1. INTRODUCTION

1.1. SCOPE OF STUDY

The Sanskrit past gerund in -tvā́(ya), -tvī́ and ´-(t)yā/-(t)ya (also known as 'absolutive' or 'conjunctive/indeclinable past participle') is an indeclinable non-finite verb-form, peculiar in its formation and use to the Indo-Aryan branch within the Indo-European family. In its standard constructions it constitutes with its adverbial complements and adjuncts a reduced adverbial clause or copredicative non-finite phrase that is dependent on another clause or phrase for its subject or agent and (unless presupposed or propositionally restrictive) temporal reference and modality, mostly expressing an action or state that is completed before the beginning of the action or state expressed by the superordinate clause and performed (or undergone) by the same actor or topicalized undergoer. It thus contrasts semantically with the much rarer non-past gerund in -am ('ṇamul'), which has closer formal and functional parallels in other ancient Indo-European languages.[1]

The above brief characterization of the gerund might give some idea of the variety of syntactic and semantic functions of this category. In the absence of any clarifying context, it would be possible to render the following didactic example (0) in more than six different ways, the bracketed readings being somewhat marginal and/or late:

(0) *indram   ārabhya   cara
    Indra-ACC grasp-GD   go-IMP.2SG
   a. 'Having taken hold of Indra, move!' / 'Move after taking hold of Indra!'
   b. 'Take hold of Indra and move!'
   c. 'Take hold of Indra before moving!'
   (d. 'Move by taking hold of Indra!')
   (e. 'Go to take hold of Indra!')
   f. 'Keep yourself to Indra!'

It may now be asked whether there are any formal or collocational (lexical) conditions on the various readings of the gerund(ial clause) or whether these diverse interpretations are

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[1] For the sake of convenience and when there is no risk of misunderstanding, I will refer to the past gerund simply as the 'gerund'. Though both gerunds and their respective morphosyntactic and semantic systems will be treated in this thesis, I concentrate on the past gerund, for which there is yet no exhaustive description comparable to Renou's (1935) account of the non-past gerund.

merely artefacts imposed upon the analysis by the metalanguage. Furthermore, how are the various functions derived synchronically and diachronically given a set of inherited or more or less invariable morphosyntactic features of the gerund? What is peculiar in its development is that it came to supplant not only the cumbersome reduplicated conjunctive perfect participle in -**vas**-/-**āna**-, competing with the past (and present) participle, but to a large extent finite coreferential sequenced clauses as well.

In view of what is generally thought to be the etymology of the allomorphs of the past gerund, viz petrified oblique (mainly instrumental) verbal nouns (the stem formatives and case affixes of which are still problematic), the functional diversity and high frequency of this category (especially after the early Vedic period) are astonishing. It is true that structurally comparable formations are found in e.g. Old and Middle Iranian, Latin, Greek, Baltic and Tocharian, but apart from Tocharian, where non-Indo-European influence can hardly be questioned (Krause 1951, 1955, p. 35ff.; but cf. also Winter 1984, p. 18 and Thomas 1985, p. 147ff.), these formations are usually only weakly productive and/or lack the temporal differentiation which sets the past and non-past gerunds apart.

Both internal reconstruction and external comparison show that the predominantly relative past tense of the Sanskrit gerund can hardly be the result of a natural or spontaneous evolution, as has frequently been asserted. Neither is there any substantial evidence in support of the rather widespread belief that this value of the gerund does not yet predominate in the Ṛgveda. In fact, when the non-past value does appear in and especially after the Atharvaveda, it is clearly subject to collocational and syntactic constraints, which are synchronically speaking suggestive of contextually conditioned temporal neutralization rather than inherent temporal indifference.

From the historical and areal linguistic point of view it is noteworthy that most South Asian languages have indeclinable non-finite forms functionally analogous to the Indo-Aryan gerund. But only in Dravidian are they sufficiently ancient to have been able to influence the Old Indo-Aryan gerund. Because of the existence of Dravidian loanwords and certain (putative) Dravidian structural features in Vedic and Classical Sanskrit, the idea that the syntactico-semantic recategorization of the Indo-Aryan gerund is due to Dravidian influence naturally suggested itself to a number of scholars in the past.

In more recent literature, this and other hypotheses about Dravidian influence on Ṛgvedic and early Vedic Sanskrit have been severely criticized due to the lack of indisputable Dravidian loanwords in the Ṛgveda and certain inconsistencies in the alleged borrowed features when compared with the reconstructed source language. A major problem for the historical analysis is that there are no Dravidian documents from the early Vedic period, while *conclusive* proof of Dravidian influence on prehistorical or early Vedic Sanskrit is mostly ruled out by the very obscurity of the linguistic prehistory of India.

1.2. ON METHOD AND THEORY

The implicit or explicit notion underlying most Western accounts of the Sanskrit gerund has been that the functions and constructions of the gerund must somehow be connected with its presumed etymology as a temporally undifferentiated instrumental (or locative) action noun or verbal adverb (cf. Bopp 1816, p. 43ff.; Speijer 1886, p. 296; 1896, p. 68; Delbrück 1888, p. 405; Whitney 1889, p. 355; Gune 1913; Renou 1940; Minard 1956, p. 60f.; Haudry 1970, p. 46; Söhnen 1985, p. 489; see 1.5.B-).

Though understandable as a heuristic method and final objective in a comparative Indo-European framework, this approach has been liable to direct the synchronic analysis in ways that support such a diachronic connection without regard to conspicuous synchronic inconsistencies. There has thus been too little respect for the generally acknowledged principle in modern structural linguistics that diachronic relations can only be established as secondary links between synchronic systems, which therefore have to be described on (maximally) independent grounds (cf. Saussure [1913] 1949, p. 114ff.; Coseriu 1979, pp. 77-90). What appears to be a diachronically correct explanation of a linguistic feature is not necessarily a synchronically adequate explanation. Even if the gerund is etymologically an instrumental action noun, this need not be relevant for any of its attested uses. The forms of the gerund cannot be synchronically derived from any inherited Indo-Aryan nominal or non-finite paradigms, while also their basic semantic value and syntactic functions as established already in the Ṛgveda are incompatible with Indo-European or even Indo-Aryan instrumental verbal nouns or adverbs.

Since some descriptive bias is impossible to avoid for sheer expository reasons, it would then be methodologically sounder to assume that *to the extent* that the Indian grammarians described (and e.g. not only prescibed) their classical language they did it adequately. This, of course, remains to be tested with the help of modern linguistic methods.

At least as regards the Paninean rule (3.4.21) of identity of 'agent' (**kartṛ**) of the gerund and main verb, the exceptions during all stages of the language are too many and yet too systematic to convince us that this is an entirely adequate account of the facts. But with regard to the sense of antecedence of event (**pūrvakāle**), it is much more difficult to show that the indigenous tradition has to be thoroughly revised.

It may, of course, seem to be a problem here that the gerund is sometimes to be paraphrased or rendered by a conjunctive perfect participle (e.g. 'having V-ed'), while at other times it may better correspond in translation and paraphrase to a present participle or adverbial phrase ('while/in the manner of V-ing'). This has been used as an argument against the indigenous description and in favor of an etymologically based view of the gerund as an instrumental verbal noun or adverb.

But it should then be examined whether or not the verbal aspect of the underlying verb

9

remains the same in the translation or paraphrase. E.g. the gerund of the verb **ni**+√**sad** 'sit down' (> **niṣadya**) may often be rendered as 'sitting', corresponding almost to a present participle (**sīdat-**, **āsīna-**), but in view of the primarily dynamic inherent aspect ('Aktionsart') of the said verb, a more literal rendering would be 'having sat down'. Here the sense of simultaneousness is only an implicature on the basis of the inferred resulting state (cf. French *être assis* and Hindi **baiṭhā** (< **upaviṣṭa-**) **honā** 'be seated' or 'sit').

Likewise, it may be questioned whether the present participle, gerund or oblique noun phrase used in the paraphrase or translation refers to a simultaneous action or state rather than to an immediately preceding action, cf. *Seeing him there, I went back = On/After seeing ≠ While/At the time of seeing* (cf. Zandvoort & Ek 1975, p. 35f.). The mere possibility of translating the Sanskrit gerund by a 'presential' form does not prove that it refers to a simultaneous action, unless we can prove that the inherent aspect and literal time reference remain intact (cf. Hendriksen 1944, p. 113 and Lorimer 1935, p. 330 for similar observations regarding the Pali and Burushaski 'gerunds').

On the other hand, to determine the (basic) literal meaning or inherent semantic value of the gerund, we have to (just as the ancient Sanskrit speakers/learners had to) *generalize* on the basis of the cases where it appears unambiguously from the context and from contrastive relations with other verbal forms and constructions. In other words, we have to start by analyzing aspectually unambiguous verbs in this form in maximally transparent and redundant contexts and in contrast with other expressions. If in the overwhelming majority of such cases, and quite regardless of word order and the lexical context, the gerund appears to refer to an antecedent action (or by implicature its resulting state) rather than to a simultaneous or impending action, we would have to conclude, regardless of any etymological considerations, that it is *synchronically* marked for relative past vs. non-past tense. This, rather than any etymologically based meaning, would then have to be taken as its default value in all *ambiguous* cases.

