kräfte, die gleichsam miteinander wetteifern”, which interpretation renders the gerund adnominal rather than adverbial by construction. The ambiguous form in RV 1.165.12c **samcaksyā marutas candrāvarṇā āchānta me** (= KS 9.8.19, MS 4.11.3) is interpreted as a gerund by the Padapāṭha, Sāyaṇa and Oldenberg (1909), but as a gerundive by Grassmann (1873, s.v.) and Geldner (1951): “ihr Marut, goldfarbig aussehend habt mir jetzt gefallen”. If **samcaksyā** is a gerund, its implicit subject would be a dative experiencer in spite of the presence of a nominative animate agentive subject (cf. 4.2, 4.2.B). Aufrecht (1888, p. 2) suggested that **abhikhyā** (1.148.5c, 8.23.5c, 10.112.10a) is a haplological formation for **abhikhyāya** (cf. Debrunner 1954 = Ai. Gr. II:2, p. 782 § 635d). However, it is more safely considered a regular instrumental: ‘[with] splendour, gracious look’.

The distribution of the allomorphs of the gerund over the ten books of the Ṛgveda appears from the following table. (V = Vālakhilya hymns of the 8. book. The ‘ratio’ gives the average number of occurrences per stanza.)

| Book  | Stanzas       | -(i)tvā               | -tvāya | -(i)tvī | -(t)yā/-(t)ya | Sum                  | Ratio |
|-------|---------------|-----------------------|--------|---------|---------------|----------------------|-------|
| 1.    | 2005          | 6                     | 0      | 4       | 25 (+3?)      | 35(+3?)              | 1/57  |
| 2.    | 429           | 1                     | 0      | 4       | 14            | 19                   | 1/23  |
| 3.    | 626           | 0                     | 0      | 3       | 13            | 16                   | 1/39  |
| 4.    | 589           | 0                     | 0      | 1       | 5             | 6                    | 1/98  |
| 5.    | 727           | 2                     | 0      | 1       | 3             | 6                    | 1/121 |
| 6.    | 765           | 1                     | 0      | 1       | 4             | 6                    | 1/128 |
| 7.    | 842           | 0                     | 0      | 2       | 3             | 5                    | 1/168 |
| 8.    | 1641(+80[V])  | 2 (+1 <sup>V</sup> )  | 1      | 3       | 5             | 11(+1 <sup>V</sup> ) | 1/149 |
| 9.    | 1108          | 2                     | 0      | 2       | 1             | 5                    | 1/222 |
| 10.   | 1754          | 9                     | 8      | 16      | 34            | 67                   | 1/26  |
| Sums: | 10486 (10566) | 23 (+1 <sup>V</sup> ) | 9      | 37      | 107           | 176(+1+3?)           | 1/60  |

## 2. FORMATION AND DISTRIBUTION OF THE GERUND

The distribution is skewed in a way that cannot be explained by the time parameter alone, i.e. the relative chronology of the books or individual hymns, as roughly established by Wüst (1927) and Arnold (1900).<sup>3</sup> Whereas some of the generally late books (1 and 10) do show the expected high frequency of the gerund and some of the oldest books (9 and 4-7) low frequency (though not as low as suggested by Renou's and Kuiper's deficient accounts), the comparatively old second and third books show far too high a frequency of the gerund for this to be understood within the limits of a standard deviation of distribution: The statistical deviation from the average ratio is as much as  $4\sigma$  for the second book and nearly as great for the third book, while even  $3\sigma$  would be expected only once in 370 cases (!), given a normal distribution (cf. Sigurd 1970, p. 132). Equally surprising is the low frequency of the gerund in the generally late eighth book.

This skewed distribution proves that the use of the gerund was a function of genre or discourse type just as much as of time. The tendency of the gerund to cluster in contexts referring to the deeds of Indra and other dynamic gods (cf. the high frequency of the gerund in the second book) corroborates the view that it was a fairly productive formation in early Ṛgvedic times, but restricted to certain genres or discourse types before it was generally accepted into the more conservative hieratic diction (cf. Kuiper 1967, p. 95f.).

It cannot be without historical significance that some of the oldest occurrences of the gerund are in contexts referring to Indra, which is a specifically Ṛgvedic god, just as the gerund is a specifically Indo-Aryan (vs. Indo-Iranian) innovation. According to Arnold (1900, p. 475) there is cumulative evidence that the hymn RV 2.20 (8d: **hatvī dāsyūn āyasīr nī tārit** 'having slain the Dasyus, he (= Indra) tore down the adamant fortresses') belongs to the oldest stratum of the Ṛgveda, despite the occurrence of the gerund. Cf. RV 2.12.3 (= ex. 72), 2.17.6, 2.20.8 and RV 2.15.4-6:

(94) RV 2.15.4ab

**sá pravolhñ̄n̄ parigátýā dabhīter vísvam adhāg āyudham iddhé agnáu**  
'Having besieged the abductors of Dabhīti, he burnt the whole arsenal in the lit fire.'

(95) RV 2.15.5

**sá im mahīm dhūnim étor aramñāt só asnātñ̄n̄ apārayat svastí**  
**tá utsnāya rayim abhí prá tasthuḥ sómasya tá máda índras cakāra**  
'He stopped this great rushing (river Dhuni) from moving, he brought the non-swimmers across safe and sound. Having emerged from the water, they reached out for wealth. In intoxication of Soma Indra did this.'

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<sup>3</sup> Note that the relative chronology of the books of the Ṛgveda and especially that of the individual hymns as established by prosodic and linguistic criteria is uncertain and inferior to conclusions based on the more primary criteria of repetitions and variations (Bloomfield 1900, 1916; Keith 1912, p. 726).