The basic mistake that can be made in semantics is the confusion of literal meaning (as defined truth conditionally or by distinctive semantic features) and contextual significance as defined pragmatically (Dik 1968, p. 256; Posner 1980; Stump 1985).[2] For example,

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[2] This is not to say that the *ontological* distinction between semantics and pragmatics is unproblematical (cf. Allwood 1981). Moreover, as shown by Searle (1980, p. 227), "the literal meaning of a sentence or expression only determines a set of truth conditions given a set of background assumptions and practices." But, of course, without a system for encoding truth conditions or semantic oppositions, there would be no common ground for deriving intepretations of linguistic utterances even given a set of shared background assumptions. As pointed out by Sutherland (1970, p. 95) in his penetrating study of Lewis Carroll's language, a linguistic sign possesses both 'differential' and 'contextual' meaning. It is by its 'differential' meaning that it contrasts with other signs on the same level of interpretation and is recognized as a functional entity of the code. In addition it may have "referential" meaning, i.e. a certain 'connotation' or 'affective value', and 'structural' meaning, i.e. a grammatical or syntactic function. The functional differentiation between contextual and non-contextual elements of meaning is a natural consequence of the use of a limited number of linguistic signs in an unlimited number of situations.

in the sentence **pītvī sómasya vāvṛdhe** (RV 3.40.7c) 'having drunk Soma he grew' or 'he drank Soma and grew', the gerundial clause is in most contexts interpreted as a temporal or circumstantial qualification of the main clause, meaning almost the same as 'by drinking Soma'. But inasmuch as it cannot mean 'while drinking/at the time of drinking Soma he grew', its literal sense remains that of an antecedent action.

The interpropositional relation of the gerundial clause to the main clause may thus be conceived of as temporally or circumstantially restrictive or purely additive-sequential, but it is not necessarily encoded anywhere in the morphosyntactic structure. More specifically, the fact that in the above-mentioned sentence the gerundial clause can be paraphrased by an instrumental adverbial phrase cannot be used as an argument against the antecedent value of the gerund, since by the same token it could then be argued that neither does the English perfect conjunctive participle 'having V-ed' in the above sentence express antecedence or previous completion of action. Apparently, we have to be consistent in our method of defining what are the (most) invariable features of a linguistic form. On the other hand, it is not to be expected that the (alleged) relative past tense of the gerund would make it semantically and pragmatically equivalent to a perfect or past conjunctive participle or a temporal phrase headed by 'after'. The feature 'antecedence of event' or 'actional sequence' does not entail the semantic function of temporal qualification, since such a function is absent also in structures like 'S1 *and then* S2'. In many languages (e.g. Tamil and Japanese) there are, in fact, only non-finite structures for expressing actional sequence in complex sentences.

A more crucial problem is that in later Sanskrit and Middle and New Indo-Aryan the gerund is sometimes used in functions and meanings that are clearly inconsistent with its alleged past relative tense. It might be conceived that these cases can be accounted for by assuming that the basic semantic feature of the gerund is 'perfective aspect' rather than past relative tense (cf. Davison 1981, 1986). But if perfectiveness was the only distinctive feature of the gerund, it should be able to function e.g. as a final infinitive.

It has also been proposed that the inherent feature of the gerund is neither relative past tense nor perfectiveness, but instrumentality (in the widest sense). Thus Rocher (1980, p. 186) has maintained that "the gerund expresses any necessary condition, way, or means that makes the completion of the action expressed by the main verb possible". But this definition would not cover even the most common use of the gerund where it refers to mere actional sequence without any logical connection and without a plausible instrumental paraphrase, cf. AV 7.102.1 **namaskṛtya dyávāpṛthivíbhyām antárikṣāya mṛtyáve mekṣyāmy ūrdhvás tíṣṭhan** 'I will urinate standing upright, having bowed down to heaven and earth, the atmosphere and death'; BC 3.35 **niḥśvasya dīrghaṁ svaśiraḥ prakampya tasmiṁś ca jīrṇe viniveśya cakṣuḥ | tāṁ caiva dṛṣṭvā janatāṁ saharṣāṁ vākyaṁ sa saṁvigna idaṁ jagāda** 'Having sighed deeply and shaken his head and turned his eye toward that decrepit being, and having gazed at the happy crowd

11

he quoth these words perturbed'.

If the use of the gerund in cases like these is to be *explained* by its expressing a necessary condition, way or means for the completion of the action of the main clause, we would have to deny that there is any semantic distinction between mere temporal succession and instrumentality. In other words, all expressions of temporal antecedence could then be explained in the same way, which would be tantamount to collapsing two distinct semantic categories to defend a circular argument. I know of no case in the history of human language where a causal connective has been reduced to or reinterpreted as a purely temporal one. The opposite derivation of causal or instrumental implicatures from expressions of antecedent or simultaneous action is, on the other hand, a universal phenomenon.[3]

At this point it has even been suggested that the gerund is semantically quite unmarked, its meaning being entirely determined by the context and pragmatic inferences (cf. Œrtel 1941, p. 109). Such an approach was taken by Lindholm (1975) for the Tamil conjunctive (verbal) participle, the use of which he describes by the undefined concept of "natural relevance".[4] But such a view is hard to maintain on system-internal grounds seeing that the default value of temporally unmarked forms (e.g. verbal nouns/adverbs, the infinitive, the aorist participle)[5] is specifically non-preterital, whereas the non-preterital value of the gerund is subject to collocational and syntactic constraints.

The synchronic inconsistencies in the temporal value of the gerund make it nevertheless impossible to explain or derive all its uses or functions on the basis of a *single uniform set of inherent morphosyntactic features*. As in the instances of the Sanskrit genitive case and Indo-European subjunctive mood, we are then faced with the problem of irreducible multi-

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[3] Instrumental implicature explains Rocher's example Mṛcch. 6.0.76 **eso ajja govāladārao guttiaṁ bhañjia guttivālaaṁ vāvādia bandhaṇaṁ bhedia paribbhaṭṭo avakkamadi** "The young herdsman has just broken jail, killed the jailor, broken his fetters, escaped, and run away" (Ryder 1906, p. 98). Rocher (1980, p. 184) concedes that the three gerunds refer to activities prior to the escape of the prisoner, but claims that their anteriority is less important than the fact that they express the three ways or means that made the escape possible. But if instrumentality predominates over actional sequence the sentence should be translated or paraphrased as: 'The young herdsman has escaped by breaking out of the cell, killing the guard and breaking out of the prison building' or 'The young herdsman has escaped by having broken out of the cell...'. Clearly this is a more forced and artificial rendering than that which states mere succession of actions, the logical connections of which are open to contextual interpretation.

[4] Steever (1981) has made an attempt at explicating this notion within the framework of categorial grammar, defining the Tamil infinitive as "the least marked modal verb form" and the verbal participle as "the least marked indicative verb form". However, this analysis is somewhat deficient, since the Tamil verbal participle may be in the modal scope of the main finite verb. Moreover, the Tamil verbal participle is not temporally unmarked, although it is susceptible to temporal neutralization in roughly the same syntactic and lexical contexts as the Middle and New Indo-Aryan gerund.

[5] The fact that the infinitive has relative future time reference when used as a final adjunct does not follow from any inherent temporal value of the infinitive, but from the particular construction, where it depends on a verb of motion, as proved by the absence of any such temporal implication when it is used as the predicate of a nominal sentence or as an adnominal or adverbal complement.

functionality, i.e. the ultimate lack of a common underlying semantic intersection explaining all the usages of a form. (Cf. the discussion in Anttila 1977, p. 114.)

This does not, however, imply that all uses of the gerund are *equally* unmarked or prototypical. For example, early unproductive idiomatic constructions (possibly) reflecting the original instrumental character of the gerund are not on a par with the more productive processes of temporal neutralization in certain contexts in the later Vedic and Classical period. The collocational and syntactic constraints on the various readings of the gerund provide thus a means for generalizing and ranking its variable syntactico-semantic features in accordance with the overall system of relative tense and non-finite clause linkage. These systems, and hence also the above constraints, have changed over time, due e.g. to convergent tendencies with other South Asian languages. A historically and typologically adequate description of the Sanskrit gerund must therefore take account of corresponding systems in those contiguous South Asian languages that are known or suspected to have influenced the structure of the Old Indo-Aryan language in this and other ways.

1.2.A. DESCRIPTIVE FRAMEWORK

The major problems in the synchronic and diachronic description of the gerund are its relative tense, aspect, voice and coreferentiality constraint, and the variety of syntactico-semantic functions of the gerundial syntagm. These interrelated features have bearing on the very categorial classification of the gerund.

Already Speyer (1886, pp. 296f., 7) realized that though syntactically subordinate or dependent and adverbial by construction, the gerund(ial clause) may often correspond semantically to a (short) coordinate phrase rather than to a subordinate clause or adverbial phrase. This he tried to explain on a syncretistic basis, seeing that the Sanskrit gerund is historically and synchronically half-way between an infinitive of the aorist and an indeclinable conjunctive participle of the past (cf. Speijer 1886, p. 347; 1896, p. 68).

The former feature he considered to be clearest reflected in its temporal vacillation and non-adnominal and occasional semi-absolute construction, and the latter in its sporadic predicative construction. On the other hand, he provided no lexical, syntactic or operational conditions on the diverse readings of the gerund(ial clause).

Although this approach may be less one-sided than the one that tries to account for the diversity of the constructions and functions of the gerund wholly in terms of its being an instrumental verbal noun or adverb, neither the assumed prehistorical connection with the infinitive or verbal adverbs, nor the presumed secondary affiliation with the participles explains all the constructions and functions of the gerund(ial clause). This was sensed already by Humboldt (1823, p. 435ff.).

In particular, when it comes to accounting for the operational constraints of the gerund (which have never been properly investigated), the comparison with verbal adverbs and even participles would run into difficulties. In the examples (1)-(2), we must assume that the illocutionary force of command expressed in the main verb is implicitly transferred to the gerundial clause, which then comes to correspond more or less to a coordinate clause sharing the subject and mood of its conjunct(s):

(1) RV 10.116.5

ní tigmáni bhrāśáyan bhrāśyāni áva sthirā tanuhi yātujūnām

ugrāya te sáho bálaṁ dadāmi *pratítyā śátrūn vigadéṣu vṛśca*

'Making your sharp arrows blunt, loosen the stiff (bows) of the demon-incited (foes)! I give you, fierce one, power, strength. Go against the foes and chop them down in slaughters!' (? 'Going against the foes, chop...!'; ?? 'Having gone..., chop!')

(2) KS 5.3cd (46, 9)

dattvāyāsmabhyaṁ draviṇeha bhadraṁ pra mā brūtād dhavirdā devatā-bhyaḥ

'Give us wealth here (and what is) good and announce me favorably to the gods, O bearer of oblations!' (? 'Having given...'; ?? 'After giving...')[6]

Similarly, in (3)-(5), the mood and tense of the main verb seem to extend elliptically to the gerund, which corresponds semantically more or less to a coordinate verb phrase:

(3) ŚB 14.1.1.23

yadā na upaneṣyáse 'tha te śiras chittvānyátrāpani dhāsyāvah

'When thou wilt have received us as thy pupils, we shall cut off thy head and put it aside elsewhere' (Eggeling SBE 44, p. 444f.; cf. Delbrück 1888, p. 591)

(≠ '[after/while] cutting off thy head, we shall put it elsewhere')

(4) TU 2.5.1

vijñānaṁ brahma ced veda tasmāc cen na pramādyati śarīre pāpmano hitvā sarvān kāmān samaśnute

'If one knows Brahman as understanding and one does not swerve from it, he leaves his sins in the body and attains all desires.' (Radhakrishnan 1953, p. 546)

(?? 'having left his sins in the body, he attains all desires', cf. Röer 1931, p. 215)

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[6] Cf. MS 1.4.1 (48, 3) dhattād asmábhyaṁ dráviṇehá bhadrám prá mā brūtād bhāgadāḿ devátāsu 'Confer on us wealth here (and what is) good, proclaim for me a share by the gods!' and AV 18.3.14cd dattó [= datta ú] asmábhyaṁ dráviṇehá bhadráḿ rayíṁ ca nah sárvavīraṁ dadhāta; similarly MS 1.10.3 and KS 9.6.

(5) Kath. 11.59ab

prabuddhasya asya gatvā tvaṁ rudihi svapituḥ puraḥ
'When he has awaked, go and cry before your own father!'
(≠ 'having gone, cry...')

It is true that participial and adpositional phrases and even subordinate adverbial clauses in most Indo-European languages (including Sanskrit) may in certain genres be used in this kind of 'additive-sequential' linkage (as assumed in the alternative translations). But this is mostly limited to indirect speech acts or sentences where the illocutionary force is that of a modally unmarked narrative statement, where the contrast between an asserted coordinate and a textually backgrounded subordinate clause is more or less neutralized.[7]

By contrast, the very conversational contexts in (1)-(5) indicate that there is nothing stylistically or pragmatically marked about Sanskrit gerundial clauses being conceived of as 'elliptically' integrated in the modal scope of the main clause. What makes this so significant is the fact that implicit modal transfer in expressions of successive actions is not logically conditioned or automatic as in the case of expressions of manner or means of action (cf. *chop down the foes by smiting them* (=> smite them!) *with your axe!*).

To the extent that the gerund is thus able to replace a finite coordinate verb in modally marked contexts while retaining its relative past tense, it is operationally or pragmatically *less constrained* than semantically near-synonymous non-finite forms in most modern and ancient European languages. In fact, even the originally more productive perfect participle is rarely to be conceived of as within the modal scope of the main clause.[8]

Despite some genre-bound variation, the modal-operational constraints of non-finite verb-forms have not changed radically over time in the Indo-European languages outside India, implying that non-finite vs. near-synonymous finite clauses tend to maintain their discourse functional differentiation. (Similarly in Semitic, where non-finite juxtaposed 'ḥāl-clauses' are always backgrounded or outside the scope of the main clause.)[9] But in the case of the Indo-Aryan gerund, there has been a gradual abandoning of the operational constraints after the Old Indo-Aryan period. This development is secondarily reflected in Epic and later Classical Sanskrit, where even the outermost operators of question (6) and

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[7] Cf. de Beaugrande & Dressler (1981, p. 122) for an empirical test of the functional overlap of textually backgrounded subordinate and finite coordinate clauses in narrative and expository discourse, where subordination and embedding contribute to reducing redundancy and increasing cohesion between clauses. Cf. the following news item telling a 'story' in a single sentence: "A man who turned into a human torch ten days ago after snoozing in his locked car while smoking his pipe has died in hospital" (quoted in Brown & Yule 1983, p. 16).

[8] But cf. RV 10.116.6cd asmadryàg vāvṛdhānáḥ sáhobhir ánibhṛṣṭas tanvàṁ vāvṛdhasva "Für uns dich stark machend an Kräften unabgestumpft, mache deinen Leib stark!" (Geldner, Rigveda III, p. 341).

[9] For a synchronic and diachronic study of Semitic ḥāl-clauses, see Trumpp (1876).

negation (7) may sporadically have elliptic scope over the gerundial clause:

(6) Śat.-tr. (Nītiśataka) I.3.97 (quoted from Böhtlingk, Ind. Spr. II: 3362)
     trinetraṁ kas tyaktvā dhanalavamadāndhaṁ praṇamati
     'Who abandons the Three-Eyed one and bows before someone blinded by the
     intoxication of a trifling fortune?' (≠ 'Who, having abandoned..., bows...?')

(7) MBh 12.530 (ed. Calcutta, quoted [and transl.] acc. to Böhtlingk, Ind. Spr. II: 4212)
     prajñāprāsādam āruhya aśocyāñ (ed. C. **na śocyāñ**) **chocato janān
     jagatīsthān ivādristho mandabuddhir na cekṣate**[10]
     'A man of mean intelligence does not rise to the platform of wisdom and see that
     people grieve for what is not to be grieved, just like a man standing on a hill does not
     (see) the ones standing on the earth (below).' (Cf. also 12.151.11 = ed. C. 12.5623.)

The construction assumed in (7) is otherwise attested only in Apabhraṁśa and New Indo-
Aryan, cf. (26)-(27), (734). The other editions have a 'normalized reading' which does not
impy that the gerundial clause is elliptically in the scope of the negated main clause: cr. ed.
Poona 12.17.19 **prajñāprāsādam āruhya na śocyāñ śocato janān** | **jagatīsthān
ivādristho mandabuddhīn avekṣate** 'Having risen to..., as if standing on a hill, one
looks down upon people who grieve for what is not to be grieved as feeble-minded...'.

    The inclusion of the gerund in the scope of the main clause in (7) cannot be explained
by analogy with two coordinate finite clauses sharing a negative operator: $_{NEG}$(VP + VP),
since in Sanskrit and all later stages of Indo-Aryan, the negative operator is normally
repeated with each negated coordinated finite verb. Despite its frequent dependence on a
marked modal operator of the main clause, even the Classical Greek aorist participle (cf.
Ružička 1963), cannot be elliptically in the scope of a negative operator of the main clause.

    Since the *potential* 'dependence' on the mood and certain (other) operators of the main
clause is not something affected by the context, it is a syntactico-semantic feature of the
gerundial clause and so an inherent categorial feature of the gerund, by which it contrasts
with other non-finite forms in Sanskrit as well as Indo-European at large. It explains why
the gerund cannot always be paraphrased by a preterital conjunctive participle even when it
expresses a preceding action performed by the subject or Actor of the main clause.