(96) RV 2.15.9ab

**svāpnenābhūpyā cūmurim dhūnim ca jaghāntha dāsyum prā dabhītim  
āvaḥ**

‘Having covered Cumuri and Dhuni with sleep, you killed Dasyu, (but) you helped out Dabhīti.’

The gerund occurs 53 times (corresponding to roughly one third of all the occurrences) with Indra as against 17 times with Agni as its subject. However, relatively speaking it is most frequent with reference to the lesser Ṛgvedic gods Bṛhaspati and Ṛbhu, while it is relatively more frequent even with reference to the All-Gods (Visvedevāḥ) and the Maruts than with reference to Agni. As can be expected, it shows the lowest frequency (5x) with (the god or drink) Soma as its subject, although it does frequently appear in contexts relating to Indra’s or other gods’ drinking Soma.

The skewed distribution of the gerund is also partly a consequence of its somewhat stereotyped contexts, cf. the following list of the most common lexical collocations of the gerund (the superscript numeral refers to the total number of a certain root in the gerund form):

- √**sad**<sup>20</sup> ‘[Gods] sit down [at sacrifice, worship]’ + (i) ‘to enjoy Soma or sacrifice’ (1.109.5c, 1.177.4d, 2.36.2c, 3.21.1d, 3.35.6c, 6.40.1c, 6.52.13d, 6.68.11d, 10.14.5d, 10.15.6a, 10.17.8c, 10.112.3d); + (ii) ‘protect, confer favor’ (2.3.8d, 4.4.12c)
- √**pā**<sup>11</sup> ‘[Indra] drink [Soma]’ + (i) ‘get strong, bull-like, superior’ (1.4.8a, 3.40.7c, 8.92.6a, 9.108.2a, 10.113.1d); + (ii) ‘conquer, kill enemy’ (9.23.7a, 10.55.8c)
- √**han**<sup>10</sup> ‘[Indra] kill [Dasyus, foes]’ + (i) ‘free waters’ (1.103.2b, 2.12.3c); + (ii) ‘tear down, annihilate fortress, etc.’ (1.100.18b, 2.17.6d, 2.20.8d, 3.34.9d)
- √**gra(b)h**<sup>9</sup> (i) ‘[Indra, Agni] seize [riches]’ + ‘give, bring’ (1.53.3c, 3.54.15d, 10.46.6c); (ii) ‘seize [limb]’ + ‘bring’ (8.70.15a, 10.85.26a, 10.109.2d); + (iii) ‘destroy’ (4.18.12d, 10.27.4d)
- √**gam**<sup>9</sup> ‘[Indra] come’ + ‘enjoy Soma, sacrifice’ (3.35.8c, 3.42.7c, 3.50.1b)
- √**hā**<sup>9</sup> ‘[we-group] leave’ + ‘slander [and go, succeed]’ (5.53.14b, 10.14.18c)
- √**i**<sup>6</sup> ‘[Indra] come, go against, attack’ + ‘destroy enemy’ (4.32.10d, 9.55.4b, 10.116.5d)
- √**yuj**<sup>6</sup> ‘[Indra, Ṛbhus] yoke [wagon, horses]’ + ‘come, go [here, to gods]’ s(1.161.7d, 1.177.1d, 1.177.3c, 5.40.4c.)
- √**viṣ**<sup>3</sup> ‘[pious personage] apply oneself [in Soma making, worship]’ + ‘receive immortality, status’ (1.110.4a, 3.60.3d, 10.94.2c)

It will be seen that three roots (**sad-** ‘sit (down)’, **pā-** ‘drink’ and **han-** ‘slay, smite’) with about half a dozen different types of contexts stand for two fifths of all the occurrences of

## 2. FORMATION AND DISTRIBUTION OF THE GERUND

the gerund in the Ṛgveda. On the other hand, the majority of the contexts of the gerund are much less stereotyped.

Another factor affecting the distribution of the gerund is the discourse function of the passages it occurs in. According to Longacre's (1976, p. 200) classification (see table below), there are just four basic types of discourse, as characterized by the intersections of two different text linguistic parameters, which together define four feature sets:<sup>4</sup>

|                    |   |   |
|--------------------|---|---|
| <u>+succession</u> | <u>-projected</u><br><b>narrative discourse:</b><br>1/3. person<br>agent oriented<br>accomplished time<br>chronological linkage | <u>+projected</u><br><b>procedural discourse:</b><br>non-specific person<br>patient-oriented<br>projected time<br>chronological linkage |
| <u>-succession</u> | <b>expository discourse:</b><br>no necessary person reference<br>(subject matter oriented)<br>time not focal<br>logical linkage | <b>hortatory discourse:</b><br>2. person<br>addressee oriented<br>(mode, not time)<br>logical linkage                                   |

Any (written or spoken) text may contain any number of discourse types, according to the communicative function of the passage in question. Thus all of these discourse types are found in the Ṛgveda, although hortatory and narrative discourse predominate due to the general contents of the text.

It appears that the Ṛgvedic gerund is most frequent in narrative and procedural discourse (which rely upon chronological linkage) and somewhat less frequent in hortatory discourse, co-occurring especially with topics like heroic slaying of foes, drinking of Soma and coming to the Soma sacrifice or rescue. In narrative discourse the mood is typically indicative or injunctive, while in procedural and hortatory discourse, imperative, optative or conjunctive. It hardly appears in expository discourse, which is rare in the Ṛgveda and which does not rely upon chronological linkage.