    On the other hand, the *actual* scope of the modal and other operators of the main clause
co-varies with the semantic and pragmatic function of the gerundial clause. When the

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[10] As observed by Rau (1963, p. 160), the text is obviously corrupt, cf. Dhp 28: **pamādaṁ appa-
mādena yadā nudati paṇḍito** | **paññāpāsādam āruyha asoko sokiniṁ pajaṁ** | **pabbata-
ṭṭho va bhummaṭṭhe dhīro bāle avekkhati** ‖ "When the wise man puts off sloth by zeal,
ascending the high tower of wisdom, he gazes sorrowless upon the sorrowing crowd below. Himself
wise, he looks upon the ignorant as one on the mountain-peak gazes upon the dwellers in the valley"
(Vaidya 1934, p. 56; cf. Childers 1875, p. xiv fn. 2).Cf. also Gāndhārī Dhp 119 (Brough 1962, p. 136).

gerundial clause is topicalized (8) or functions as a *propositionally* (temporally or circumstantially) *restrictive* qualification of the main clause (9)-(10), it is pragmatically presupposed (although not necessarily expressive of contextually 'given' information) or blocked from the (elliptically extended) scope of main clause operators. This is seen in that it can be paraphrased by a subordinate adverbial clause or adpositional phrase, cf.:

(8) RV 10.109.6-7

...brahmajāyām púnar daduḥ ‖ punardáya brahmajāyám... urugāyám úpāsate

'...they [= the kings] should give back the brahmin's wife. Having given/After giving back the brahmin's wife... they worship the strider.' (≠ 'They gave back..., and...')

(9) AV 9.4.19

brāhmaṇébhya ṛsabhám dattvā varíyaḥ kṛṇute mánaḥ

'Having given/By giving a bull to the brahmins, one makes one's mind wider.'
(≠ 'One gives a bull to the brahmins and makes one's mind wider')

(10) MBh 5.1222 (ed. Calcutta; cf. ed. Poona 5.35.33)

na devā daṇḍam ādāya rakṣanti paśupālavat
yaṁ tu rakṣitum icchanti buddhyā saṁvibhajanti tam

'The gods do not protect with a stick (lit. 'having taken a stick') like shepherds; whom they wish to protect, him they endow with intelligence.'
(≠ 'The gods do not take a stick and protect')

The 'semantic function' of the gerundial clause is also subject to certain aspectual constraints: if based on a stative or atelic durative verb, the gerundial clause becomes automatically propositionally restrictive (rather than additive-sequential), inasmuch as states or activities lacking a natural or expressed end-point are not usually sequenced chronologically. Similarly when the gerund expresses a mental process, the implication is usually restrictive. But other than these, there are few collocational constraints on these readings, implying that many gerundial clauses should be functionally ambiguous, cf. the alternative but contextually inappropriate bracketed readings of (9)-(10).

This functional and operational ambiguity might principally be approached by assuming constructional ambiguity, i.e. 'double syntactic analyzability' of gerundial clauses as e.g. either 'embedded' or 'not embedded' in the peripheral layer of the main clause, depending on whether they are part of the proposition of the superordinate clause or not. Thus the syntactic structure of (8)-(10) could be represented as $[[...Ger...]_{S:ADV-P} ...Pred...]_S$ and that of (1)-(7) as $[[...Ger...]_{S>} [...Pred...]_S]_S$, where S> means 'dependent' clause.

But to the extent that this is a genuine constructional distinction, it should be subject to

certain *morphosyntactic* (e.g. linear, collocational or inflectional) constraints or it should display different *birectional transformational relations* (i.e. cooccurrence restrictions; cf. Matthews 1981, p. 6). Otherwise one would have to assign the same structure to all these gerundial clauses, viz as subordinate/dependent but unspecified (underdetermined) or neutralized for 'embedding'.

Still another solution has been proposed by Davison (1981, p. 121ff.; 1986, pp. 8, 11) for Hindi gerundial clauses, which she represents as subordinate to but not constituents of the main clause: $[[....Gd..]_{S1} ...Pred...]_{S2}$ (cf. 6.3.B). On this analysis, gerundial clauses are never 'embedded' in the main clause as proper adverbial constituents, while their semantic interpretation is thought to be fully determined by the context, relative discourse prominence and conversational inferences. But I do not see how this analysis could account for the operational ambiguity of (7), which is paralleled in Hindi, cf. (26)-(27).

It will be seen that a propositionally restrictive gerundial clause behaves much in the same way as a finite embedded clause when the main clause is negated, i.e. it appears as if presupposed or emphatically/contrastively denied (cf. 10), although unlike a proper embedded clause or adverbial phrase, it does not seem to allow the contrasting proposition to be stated (e.g. ??**na devā daṇḍam ādāya rakṣanti apitu somaṁ pītvā** 'the gods do not protect having taken a stick but having drunk Soma'). Conversely, an additive-sequential gerundial clause *should* be elliptically in the scope of negation (cf. 7), but this is never the case in Vedic and early Classical Sanskrit, cf. **mā pratītya śatrūn vigadeṣu vṛścaḥ** 'Having gone against the foes, do not cut them down in slaughters' ≠ (??) 'Do not go against the foes and cut them down in slaughters!'

To the extent that negation does not have elliptic scope over the gerundial clause, the additive-sequential reading of the latter is thus more *marked* than the propositionally restrictive one. This is also seen in certain formal constraints: mostly only a propositionally restrictive gerundial clause can be placed after the superordinate clause or 'incorporated' within a discontinuous syntagm of the latter:

(11) RV 1.161.3d

 ...**tắni bhrātar ánu vah kṛtvy émasi**

 '...those things, brother, after you, having done, we shall come'

 (= 'having done those things [= 'after that'] we shall come after you, brother')

Likewise, the coreferentiality constraint is stricter for additive-sequential gerundial clauses, which usually require that the (implicit) subject of the gerund be coreferential with the (grammatical) subject or semantic Agent of the main clause, while the propositionally restrictive reading is also compatible with dependence on an oblique (or understood) Experiencer or Affected Possessor, cf. (11)-(12):

(12) ŚvU 1.11a

    jñātvā devaṁ sarvapāśāpahāniḥ

    'By [one] having come to know god there is a falling off of all [one's] fetters'

(13) Svapn. 4.6b

    smṛtvā smṛtvā yāti duḥkhaṁ navatvam

    'On constantly remembering, one's grief grows anew'

In terms of distributional differences, it may also be noticed that usually only a restrictive gerundial clause may be 'embedded' in a non-finite phrase with nominal function, e.g.:

(14) Kauṭ. 3.2.2

    kanyādānaṁ kanyām alaṁkṛtya brāhmo vivāhaḥ

    'Giving of the girl after adorning her is the Brahman-form of marriage.'

These formal constraints do not, however, remove ambiguity or even indeterminacy. In sentences such as (1)-(2) and (4), the gerundial clauses could alternatively be understood as propositionally restrictive, given that they are interpreted as *indirect speech acts*. On the other hand, when such putative indirect speech acts based on the gerund become as frequent as they do in later Vedic Sanskrit, this analysis becomes more forced than the one that allows gerundial clauses to be ambiguous as to their function and scope relations:

(15) PrU 3.1

    kuta eṣa prāṇo jāyate katham āyāty asmiṁ charīre ātmānaṁ vā *pravi-*
    bhajya (Ś.: **pravibhāgam kṛtvā**) **katham prātiṣṭhate** (Ś.: **pratitiṣṭhati**)...

    'Whence is this life born? How does it come into this body? And how does it distribute itself and establish itself?' (Radhakrishnan 1953, p. 658)

    Or: 'How, dividing itself, does it abide?' (Röer 1931, p. 113)

As can be seen from the answer (16), the gerundial clause has actually been understood as implying a coordinate question, although the position of the interrogative after the gerund might have suggested that it really dominates only the main clause:

(16) PrU 3.4.

    yathāsamrāḍ evādhikṛtān viniyuṅkte etān grāmān etān grāmān adhitiṣṭha-
    sveti evam evaiṣa prāṇaḥ itarān prāṇān pṛthak pṛthag eva saṁnidhatte

    'As a sovereign commands his officers, saying, "you superintend such and such villages", even so does this life allot the other vital breaths to their respective places.'

Thus it appears that while some gerundial clauses are genuinely ambiguous as to propositional restrictiveness, others are semantically indeterminate ('neutralized') as to this parameter. Clearly, they would then also be indeterminate as to 'embedding'. This syntactico-semantic neutralization is largely due to the non-finite form of the gerund, the reduced 'predicative force' of which is seen in the difficulty of negating, asserting or questioning the interpropositional relation *per se*. This confers a specifically *backgrounding* function to many gerundial clauses:

(17) RV 10.15.6ab

ā́cyā jā́nu dakṣiṇató niṣádyemā́m̐ yajñám abhí gṛṇīta víśve
'Bending your knee and sitting down to the south, greet you all this sacrifice welcome!' (?'Bend your knee, sit down and greet'; ??'After bending your knee and sitting down...')