Although there is a tendency for the gerund to acquire a wider range of discourse functions after the Ṛgveda, this distribution is common in all periods. In combination with the (related) fact that the gerund is mostly a transitive and punctual or telic verb (cf. 2.3.B), we may then establish a certain functional 'frequency profile' (concept taken from Karlsson 1985) of the gerund for each period/genre.

<sup>4</sup> It might be objected that this classification is circular, since e.g. 'chronological linkage' follows from 'succession' and vice versa. On the other hand, 'chronological linkage' is not an isolated feature defining 'narrative discourse'. I.e. the relevance of the classification is the globality or internal consistency of the features. ('Projected' means: 'gives instructions about how to proceed in regard to the subject matter'.)

## 2.2.B. ATHARVAVEDA

With about 260 occurrences (280 counting the secondary books 19-20), which gives an average of one occurrence per appr. 17 verses, the gerund is nearly three times as frequent in the Atharvaveda as in the Ṛgveda. The total number of roots forming the gerund is somewhat larger than in the Ṛgveda ( $\approx 70$ ), and the number of new primary or secondary roots that form the gerund is ca. 30, marked with an asterisk in the following list. (Superscript numerals in square brackets refer to the secondary books 19 and 20. A star over a preverb indicates that the root is not attested with that preverb in the gerund form in the Ṛgveda.)

$\bar{a}+ac-$  'bend' (< RV),  $\bar{a}^2[1]/*ud/*ud+\bar{a}/*ni/*par\bar{a}/[prati]/*sam+\bar{a}^2+i-$  'come/go up/down/away/against/come together',  $*\bar{r}-^3$  'go',  $*nis+\bar{r}$  'separate',  $*prati+arpaya-$  (<  $\sqrt{r}$ ) 'send against',  $*kalpaya-$ <sup>2</sup> (<  $\sqrt{k|p}$ ) 'form, fabricate',  $k\bar{r}-$ <sup>42[2]</sup> 'do',  $*\bar{a}+k\bar{r}-$  'turn back',  $*namas+k\bar{r}-$  'bow down to',  $pari+k\bar{r}t-$  'cut around',  $*\bar{a}/*par\bar{a}/*pari+kram-$  'enter/stride forth/step around',  $*k\bar{r}i-$  'buy',  $gam-$ <sup>3[1]</sup> 'go',  $*[anu]/*abhi+sam/sam^4+gam-$  '[follow]/come together (to)',  $sam+*g\bar{r}-$  'swallow up',  $gra(b)h-1[2]$  'seize',  $*[ni]/prati/*vi/sam+gra(b)h-$  'seize/receive/spread out/grab',  $hast^4+grah-$  'take the hand',  $*c\bar{a}y-$  (=  $ci-$ ) 'perceive',  $*ci-$  'gather',  $vi+*chid-$  'cut apart',  $jak\bar{s}-^2$  'eat',  $abhi^1[1]/sam+*jit-$  'conquer',  $[\bar{a}+*tan-$  'extend'],  $[*t\bar{r}h-$  'tread upon'],  $*t\bar{r}-^2$  'traverse',  $d\bar{a}-^6[1]$  'give',  $*prati+\bar{a}+d\bar{a}-?$  'give back' (? =  $prati+\bar{a}+dh\bar{a}-$  'aim against', cf. BRW s.v. and Roth 1894, p. 681; Whitney 1905, p. 566: 'fit'),  $\bar{a}^2/*upa/*sam+\bar{a}+d\bar{a}-$  'take/put on/take all together',  $punar+d\bar{a}-$  'give back' (= RV),  $d\bar{r}s-$ <sup>2</sup> 'see',  $*par\bar{a}+d\bar{r}s-$  'see afar',  $\bar{a}^2/*pari+*dh\bar{a}-$  'put on',  $vi+*dh\bar{u}-$  'shake away',  $par\bar{a}+*n\bar{i}-$  'lead away',  $*pac-$ <sup>3</sup> 'cook',  $*pat-$  'fall',  $*\bar{a}/*pra+pad-$  'reach/go forward',  $p\bar{a}-^2$  'drink',  $*sam+p\bar{a}-$  'drink all up',  $p\bar{u}-$  'purify' (= RV),  $*bandh-$ <sup>3</sup> 'bind',  $bhaj-$  'partake' (= RV),  $vi+*bh\bar{a}jaya-$  (<  $\sqrt{bhaj}$ ) 'distribute',  $bh\bar{u}-$ <sup>43[+2]</sup> 'become',  $*abhi+sam/*sam+bh\bar{u}-$  'turn into/become (fully)',  $ud/ni+*maj-$  'emerge/immerge',  $[*apa+m\bar{a}-$  'measure off'],  $*m\bar{r}j-$ <sup>2</sup> 'wipe',  $*apa+m\bar{r}j-$  'wipe off',  $*yaj-$ <sup>5</sup> 'sacrifice',  $ud+*yam-$  'hold up',  $yuj-1[1]$  'yoke',  $[sam+rabh-$  'seize together'],  $*ruh-$  'ascend',  $*\bar{a}+ruh-$  'ascend',  $labh-$ <sup>2</sup> 'take',  $sam+*lup-$  'tear up',  $[ud+*vah-$  'carry up'],  $*vid-$ <sup>3</sup> 'find',  $[v\bar{r}-$  'encompass' (= RV)],  $upa/pr^2+*vi\bar{s}-$  'sit down upon/enter',  $*pari+vi\bar{s}-$  'serve',  $*pra+\bar{a}+v\bar{r}-$  'envelop',  $*apa+\bar{a}/abhi(=RV)/ *ni+v\bar{r}t-$  'turn away from/turn back',  $sam+s\bar{a}-$  'sharpen' (= RV),  $\bar{s}ru-$ <sup>2</sup> 'hear',  $*upa+\bar{s}ru-$  'overhear',  $*s\bar{a}d\bar{a}ya-$  (<  $\sqrt{sad}$ ) 'seat, settle',  $\bar{a}^3/ni^3/*sam+ni+sad-$  'sit down (together)',  $upa^6/sam+*sic-$  'sprinkle/pour together',  $apa+*sidh-$  'drive away',  $sam+*siv-$  'sew together',  $nih+*srp-$  'creep out',  $*stabh-$  'establish',  $*stu-$  'praise',  $*[ati]/*prati+sth\bar{a}-$  'excel/settle firmly',  $*sram\bar{s}aya-$  (<  $\sqrt{sram\bar{s}}$ ) 'let hang loose',  $*svap-$  'sleep',  $han-$ <sup>2</sup> 'slay',  $vi+han-$  'smite away' (=RV),  $h\bar{a}-^6$  'leave',  $*anu/*ava^2/*vi^2+h\bar{a}-$  'pursue/leave/quit',  $*him\bar{s}-^2$  'harm',  $[ud+*h\bar{r}-$  'take up'].