The gerundial clauses in (17) are neither contextually given as in (8) nor propositionally restrictive in the emphatic or pregnant sense as in (9)-(14). This is seen from the fact that they can be omitted without affecting the main proposition (contrast: 9-14). But unlike the additive-sequential gerundial clauses in (1)-(7) they are not (necessarily) conceived of as semantically coordinate with the main clause, i.e. integrated in the modal-operational scope of the latter. (In a modally unmarked sentence or indirect speech act this would, however be impossible to ascertain.) In their particular communicative context, they present modally unmarked and *textually backgrounded information* (cf. 15) that cannot be very well paraphrased by *either* (assertive) coordinate or (restrictive) subordinate finite clauses.

This discourse function does not follow automatically from the specific semantic context or partial predictability of these gerundial clauses. Rather it is the overall communicative context that decides their reading: in a ritual text they would in the same semantic context have received the same additive-sequential function and coordinate paraphrase we assumed for (1)-(7) or at least (3)-(7).

The range of semantic interpretations of a gerundial clause is thus determined by collocational and pragmatic factors within the limits of the past relative tense and synchronically relevant modal-operational constraints of the gerund. In (8)-(11) it makes more sense on the basis of conversational inferences (esp. Grice's maxim of 'relevance'; cf. Levinson 1983, p. 100ff.) to assume that the gerundial clauses are propositionally restrictive rather than semantically coordinate with their main clauses, although only in (8) do we have contextual support for such an interpretation. On the other hand, in (11)-(14) this is the only possible interpretation on formal grounds, while in (15) and (17) as well as perhaps (1)-(2) it does not make much difference truth conditionally which interpretation we select, since the information presented by the gerundial clauses is backgrounded or

could be conceived of as indirect speech acts. On the other hand, the gerundial clauses in (3)-(7) do not present textually backgrounded (let alone given) information or even plausible circumstantial settings for the main proposition, and hence they are naturally interpreted as integrated in the modal-operational scope of the main clause. On the other hand, it is only toward the later Middle Indo-Aryan period that a negative operator of the main clause may have scope over the gerundial scope, implying that (7) represents a late addition to the text of the Calcutta edition. Thus we may conclude that both semantic and pragmatic as well as certain syntactic factors affect the interpretation of gerundial clauses.

A somewhat different, but partly supplementive analysis has been suggested by Jeffers and Kantor (1984; cf. 1.5.O), who differentiate between presupposed, presumed and asserted gerundial clauses on a purely functional basis. Most of the above gerundial clauses (except 6-7) could accordingly be termed logically 'presumed', because they presume (without necessarily presupposing or asserting) that the described event must be fulfilled for the (mostly hypothetical) event expressed in the main clause to be carried out. Presupposed gerundial clauses are by contrast defined as contextually given, but it may be observed that any temporally restrictive clause is pragmatically presupposed, inasmuch as its propositon cannot be questioned in that function. The examples (6)-(7) represent the assertive consecutive reading which may be equated with the above-mentioned additive-sequential reading and which appears to the fore in Epic and Classical narrative discourse.

This exclusively pragmatic approach does not, however, capture the fundamental semantic distinction between propositionally restrictive and non-restrictive clauses, which is operative also for participial and finite paratactic clauses, being paralleled on a different level also by attributive phrases (cf. Seiler 1960). Neither does it say anything about the operational constraints to which the assertive consecutive reading is subject during different stages of the language, while the definition of 'presumed' gerundial clauses remains circular, inasmuch as any preceding action could qualify as 'presumed'.

Regardless of their semantic functions and possible syntactic differentiation, all the above gerundial clauses have at least two syntactic features in common: they are dependent on a superordinate finite or non-finite clause and they are syntactically 'peripheral' (structurally dispensable) constituents of the sentence. More rarely the gerund functions as an obligatory or optional complement of manner, completing the sense of the main verb:

(18) Mbhṣy. 1.1.3.2 (& *passim*)

> athavā maṇḍūkāgatayo 'dhikārāḥ. yathā maṇḍūkā utplutyotplutya gacchanti tadvad adhikārāḥ
>
> ≈ 'Or the heading rules may be said to have the motion of frogs. Just like frogs move by jumping and jumping, in the same way the heading rules (move).' [11]

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[11] Speijer (1886, p. 299, fn. 2): "frogs move by jumping"; Filliozat (1975, p. 420): "Les énoncés gouvernants sont comme les grenouilles qui avancent par sauts successifs."

(19) VikrC 18.0 (Southern recension, ed. Edgerton, p. 141)
vikramārko nītim ullaṅghya rājyaṁ na karoti
'Vikramārka does not rule his kingdom transgressing (≠ having transgressed/while transgressing) rules of ethics.'

Omitting the (repeated) gerund in (18) would change the meaning of the main verb by reducing its valency: 'go (to X)' ≠ 'move by Y'. In (19) the gerundial clause is an adverbial adjunct of manner which differs from a normal ('outer') peripheral gerundial clause in that it must share its spatio-temporal and circumstantial setting with the main clause: *'Vikramārka does not rule his kingdom here/nowadays/in oblivion by transgressing rules of ethics there/in the future/in happiness'.

In the Epic and Classical language, the gerund appears often as an obligatory complement of a 'prohibitive' or 'dissuasive' particle such as **alam** 'enough; away with' (cf. Pāṇini 3.4.18) or **kim** 'what, why', e.g. **alaṁ ruditvā bāle** 'No good crying, baby!'. This construction is compatible with the assumed instrumental origin of the gerund, but it is doubtful whether it is thus derived historically.

A peculiar feature of the gerund in these complemental and manner adverbial functions is its temporal neutralization. It may be asked why were not some of the many non-past or temporally undifferentiated forms used instead of the gerund in such functions, given that the basic temporal value of the gerund had already been established as relative past. Since the temporally neutralized uses of the gerund appear comparatively late and mostly in non-regularized or late texts of especially southern provenance (e.g. the Śaunaka recension of the Atharvaveda, Vaikhānasasmārtasūtra, Daṇḍin's Daśakumāracarita, the southern recension of the Vikramacarita, and the Epics), one would be tempted to look for local Dravidian influence on this point. Some of these texts show, in fact, other 'Dravidisms', such as genuinely absolute gerundial constructions (cf. Caland 1929, p. xiiif.). The sporadic final and cognate instrumental value of the gerund in the Atharvaveda, could, however, also be syntactic relics or archaisms, reflecting the infinitival origin of the gerund.

While some of the functional correspondences of the gerund with analogical categories in other South Asian languages may appear as trivial, others are too specific to be conveniently dismissed as independent developments. A typical example is the use of the gerund in connection with 'perfective' (and not only 'stative-habitual') auxiliaries in late Classical Sanskrit and Middle and New Indo-Aryan:

(20) Pañc. 1.22 (ed. Kielhorn, p. 91, l. 14)
...**tato makṣikoḍḍīya gatā**
'...then the fly flew away' (lit. 'then the fly having flown went')
Cf.: Hindi: **makkhī uṛ gaī**; Tamil: **ī paṟantu pōyiṟṟu**

These preliminary reflections on the various uses and constructions of the gerund show that we are not dealing simply with an (Indo-European) verbal adverb, indeclinable participle or infinitive: The Sanskrit gerund constitutes a synchronically and diachronically unique inflectional category, displaying morphosyntactic and pragmatic features that cannot be fully reconciled with any other Indo-European non-finite category, but which are largely paralleled by analogical categories in contiguous South and Central Asian languages (cf. 6.5-6.8). This strengthens our doubts about the spontaneous character of its syntactico-semantic development and the synchronic relevance of its instrumental nominal origin.

1.2.B. IMPLICATIONS FOR THE THEORY OF CLAUSE LINKAGE

The descriptive framework of this thesis is largely founded on and should have further bearing on recent theories of clause linkage as developed in functional syntax (Dik 1968, 1978; Olson 1981; Foley & Van Valin 1984; Van Valin 1984, Foley & Olson 1985, Haiman & Thompson 1984), systemic grammar (Halliday 1979, 1981, 1985), dependency theory (Nichols 1978a, 1978b; 1986) and discourse analysis (e.g. Davison 1981, 1986; Thompson 1983; Heath 1985; Chafe 1984, Lakoff 1984, Wiegand 1984).

Given that gerundial structures serve to link predications along certain syntactic, semantic and pragmatic parameters, they are to be described as part of the system of clause linkage. But in order to be able to deal with both finite and non-finite clauses in a unified framework without resorting to abstract or unverifiable trans-derivational connections, we need a functionally based concept of the clause. A promising point of departure seems to be the theory of the layered structure of the clause as elaborated within the functional theory of Role and Reference Grammar (Olson 1981; Foley & Van Valin 1984; Van Valin 1984; Foley & Olson 1985).