(A complete list of all the occurrences of the gerund in the Atharvaveda is given in

appendix 2.)

As in the Ṛgveda, most verbs forming the gerund are transitive and telic or punctual, but there are also many durative atelic verbs, e.g. **stu-** ‘praise’, **mṛj-** ‘wipe’. The number of secondary causative stems has increased, supporting the enhanced productiveness of the formation: **kalpayitvā**, **pratyarpayitvā**, **vibhājya**, **sādayitvā**, **sraṁsayitvā**.

The typically Ṛgvedic allomorphs in **-tvī**, **-tvāya** and **-(t)yā** are almost wholly absent, being mostly (**-tvī** always) replaced by (classical/eastern) **-tvā** and **-(t)ya**. The semivowel in **-tvā** is metrically vocalized (**-tuā**) without regard to the quantity of the preceding syllable in about one third of the instances (cf. Arnold 1897, p. 247). The one in **-(t)ya** is, however, vocalized no more frequently than it is in the Ṛgveda.

The ending **-(i)tvā** is used once after a prefixed causative root (**praty+arpay-i-tvā** ‘having sent in opposite motion’)<sup>5</sup>, which preserves the causative morpheme **-ay(a)-**. Nominal prefixed members are found in **namas+kṛtya** ‘having bowed down to’ (7.102.1a, cf. AV 5.22.4b **nāmaḥ kṛtvā**) and **hasta+gṛhya** ‘having taken the hand’ (5.14.4b, 5.20.5c, 5.17.12d = RV 10.109.2d, 14.1.20a = 10.85.26a). The present stem of a primary root is used as the base in the case of **dā-** ‘give’, e.g.: **upa+dād-ya** < **upa+dā-** ‘put on’ (AV 10.8.18c = 13.2.38.c = 13.3.14c).

The ratio of simplex vs. compound gerunds is reversed in comparison with the Ṛgveda (and later texts), being approximately 160 : 95 (≈ 1.7). This is partly due to the many repeated or stereotyped occurrences of **kṛtvā** (42x) ‘having done; having turned something into something else’ and **bhūtvā** (43x) ‘having become, turned into something [else]’. The high frequency of these gerunds follows from the high frequency of magic contexts in the Atharvaveda. By contrast, some of the most common roots underlying gerund formation in the Ṛgveda, such as **sad-** ‘sit down’, **pā-** ‘drink’ and **han-** ‘slay, smite’, which occur mainly in Somic and Indric contexts, are almost absent in this form in the Atharvaveda.

The distribution of the gerund over the 20 books of the Atharvaveda is far from even. It occurs about once in 16 (± 5) stanzas in books 3-5 and 8-14, which is the average ratio for the whole corpus. But as in the case of the Ṛgvedic gerund, it tends to cluster.

Thus it appears at least three times in the following hymns: 5.18, 8.8, 9.6, 10.1, 10.9, 11.5, 11.8 and 15.14. It is clearly less frequent in the books 1, 2, 6, 7 and 17, where it occurs approximately only once in 30-70 stanzas. It occurs only once in book 16, which is wholly in prose. By contrast, it occurs on an average as often as once in five stanzas in book 15, which contains the unorthodox Vṛātya-hymns. However, 24 of the 27 occurrences in this book are contained in a single hymn (15.14), being restricted to the items **kṛtvā** and **bhūtvā** in highly repetitive contexts:

<sup>5</sup> For similar formations in Vedic prose, see Debrunner (1954 = Ai. Gr. II:2, p. 661 § 487b).

(97) AV 15.14.1-12

**sá yát prācīm dīsam ánuvyācalan mārutaṁ sárdho** (2: indro; 3: váruṇo rájā; 4: sómo rájā; etc.) **bhūtvānuvyācalan máno** (2: bálam; 3: ápo; 4: āhutim; etc.) **'nnādám kṛtvā | mánasānnādénānnamatti yá evám véda** ||

'As he moved out toward the eastern quarter, having become the troop of Maruts (2: Indra; 3: king Varuṇa; 4: king Soma; etc.; or: the troops of Maruts (etc.) having come into being, it ... ), he moved out after, having made mind (2: strength; 3: the waters; 4: the offerings; etc.) (their or his) food-eater. With mind as food-eater he eats food who knows this.' (Cf. Whitney 1905, p. 788f.)

Despite the increased frequency of the gerund in the Atharvaveda, it is generally more stereotyped than the Ṛgvedic gerund in terms of its lexical contexts (cf. appendix 2).

### 2.2.C. YAJURVEDA AND VEDIC PROSE

In the Black Yajurveda, which consists mainly of expository discourse, the gerund is extremely rare, and the number of roots forming the gerund is smaller than in the Ṛg- and Atharvaveda. E.g. in the Kāṭhakaśaṁhitā the past gerund occurs on an average only once in about 26 pages (the non-past gerund occurring only some 15 times in the whole text; Renou 1935, p. 272), being formed from almost a 100 different roots or secondary stems at least 30 of which are not represented in the gerund form in the Ṛg- and Atharvaveda, e.g. +anya < apa/pra+an- 'breathe (out)', āptvā < āp- 'attain', ākūya < ā+kū- 'design', caritvā < car- 'move', prajñāya < pra+jñā- 'realize', dikṣayitvā < dikṣ-aya- 'consecrate', dugdhvā < duh- 'milk', +tatvā(ya), +tatyā < (+)tan- 'stretch', +drutya < +dru-, saṁnahya < sam+nah- 'tie together', vinudya < vi+nud- 'dispell', palāyitvā < palāy- 'flee', prathayitvā < prathaya- 'spread', prabudhya < pra+budh- 'awake', bhṛtvā < bhṛ- 'carry', mathitvā/+mathya < (±)math- 'churn, whirl', sṛṣṭvā < sṛj- 'emit', hutvā < hu- 'sacrifice', +hṛtyā < +hṛ- 'take'.

As in the Ṛg- and Atharvaveda, the majority of the verbs forming the gerund are transitive and non-stative. The enhanced productivity of the gerund is also reflected in the increase of causative and other secondary stems, e.g. yojayitvā < yojaya- (< √yuj 'yoke'), pravāpayitvā < pravāpaya- (< pra+√vap 'scatter'), anvārambhayitvā < anvārambhaya- (< anu+ā+√rabh 'grasp from behind'). In mīmāṁsitvā (26.9) the gerund is formed from a desiderative stem mīmāṁsa- 'ponder' (< √man 'think').

In the metrical White Yajurveda (Vājasaneyīśaṁhitā), the past gerund occurs once in about 40 verses, being thus somewhat more frequent than in the Ṛgveda, but not as frequent as in the Atharvaveda. The group of roots forming the gerund contain only a few

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new items, but some of the forms are archaic: **kṛtvāya** ‘having done’ 11.59 = 12.60 (K), **vṛtvāya** ‘having covered’ 11.19 = VSK 12.19. Ṛgvedic allomorphs of the gerund occur rarely also in the Black Yajurveda: **kṛtvī** ‘having done’ (KS 18.21, MS 4.13.7), **kṛtvāya** (TS 4.1.5.4, VS 11.59), **khātvī** ‘having dug’ (TS 4.1.1.4), **rātvī** ‘having given’ (KS 11.9 [mantra]), **tatvāya** ‘having stretched’, **yuktvāya** ‘having yoked’ (KS 15.11, TS 4.1.1, MS 2.7.1, VS 11.1 = VSK 12.1), **vṛtvāya** ‘having covered’ (TS 4.1.2.3, VS 11.19).

Being attested from at least 130 different (simplex or compounded) roots, of which 95-100 occur in mantras, the gerund is despite its overall low frequency quite a productive formation in the Saṁhitās, especially if compared with the non-past gerund, which becomes more frequent only in the later Brāhmaṇas and older Śrautasūtras.

In the Brāhmaṇas, where the proportion of procedural and narrative discourse is greater than in the Saṁhitās, the frequency of the past gerund increases considerably. Thus in the Aitareyabrāhmaṇa the gerund is about 10 times more common as a verb-form than in the Ṛgveda (the non-past gerund occurring altogether only 26 times, Renou 1935, p. 372). Also the number of roots forming the past gerund increases especially with items that refer to ritual acts or common daily procedures (as typically also found in the Black Yajurveda), e.g.:

**añj-** ‘anoint’, **ad-** ‘eat’, **aś-** ‘eat’, **ās-** ‘sit’, **(+)iṣ-** ‘send’, **(+)ikṣ-** ‘see, watch’, **(+)ukṣ-** ‘besprinkle’, **(+)u(n)d-** ‘wet’, **(+)ubj-** ‘restrain’, **(+)u(m)bh-** ‘confine’, **(+)ūh-** ‘remove’, **(+)ṛc-** ‘shine, praise’, **ṛdh-** ‘succeed’, **(+)kamp-** ‘become startled’, **kṛṣ-** ‘drag’, **(+)kṣi-** ‘destroy’, **kṣu-** ‘sneeze’, **(+)gā-** ‘sing’, **grath-** ‘tie’, **gras-** ‘eat’, **(+)ghṛṣ-** ‘rub’, **(+)gad-** ‘say’, **(+)cam-** ‘sip’, **(+)cṛt-** ‘bind’, **ceṣṭ-** ‘move, try’, **chid-** ‘cut’, **jap-** ‘rattle’, **(+)jyut-** ‘flame’, **(+)tac-** ‘coagulate’, **tṛd-** ‘bore’, **(+)tyaj-** ‘leave’, **damś-** ‘bite’, **(+)dah-** ‘burn’, **(+)dṛ-** ‘pierce’, **(+)duyt-** ‘shine’, **(+)druh-** ‘be hostile’, **(+)dhmā-** ‘blow’, **(±)dhā-** (> **dhītvā**) ‘suck’, **yam-** ‘hold’, **(+)yāc-** ‘beg’, **(+)vyadh-** ‘pierce’, **(+)sri-** ‘place (upon)’.