According to this theory, a clause is a complex structural unit that consists of (at least) three concentrically arranged 'layers', each characterized by certain structural or functional elements ('arguments') and 'operators' with scope over that layer. In configurational languages (such as Sanskrit) these layers are mapped onto non-coextensive phrase structures that enable the embedding of larger units as constituents within smaller ones.

The innermost layer of the clause is called the *nucleus*. The nucleus contains the most essential structural or functional element of the clause, the *predicate* ('predicator' in systemic grammar), which is in the scope of the nuclear operators of '(verbal) aspect',[12] 'directionality' and 'voice'. The predicate denotes an action or state of affairs existing in or through time ('process' in systemic grammar) and may be a finite or non-finite verb

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[12] Note that aspect is a recursive category, each layer being capable of superimposing its own aspectual limits or modifications onto a preceding layer (cf. 3.4).

(group), or a logico-semantic relation obtaining between the 'core arguments' (actants/ central participants) of the clause, e.g. 'attribution', 'location', 'possession', 'acquisition', 'existence', etc. The nuclear operators are typically marked in the inflection of the verb or by affixes, clitics or auxiliaries occurring in immediate proximity to the verb stem.

Encompassing the nucleus is the *core layer,* which contains the obligatory and optional *core arguments* of the predicate ('actants', Tesnière; 'nuclear complements', Dik 1978, 1980; 'central participants', Halliday), as determined by the valency or argument structure (logical composition) of the predicate. The core argument that controls corefence under ellipsis in coordination or clause chaining is called *pivot* and is the 'subject' in reference-dominated systems, but (usually) the 'Actor' (or single actant of an intransitive clause) in role-dominated systems, where 'Actor' vs. 'Undergoer' may be realized as Agent, Effector, Locative [incl. Experiencer, Possessor, Carrier (of property)] or (located) 'Theme', according to the logical structure or semantic composition of the predicate.[13]

On the other hand, coreference may operate without a given pragmatic or semantic pivot, or the criteria for pivothood may be more complex. For example, Sanskrit gerundial constructions show normally coreference of subject (and also agent, when passive) with that argument of the main clause or phrase that ranks highest in Actorhood, but this may be overridden by features of topicality and 'animacy'/'empathy'.[14] Since topicality affects the choice of implicit subject, it may thus be concluded that the pivot in gerundial structures is *pragmatic* rather than *semantic* (cf. 4.2).

The operators whose scope extends over the core are various manner or process adverbials (e.g. 'well', 'clearly', 'quickly', etc.) as well as 'deontic modality', referring to the objectively envisaged ability or necessity/permission to carry out the action (cf. Chung & Timberlake 1985, p. 246). These operators are typically signaled as affixes, clitics, auxiliaries or adverbial elements next to the nuclear operators.

Encompassing both the nucleus and the core layer is the (complex) *peripheral layer* of

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[13] The Actor is here defined as that argument of a predicate which expresses the participant which performs, effects, instigates or controls the situation denoted by the predicate, as against the Undergoer, which expresses the participant that does not perform, effect, instigate or control the situation denoted by the predicate, but rather is affected by it in some way (Foley & Van Valin 1984, p. 29; capital letters are used to distinguish semantic roles from syntactic functions). In accusative systems the Actor is typically encoded in active clauses as the (topical and mostly pivotal) subject and the Undergoer as the object of a transitive clause but the subject of an intransitive clause, whereas in passive and impersonal clauses the mapping is reversed, leading to the foregrounding or topicalization of the Undergoer and/or demotion of the Actor, cf. *I like him/He pleases me* vs. *He is liked [by me].* In ergative systems the Actor is typically encoded in active transitive clauses as the ergative agent and in intransitive clauses it is 'conflated' with the Undergoer, being encoded in the 'absolutive' case, whereas in 'anti-passive' clauses the mapping is reversed, leading to the foregrounding or topicalization of the Actor and possible demotion of the Undergoer. Even so coreference operates mostly on an accusative basis, i.e. between intransitive U and transitive A rather than between intransitive and transitive U. (Cf. Comrie 1981, ch. 5-6; Keenan 1985.)

[14] The animacy/empathy hierarchy is defined as: 1. person > 2. person > 3. person > human > non-human living being > natural forces > inanimate (cf. DeLancy 1981; Comrie 1981, p. 178ff.).

the clause, which may contain any non-central participants, circumstantial arguments or adjuncts ('satellite constituents', Dik 1978), such as spatio-temporal, causal, conditional, instrumental and similar adverbial qualifications. The periphery is also the domain of the peripheral operators, which are necessary for conferring full sentencehood (cf. Foley & Olson 1985, p. 57).[15]

The most common peripheral operators are (in the reversed order of peripherality): 'absolute-[relative]tense', 'epistemic modality' (i.e. the subjectively envisaged reality 'status' of the proposition; cf. Chung & Timberlake 1985, p. 242f.), 'evidentials' (i.e. source of knowledge, e.g. 'by hearsay', 'personal experience', etc.) and 'illocutionary force' or 'sentence mood' (e.g. declarative, directive, interrogative, narrative/memorative, assertive).[16] To the extent that these operators are signaled, they are marked by affixes, clitics, auxiliaries, or adverbial elements surrounding the nuclear and core operators.

The layered structure of the clause has relevance for clause linkage and certain more or less language-independent constraints on relative word order. Thus it is no coincidence in terms of the distinct layers of peripheral, core and nuclear operators that the word order in the English sentence *Honestly, John is supposed to be able to have gone abroad* cannot be: **John is supposed to honestly be able to have gone abroad*, where an outer peripheral operator of illocutionary force ('honestly') occurs nearer to the nucleus ('have gone') than an inner peripheral operator of evidentiality ('be supposed to'), or **Honestly, John is able to have been supposed to go abroad*, where a core operator of deontic modality ('be able to') occurs further away from the nucleus than a peripheral operator of evidentiality ('be supposed to').

A clausal (incl. quasiclausal) unit may consist of a nucleus, a nucleus with its core, or a nucleus with its core and periphery. Moreover, in addition to being elliptic, any layer (except for the nucleus) may be structurally incomplete, as e.g. in the case of gerundial and other non-finite clauses, which lack an independent subject and the formal specification for absolute tense and mood (signaling illocutionary force and/or modality). Such clauses are

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[15] Andersson (1974) argues on distributional grounds for a collapsing of the categories of clause and sentence, but apparently there are some distributional differences, such as tag questions or speech acts that cannot be applied to 'embedded sentences', except when sentence-final or non-restrictive, cf. *We should go on a picnic, because isn't it a beautiful day!*, but not: **Because isn't it a beautiful day, we should go on a picnic!*, **We should go on a picnic, if isn't it a beautiful day!*, **If isn't it a beautiful day, we should go on a picnic!* (cf. Lakoff 1984, p. 472ff. and Winograd 1983, p. 469).

[16] Palmer (1986) subsumes on semantic and morphological grounds these 'modal' categories into a simple dichotomy of epistemic vs. deontic modality, treating e.g. the declarative as an (unmarked) epistemic and the imperative as an (unmarked) deontic (or more specifically, 'directive') modal category. (Cf. Chung & Timberlake 1985, p. 241ff.) In support of this analysis it may be noted that whereas a peripheral (i.e. 'discourse level') modal operator such as 'frankly' or 'certainly' may have in its scope both epistemic and deontic modals (e.g. *Frankly/Certainly, you may/must go home*), an imperative clause can contain no further epistemic or deontic modals: **Can/May/Must go home!* On the other hand, an imperative may be within the scope of a peripheral or discourse level modal operator, e.g. *Frankly/Honestly, go home!*, *Go home, won't you!*

here termed 'reduced clauses' in distinction from 'full clauses', though more traditional theory may prefer to assign only phrasal status to reduced clauses due to their lack of a NP+VP -structure (cf. Andersson 1974, p. 22; Halliday 1985, p. 192 fn.).

We may now approach *clause linkage* as the combination of different layers of clauses into complex structures. According to the said theory, any clausal unit may be syntactically joined to another clausal unit of the same kind, i.e. same structural layer. In other words, a nucleus may be joined to another nucleus, surrounded by a (partly or wholly) shared core and periphery, as in 'tight verb serialization' and periphrastic temporal/aspectual conjugation, e.g. *keep playing the guitar here*. Or a nucleus with its core may be joined to another nucleus with its (partly or wholly independent) core, together surrounded by a (partly) shared periphery, as in adverbal complementation and 'loose verb serialization' (≈ [a]syndetic coordination of verb phrases vs. full clauses), e.g. *sit here playing (/and play) the guitar when she comes*. Or a nucleus with its core and periphery may be joined to another nucleus with its core and (partly or wholly independent) periphery as in peripheral adverbial and coordinate clauses, e.g. *she came here when/and I was playing the guitar there*. (The juncture is between the underlined units.)