The frequency of the gerunds continues to increase in the later Vedic literature (e.g. Upaniṣads and ritual Sūtras), especially because of the practice of using gerundial clauses recursively in sequential linkage. For example, in the Jaiminīyasrautasūtra the past gerund is found approximately once in five sūtras, while in the Bṛhaddevatā it occurs once in almost every stanza in narrative passages, being otherwise almost absent. In the metrical Kaṭhopeniṣad it occurs once in about four verses, which is about 15 times more often than in the Ṛgveda. The number of new roots forming the past gerund in the later Vedic literature is comparatively small and semantically limited, e.g. **(+)kṛ-** ‘scatter’, **(+)gāh-** ‘plunge’, **(±)ghrā-** ‘smell’, **(+)dih-** ‘smear’.

The non-past gerund occurs in rather stereotyped contexts on an average 50-60 times in

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each of the Śrautasūtras, being especially frequent in the Baudhāyanaśrautasūtra (Caland 1910, p. 43), but occurring only twice in the Jaiminīyaśrautasūtra and rarely in the Drāhyāyaṇa- and Lāṭyāyanaśrautasūtra. In most Gṛhyasūtras it occurs altogether only 2-7 times. (Cf. Renou 1935, p. 372.)

By the end of the Vedic period, the past gerund can be attested for at least 270 primary roots and, in addition, a fair number of secondary roots. This amounts on a rough estimate to almost half of the tolerably productive primary roots of the Vedic language. While this number is high enough to convince us of the steadily increasing productivity of the gerund in this period, it is too low for there not to have been any lexical or discourse functional constraints on its formation. This impression is reinforced by looking at the occurrence and distribution of the gerund in the post-Vedic literature.

### 2.2.C. EPIC AND CLASSICAL SANSKRIT

Outside the elaborate *kāvya* and elliptical *sūtra* style, the post-Vedic gerund is at least as frequent as the later Vedic gerund. According to Whitney (1889, p. 358 § 994a) the number of occurrences of the gerund is three times greater in the Nala and Bhagavadgītā than in the Ṛgveda, although the latter text has more than ten times as many verb-forms by token.

The increase of frequency is particularly conspicuous in narrative prose: thus in the Pañcatantra, Hitopadeśa and Śukasaptati there is hardly a sentence without a (string of) gerundial clause(s). By contrast, there is little increase of its use in the expository discourse of the scientific and technical Sūtras, where nominal compounds predominate in clause linkage. E.g. the Vedāntasāra musters one gerund in approximately 17 *sūtras*, which, roughly estimated, is less than the corresponding number in the non-metrical Upaniṣads. The Nyāyasūtra and Sāṃkhyapravacanabhāṣya show even lower frequency of the gerund.

What with the marked preference for nominal compounds instead of finite or non-finite complex constructions in the elaborate *kāvya* style, the gerund is found on an average only once in two verses in the narrative (and partly expository) poems Meghadūta and Raghuvamśa. In the Ṛtusamhāra and Śiśupālavadhā it occurs approximately once in six verses, which is less often than in the Upaniṣads and Vedic Sūtras.

In view of the enhanced rate of use of the gerund, it seems paradoxical that the increase of primary roots forming the gerund in the Epic and Classical Sanskrit literature is not much more than a hundred. In the whole corpus used by Whitney (1885) and myself in this work, the gerund can be attested for only some 330-350 primary compounded or simplex roots, i.e. little more than half of the productive roots. The crucial question of what the lexical gaps in the formation of the gerund are attributable to has never been asked.

### 2.3. LEXICAL GAPS IN THE FORMATION OF THE GERUND

The gaps in the formation of the gerund are not entirely unsystematic or merely due to the limitations of the corpus. On one hand there are roots that are idiosyncratically excluded from gerund formation, e.g. \***paśyitvā** ‘having seen’ (once in the Mahāv., p. 302) vs. **dr̥ṣṭvā** ‘having seen’, while on the other hand there are roots that are aspectually more or less incompatible with gerund formation, e.g. \***śakitvā** ‘having been able’, \***īsitvā** ‘having been able, mastered’.

#### 2.3.A. DEFECTIVE PARADIGMS

Some half a dozen roots that do not form the gerund have a paradigm which is also defective in other respects. They may lack the past participle, the imperfect tense or some other preterital form. The missing forms are then supplied from the paradigm of other, differently defective or near-synonymous, roots.

A typical example is the root **as-** ‘be, exist’, which forms neither the gerund nor the past participle nor even the infinitive, supplying these forms from the paradigm of **bhū-** ‘be(come)’ (i.e. **bhūta-**, **bhūtvā**). Cf.:

(98) BC 6.16

**bhūtvāpi hi ciram śleṣaḥ | kālena na bhaviṣyati**

‘For though having existed for ever so long, a union will in time cease to be.’