This gives theoretically three distinct levels of *juncture* in clause linkage: 'nuclear juncture', 'core juncture' and 'peripheral juncture'. For example, when construed with an aspectual auxiliary as a periphrastic verb-form, the gerund would enter a nuclear juncture, where all the arguments and operators are shared (21), but when joined to the core layer of another clause as an optional or obligatory complement it would enter a core juncture, where the superordinate clause lacks separate peripheral arguments (22), while, finally, when joined to the periphery of another clause as a free adjunct it would enter a peripheral juncture, where the peripheral operators may be shared (23) and (24).

(21) RV 1.57.4b

…yé tvārábhya cárāmasi

'…who constantly keep ourselves to you'

Lit. 'who move about having taken hold of you'

(22) Rm 2.28.25

tad alaṁ te vanaṁ gatvā

'So no good for you going to the forest!'

(23) RV 10.15.6ab

ā́cyā jā́nu dakṣiṇató niṣádyemā́m yajñám abhí gṛṇīta víśve

'Bending your knee and sitting down to the south, may you all bid this sacrifice welcome!'

(24) RV 10.116.5
  pratītyā śátrūn vigadéṣu vṛśca
  'Go against the foes and chop them down in slaughters!'

Apart from the level of 'juncture', the theory differentiates between different kinds of *nexus* or syntactic connections between the joined clausal units (*juncts*). The juncts may be simply coordinated or juxtaposed with or without some connector, as in the asyndetic ("paratactic") chaining of clauses or verbs with shared peripheral operators and core arguments. Or one junct may be *embedded* as an argument or constituent of a certain layer of the other, as e.g. an adverbial adjunct or nominal adverbal complement that is sensitive to the same syntactic processes as a single adverb or noun in that function.

This gives a theoretical distinction between 'embedded' and 'non-embedded' core-layer and peripheral-layer juncts, where 'embedded' is not used in the traditional transformational (i.e. 'trans-derivational' sense), but with the meaning 'functioning as an argument of', thus roughly corresponding to the concept of 'rank shift' in Hallidayan systemic grammar (cf. Halliday 1979; 1981; 1985, p. 192ff.).

As seen in the previous section, this distinction might be evoked to differentiate between 'embedded' and 'non-embedded' (peripheral) gerundial clauses, according to their function and operational relations. But the problem is that the syntactico-semantic function and scope relations cannot always be determined dichotomically in non-finite structures (cf. 14), although they are subject to certain system-specific constraints that must be considered in the theory. There is thus a large amount of indeterminacy or neutralization inherent in the system we are trying to describe. (Cf. the discussion on grammatical indeterminacy in Matthews 1981, p. 17ff.)

Apart from embedding, also various dependency relations affect the connection. Somewhat enlarging the original theory, one could differentiate between morphological, lexical, syntactic, semantic and pragmatic dependency (cf. Nichols 1978a, 1978b and Van Valin 1984). Morphological dependency refers to rules of agreement or cross-reference between constituents of a construction (as defined on semantic and syntactic grounds) and is marked on either the modifier or the head or both (cf. Nichols 1986). Being indeclinable, the gerund shows no morphological dependency, contrasting thus with the participles, but agreeing with the infinitives.

Syntactic dependency refers to mutual word order constraints or distributional constraints on elements that are capable of forming 'minimal utterances' (= minimal segments in the dependency tree). A gerundial or similar non-finite clause is distributionally dependent on a superordinate clause or phrase, without which it cannot occur in a structurally complete sentence, while nuclear and certain core-layer gerundial constructions also show word order constraints in relation to the superordinate junct (gerund + auxiliary,

alam + gerund). On the other hand there is no syntactic dependency between the gerund and the controller (pivot), since the latter is never a *syntactically* necessary element of the gerundial clause, being recoverable from the superordinate clause.

Semantic dependency is at hand when some characteristic or action is predicated of an argument by a predicator, the former being semantically dependent on the latter. For example, unlike a non-copredicative adverbial, a copredicative complement/adjunct or conjunctive participle predicates something about its 'controller' or nominal head. Thus, the sentence *He walked along happy* entails that he was happy, whereas the sentence *He walked along happily* does not entail that he was happy (cf. Nichols 1978, p. 328).

By this token, there is semantic dependency between the gerund and its controller as in a copredicative construction. On the other hand, there is no semantic dependency between the gerundial clause and the main clause, unless the former functions as a restrictive adverbial adjunct or nominal complement of the latter, cf. (9)-(14), (18)-(19), (22).

Pragmatic dependency refers to constraints on coreference and dependence on operators like tense, mood and modality. For example, ellipsis of subject in a non-initial coordinate clause entails dependency not only on the subject but also on the illocutionary force, tense and modality of its conjunct (e.g. *Did he work and [did he] eat happily?*). Likewise, additive-sequential gerundial clauses are pragmatically dependent on their main clauses.

The basic tenet here is that there are not just two formally different types of syntactic connection between clauses, as assumed in traditional grammatical theory. Apart from 'subordination' (i.e. 'embedding') and 'coordination' (i.e. linking of independent clauses), the functional theory of clause linkage provides for an intermediate type of nexus, viz *cosubordination* (Olson 1981), where one clause is in some way or other dependent on the other, but not embedded as a constituent part of it.

Typical examples of 'cosubordination' are non-restrictive relative clauses and various correlative and contrastive clauses, which are not syntactically embedded within any layer or constituent of the superordinate clause (cf. Huddleston 1984, p. 379), e.g. *I stayed at home whereas she went out :Whereas she went out I stayed at home,* contrast: *I stayed at home and she went out,* but not: **And I stayed at home, she went out.*

This model has been worked out mainly on the basis of Australian aboriginal languages, which show a remarkably transparent structure with respect to the above parameters of clause linkage independently of the parameter of finiteness. But if applied to e.g. Indo-European languages, this model is liable to impose (formal) syntactic differentiations where there are none, while at the same time neglecting differentiations or parameters that are of a more subtle nature. Particularly significant is the largely pragmatically conditioned use of the contrast between finite and non-finite structures in most Indo-European languages. As pointed out earlier, many peripheral or juxtaposed non-finite clauses are formally quite indeterminate as to the above parameters of embedding and dependency (cf. Matthews 1981, p. 234), while this very indeterminacy is part of their specialized discourse function.

For example, we know on pragmatic grounds that the juxtaposed dependent non-finite clause in the sentence *The headmaster resigned in September, dying before the end of the year* (Huddleston 1965, p. 584) can stand only in an 'additive-sequential' and hence syntactically non-embedded relation to the main clause. This is supported by comparison with Swedish and German, which do not use such non-finite clauses with 'additive-sequential' value unless there is a closer *logical* connection between the events. Thus the above sentence can only be translated by two coordinate finite clauses into Swedish: *Rektorn avgick i september och dog* (not: **döende*) *före årets slut*.

But note also that given a finite paraphrase of this sentence, the continuity of topic and modality across the clauses demands that the subject of the latter conjunct be elliptically omitted: *The headmaster resigned in September and he died before the end of the year* and *Rektorn avgick i september och han dog före årets slut* are not appropriate paraphrases of the above sentence, because in not showing zero-anaphora of subject theyimplyno modal or logical cohesion between the propositions. Non-finiteness in peripheral clauses may thus be used as a system-specific device to achieve referential and logical cohesion between clauses and 'compactness' of expression, corresponding to some extent to zero-anaphora (ellipsis) of subject in finite structures rather than to embedding (which is another potential function; cf. Tikkanen 1987).

The interpretation of a peripheral non-finite clause is largely determined also by the lexical context. If we exchange the verb of the non-finite clause in the above sentence for a stative or durative one (or even a dynamic mental process verb), the 'transitivity' or 'kinecity' of the non-finite clause is reduced and at the same time its potential for expressing an additive(-sequential) connection decreases. Then the non-finite clause is naturally (re)interpreted as a circumstantially restrictive qualification of the main clause, cf. *The headmaster resigned in September, wishing to devote all his time to his book* (ibid.).

On the other hand, all peripheral non-finite clauses cannot be disambiguated on the basis of the lexical or even pragmatic context, cf. *John mentioned something about the heat [while/then] taking off his jacket.* There is nothing in the lexical or (necessarily) previous context here that would determine the reading of the non-finite clause. Yet for the sentence to be fully understood, the non-finite clause must be interpreted either as a propositionally restrictive or non-restrictive element as indicated by the alternative glosses in square brackets and by obvious prosodic differences (cf. Quirk & al. 1972, § 11.48ff.).