(99) Śat.-tr. (Vairāgyasataka) III 48 (quoted from Böhtlingk, Ind. Spr. I: 2004)

**kṣaṇam bālo bhūtvā kṣaṇam api yuvā kāmarasikaḥ**

**kṣaṇam vittair hīnaḥ kṣaṇam api ca sampūrṇavibhavaḥ |**

**jarājīrṇair āngair naṭa iva valīmaṇḍitatanur**

**naraḥ samsārānte viṣati yamadhānīyavanikām**

‘Having been for a moment a child, and for a moment a young lover, for a moment destitute, and then for a moment in possession of great wealth, man, with his decrepit limbs and wrinkled body, makes like an actor, at the end of his time, his entry into/behind the curtain of Yama’s abode.’ (Cf. Ind. Spr. I: 1995.)

The following is a nearly complete list of such defective roots and their suppletive forms:



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**as-** 'be; exist': gerund and past pple from **bhū-** 'be(come); exist': **bhūtvā**  
**ah-** 'say': gerund, past pple and imperfect from e.g. **vac-** 'say': **uktvā**  
**gā-** 'go': gerund and past pple from e.g. **gam-** 'go': **gatvā**  
**ghas-** 'eat': gerund, past pple and imperfect from e.g. **jakṣ-** 'eat': **jagdhvā**  
**paś-** 'see': gerund, perfect, aorist and past pple from **dr̥ṣ-** 'see' (no pres.): **dr̥ṣtvā**  
**brū-** 'speak': gerund and past pple from e.g. **vac-** 'say': **uktvā**  
**v/badh-** 'slay': gerund and past pple from **han-** 'smite, slay': **hatvā**

As can be expected on the basis of the formal and semantic analogy, there is a tendency for the gerund to be lacking especially if the past participle is lacking.

### 2.3.B. ASPECTUAL CONSTRAINTS

The aspectual constraint on gerund formation follows from the relative incompatibility of combining the expression of antecedence of action with a temporally unbounded situation. Hence verbs that are stative or atelic by inherent aspect, i.e. express actions or activities that lack a natural or expressed end-point do not tend to occur in the gerund form, unless embedded in a perfective context. (Atelic verbs can only be durative, while telic ones can be either durative or punctual, as can be ascertained from the entailment of the present progressive tense, cf. 'run' (atelic durative) vs. 'drown'/'become' (telic durative/punctual): 'he is running' => he has run, but 'he is drowning'/'he is becoming' ≠> he has drowned/become.)

The following list presents the most common stative and atelic durative simplex verbs that are more or less blocked from gerund formation due to aspectual incompatibility:

**arh-** 'be worthy', **īrṣy-** 'be jealous', **īś-** 'be master', **kṛp-** 'be fit', **klam-** 'be weary', **galbh-** 'dare', **glā-** 'be weary', **cha(n)ḍ-** 'be pleased', **tṛp-** 'be satisfied', **trap-** 'be abashed', **tras-** 'be terrified', **daḥ-** 'be able', **dviṣ-** 'hate', **puṣ-** 'thrive', **ma(n)ḍ-** 'be merry', **mud-** 'be merry', **muh-** 'be crazed', **mṛḍ-** 'be gracious', **rāj-** 'be kingly, resplendent', **lajj-** 'be ashamed', **laṣ-** 'be lustful', **vāñch-** 'wish', **ven-** 'long for', **vr̥ḍ-** 'be abashed', **sak-** 'be able', **spṛh-** 'be eager', **hīḍ-/hel-** 'be hostile', **hrī-** 'be ashamed.'

Many of these verbs express comparatively non-transitory mental states which are not naturally associated with the expression of actional sequence or succession. To be sure, most of them do form the past participle, (e.g. **īśita-** 'enabled', **kṛpta-** 'fit', **glāna-** 'tired', **tṛpta-** 'satisfied', etc.), but then the sense is that of a completed action leading to a

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permanent simultaneous state. To this group we could add many less common stative or durative atelic verbs, which hardly ever occur in the gerund form:

**iñkh-** 'swing', **katth-** 'boast', **kṛp-** 'lament', **kvath-** 'boil', **kṣar-** 'flow', **khel-** 'move to and fro', **gal-** 'drop', **guñj-** 'hum', **ghūrṇ-** 'waver', **cakās-** 'shine', **carv-** 'chew', **dī(di)-** 'shine', **dīv-** 'lament', **dṛp-** 'rave', **drā-** 'run', **bhās-** 'shine', **bhur-** 'quiver', **bhrāj-** 'shine', **raṭ-** 'howl', **ran-** 'take pleasure', **rap-** 'chatter', **ras-** 'roar', **ruc-** 'shine', **lal-** 'sport', **luth-** 'roll', **vas-** 'shine', **vij-** 'tremble', **vyath-** 'waver', **scut-** 'drip', **svan-** 'sound', **svid-** 'sweat', **hikk-** 'sob, hiccup'.

It may, however, be observed that the grammarians sometimes describe the formation of the gerund of stative or atelic verbs which are not found in this form in the literature, e.g. **klid-** 'be wet': **kliditvā/klittvā**; **kliś-** 'be distressed': **kliśitvā/kliṣtvā**; **kṣudh-** 'be hungry': **kṣudhitvā**. Forms as these could be expected only if embedded in perfective contexts, e.g. 'having become wet' or 'having been wet for some time', etc. The past gerund (vs. non-past gerund and especially present participle) is thus preferably formed from punctual or durative telic verbs (cf. 3.4). When the past gerund is formed from a stative or atelic durative root, this has mostly a perfective preverb or the aspect is made perfective by imposing a temporal limit and/or making the form transitive.

Thus, for example, from the simplex root **tras-** 'fear' there is no gerund **\*trasitvā** 'having feared', but the perfective form **sam+ut+trasya** 'having become terrified' is, of course, attested. Similarly, there is no gerund **\*kṛptvā** 'having been fit' from **kṛp-** 'be fit'. But from the causative stem **kalpay-** we may freely derive **kalpayitvā** 'having constructed'.

Moreover, verbs that are aspectually ambivalent between a stative or atelic durative and a telic or punctual reading tend to pick the latter in the gerund form. E.g. **jñā-** means either 'know, be aware of' (stative) or 'come to know, realize' (punctual), but the gerund **jñātvā** means 'having come to know', not 'having known (and no longer knowing)' or 'while realizing'. Similarly, **budh-** 'awake, realize; understand, think', **ṛdh-** 'thrive, prosper, succeed' and **sī-** 'lie (down)', etc. tend to have the durative telic or punctual rather than durative atelic or stative reading in the gerund form:<sup>6</sup>

(100) JB 2.22 (16) (cf. 3.234)

**athaitena saprajāpatikā evaitena devatā antata ṛddhvāptvottiṣṭhanti**

'Having in the end succeeded and accomplished with this, the gods together with Prajāpati finish their sacrifice.'

<sup>6</sup> This still leaves us with a residue of idiosyncratic telic and punctual verbs that do not usually form the gerund when simplex: **a(m)s-** 'attain', **kṛand-** 'cry out', **ghaṭ-** 'occur', **cit-** 'perceive', **dal-** 'burst', **nakṣ-** 'attain', **nas-** 'attain', **pā-** 'protect', **pṛc-** 'mix, mingle', **bhra(m)s-** 'fall', **ric-** 'leave', **van-/vā-** 'win', **slāgh-** 'extol', **sac-** 'accompany', **sad-** 'sit; sit down', **san-** 'win'.

- (101) Rm 2.88.4 (quoted from BRW, but reference confused; not identified)

...**caramamapi śayitvā pūrvam eva prabuddhāḥ**  
 ‘...although having gone last to sleep, they have risen first’

But this aspectual constraint is relative rather than absolute. Thus, e.g. **bhū-** ‘be(come)’ may have either non-stative telic or stative atelic meaning in the gerund form (cf. 98-99), but in the latter case, there is the implicature of a specifically *transitory* or *momentary* vs. permanent or prolonged state, i.e. ‘having been for a while’. The same is true for the durative atelic verbs **ās-** ‘sit’, **jīv-** ‘live’, **ram-** ‘make love’, **vas-** ‘dwell’ and **śī-** ‘lie’, **prati+iṣ-** ‘search for’, etc., and all desiderative and intensive secondary stems (cf. Renou 1930, p. 126), which in this form denote completed activities rather than simultaneous states or activities, which should be possible if the gerund was temporally indifferent.

- (102) ŚB 2.3.2.5 (cf. ŚB 4.6.6.1-5; JB 212)

**átha prātāḥ ánaśitvā muhūrtām sabhāyām āsitvāpi kāmam pályayeta**  
 ‘Then early in the morning, before eating, having sat for a while in the assembly hall, he may also, if he so likes, walk around (the hall fire).’

- (103) JB 1.97 (12)

...**punyaṁ jīvitvā... anvāgamiṣyati**  
 ‘...upon living (comm.: **sthitvā**) piously, he will follow suit.’

- (104) JB 3.104 (26)

**tāḥ prajāpatau samvatsaram uṣitvāpākrāman**  
 ‘Having dwelt for a year in Prajāpati, they departed.’

- (105) ŚB 5.3.5.29

**átha yáyā viddhāḥ śayitvā jīvati vā mriyate vā sā dvitīyā**  
 ‘And the one by which (the enemy) being pierced lies either living or dead, that is the second’ (Eggeling, SBE 41, p. 88)

- (106) Rm 2.96.5 (ed. Gorresio = ed. Baroda 2.82.4)

**ajinottarasamstīrṇe varāstaranaśambhūṣite**  
**śayitvā puruṣavyāghraḥ katham śete bhūtale**  
 ‘Having been used to lying on the finest adorned couch, covered with an antelope skin, how could the tiger of men now possibly lie on the bare ground!’

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(107) Kath. 64.46

...ramtvā ca tena sākam sā dattvā cārtham tam abravīt

‘...and having made love to him and having given him money, she said’

(108) DSS 13.3.6

teṣām brahmaikam lipsitvā yasya sa syāt tasmai prayacchet

‘Having desired (Dhanvin: svahastena pratilabhya) one Brahma of these (sacrificial cookies), whose it may be, to him he should offer it.’

Together with the coreferentiality constraint and basically past relative tense of the gerund, these aspectual restrictions lead to the conclusion that the discourse function of the gerund in *narrative* discourse was more amenable to that of *foregrounding* than backgrounding events, while foregrounding has been described as a feature of ‘perfective aspect’ by Hopper (1979). In other words, in narrative discourse the gerund came to be increasingly used to express the sequence of ‘main line’ events or episodes rather than describe or depict attendant or concomitant circumstances related to the same or some other subject/topic (cf. 4.7.B, 5.2). The latter discourse function was mainly performed by the present participle, non-past gerund, oblique action nouns and the absolute past participles (cf. 3.4, 5.1-).

Nevertheless, foregrounding cannot be equated with the expression of main line events or actional sequence in *non-narrative* discourse, which relies upon logical rather than chronological linkage (cf. Leinonen 1982, p. 62ff.). The gerund occurs frequently also as a device for expressing temporal or various circumstantial restrictions or qualifications in (especially) *expository* and *procedural* discourse, where foregrounded information is compatible with imperfective rather than perfective aspect (cf. 4.7.A, 4.7.C).