It may now be asked whether it is necessary to postulate different (surface) syntactic structures for these interpretations. To the extent that the preposed position of the non-finite clause is mostly available only with the propositionally non-restrictive reading, this would seem to be so in some cases. A similar result was obtained in Chafe's study (1984), where a differentiation was made between 'bound' and 'free' finite adverbial clauses in English, on the basis of their position and how tightly bound they are to the main clause by proso-

dic or orthographic criteria. The paradigm example of semantic and syntactic ambiguity in complex structures are the Scandinavian *så*-clauses, which exhibit most of the unique properties of Scandinavian main clauses when signifying non-restrictive or 'coordinate-like' cause and effect-relations ['A and so also B'], but not so when signifying restrictive final cause ['A so as to B'], while formally neutral constructions are disambiguated only by intonational means (Fretheim 1981).

Unfortunately, word order has little distinctive function in Sanskrit gerundial structures, and there are no means of ascertaining intonational patterns outside the partly pragmatic and partly structurally conditioned use of *pluti,* i.e. vowel lengthening (cf. Strunk 1983), which has no relevance in disambiguating gerundial structures.

On the other hand, there are in most Indo-European languages certain system-specific restrictions on using a juxtaposed peripheral non-finite vs. near-synonymous finite clause in modally or operationally marked contexts. These restrictions have not yet been considered in the above theory of clause linkage, where they would introduce a wholly new paramater in the system of nexus.

As pointed out in 1.2.A, English perfect or present participial clauses cannot in normal style be used with additive-sequential value if the main clause is operationally marked, i.e. expresses a command, prohibition, supposition, wish, question, negation, etc., cf. ?*The headmaster did not resign in September, dying before the end of the year/Having resigned in September, the headmaster did not die before the end of the year ≠ The headmaster did not resign in September and die before the end of the year*. On the other hand, even under the propositionally restrictive reading such non-finite clauses are operationally more constrained than the corresponding finite embedded clauses, which are in the scope of the main clause and subject to contrastive negation, etc. Thus: *The headmaster did not resign in September, because he wished to devote all his time to his book, but because he hoped to get some rest,* rather than: *The headmaster did not resign in September, wishing to devote all his time to his book,but hoping to get some rest.* Such non-finite clauses are not common in answers to questions about time or cause, where the interpropositional relation is specifically foregrounded or topicalized. Thus: *[He did it] because he wished to devote all his time to his book* rather than: *[He did it] wishing to devote all his time to his book* as an answer to: *Why did the headmaster resign?*

These operational and semantic constraints show that a peripheral non-finite clause is not always syntactically on a par with an adverbial phrase or embedded subordinate clause even when it is propositionally restrictive (cf. Davison's analysis of the Hindi gerund). But also when additive-sequential it may differ from a finite cosubordinate clause in not being dependent on the operators of the main clause. Such system-specific constraints following from non-finiteness, block the occurrence of juxtaposed non-finite clauses in modally and operationally marked contexts as potential paraphrases of either coordinate or subordinate finite clauses, assigning to them a mainly backgrounding discourse function.

This phenomenon, which is common in modern and classical European languages (cf. Fox 1983), has been explained by Thompson (1983) in terms of the semantic vagueness of the relation expressed by juxtaposed non-finite clauses. Their non-committal logico-semantic relation to the main clause makes them especially frequent in 'depictive' narrative discourse, which contains the greatest amount of non-finite clauses unamenable to para-phrase by either coordinate or subordinate finite clauses.. But similar vagueness we find between many finite clauses in asyndetic linkage, while even the clause-linking conjunction 'and' is extremely versatile in most European languages. The backgrounding effect of non-finite vs. near-synonymous finite clauses in additive-sequential linkage is thus ultimately linked with their reduced degree of modal-operational integration in the sentence structure, and this may be a consequence of their nominal origin and reduced predicative force.

However, these operational constraints are language-specific and liable to change over time, being also somewhat genre-bound. As was seen in 1.2.A, the early Vedic gerund is operationally more constrained and hence more confined to expressing backgrounded, given or predictable information than the later Vedic and Classical gerund (5-7), which may share an interrogative and even negative operator with the main clause:

(25) Śat.-tr. (Nītiśataka) I. 3. 97 (quoted fom Böhtlingk, Ind. Spr. II: 3362)
   trinetraṁ kas tyaktvā dhanalavamadāndhaṁ praṇamati
   'Who abandons the Three-Eyed one and bows before a man blinded by the intoxi-cation of a trifling fortune?'

The relaxation of the operational constraints has continued in Middle and New Indo-Aryan. Thus the Hindi and the other New Indo-Aryan languages allow several marked operators to simultaneously extend their scope over a peripheral (and esp. core layer) gerundial clause:

(26) Premcand: Godān, p. 17, l. 9f.
   use   ḍā̃tkar   bolī: ab god se utarkar pāv-pāv kyõ nahī̃ caltī
   (s)he-DAT scold-GD said-FEM now lap from descend-GD foot-foot why not go-FEM
   'She said scoldingly to her: "Why do you not now get down from (daddy's) lap and walk on your own feet?"'

(27) Premcand: Godān, p. 239, l. 11f.
   vah kabhī   us ke   ūparī   vilās-āvaraṇ ko chedkar   us ke
   (s)he ever (s)he GEN outer   play-cover OBJ pierce-GD (s)he GEN
   antaḥkaraṇ tak na pahūc   sakī thī
   inner organ until not reach   can-PLUPERF-FEM.SG
   'She had never been able to pierce his superficial playful exterior and reach his heart.'

It would be quite impossible to render these gerundial clauses by non-finite or subordinate clauses (at least in similarly unmarked style) in any European language. This development (as well as the relaxation of the coreferentiality constraint, relative past tense and perhaps also strictly active voice) has gradually brought the Indo-Aryan gerund typologically more in line with the (Old and Modern) Dravidian past verbal participle, which may have the additive-sequential reading in any modal-operational context, cf.:

(28) KT 130.1

    nilan   **toṭṭup**   **pukāar**
    earth   *dig-VBL.PPLE*   *enter-NEG.HAB.3SG*
    "He will not dig up the earth and enter it" (Hart 1979, p. 65)
    "He just cannot have dug up and entered the earth." (Ramanujan 1971, p. 58)

In general it appears that the more constrained a language is for combining finite clauses in a sentence, the less constrained it is for letting the operators of the finite main clause be elliptically transferred to any non-finite clause that does not function as a temporally or circumstantially restrictive qualification.

Thus e.g. in Japanese as well as many Altaic and Dravidian languages there are rather strong formal and semantic restrictions on the combination of finite (i.e. modally and temporally fully specified) clauses in a sentence. In languages of this type, finiteness of verb typically signals sentence juncture and change of speech act or shift of deictic center, while non-finiteness may to that extent be either a means of embedding or simply an analogue to ellipsis of redundant or repeated elements across sequenced clauses.[17] Adopting Kiparsky (1968), we could define such forms as temporally and modally neutralized, corresponding semantically to the Sanskrit injunctive, which may take its tense and mood from a conjunct verb.

Moreover, in the absence of a systematic coding of the scope relations and/or the inter-propositional semantic relation, this may lead to large-scale ambiguity of non-finite clauses, depending on whether they are conceived of as in the modal-operational scope of the superordinate clause or not, just as a modifier may have scope over various layers of a coordinate expression (e.g. old [men and women] or [old men] and women).

This was seen in the case of the modern Indo-Aryan gerund and the Dravidian verbal participle, which behaves much in the same way as e.g. the (modern) Turkish, Mongolian and Japanese 'copulative' or 'perfective' gerunds (cf. Jansky 1954, p. 107ff.; Lewis 1967, p. 177f.; Schulz 1978, p. 128; Grønbech & Krueger 1955, p. 29f.; Sansom 1928, pp. 106f., 139, 175f., 324ff.; Lehmann & Faust 1951, p. 57). Cf. the following Japanese

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[17] Cf. Longacre's (1985, p. 238) gross typological classification of clause linkage as either of the 'co-ranking' or 'chaining' type. The former type implies the combination of units of syntactically equal rank (e.g. full clauses), the latter units of different rank (e.g. reduced+full clauses).

examples (Kuno 1973, p. 201ff.):

(29) **uwagi o   nuide   hangaa ni   kake nasai!**
    jacket OBJ strip-GD hanger on   hang IMP
    (Lit. ≈ 'Having taken off your jacket, hang it on a hanger!')
    'Take off your jacket and hang it on a hanger!' $(S_{GER} + S)_{IMP}$
    Or: 'Having taken off your jacket, hang it on a hanger!' $([S_{GER}] S)_{IMP}$

(30) **John wa uwagi o nuide   hangaa ni   kakemashita ka?**
    John TOP jacket OBJ strip-GD hanger on   hang-PAST   Q
    'Did John take off his jacket and hang it on a hanger?' $(S_{GER} + S)_Q$
    Or: 'Taking off his jacket, did John hang it on a hanger?' $([S_{GER}] S)_Q$

(31) **John wa uwagi o   nuide   hangaa ni   kakenakatta.**
    John TOP jacket OBJ strip-GD hanger on   hang-NEG-PAST
    'John did not take off his jacket and [did not] hang it on a hanger.' $(S_{GER}+S)_{NEG}$
    Or: ??'John, having taken off his jacket, did not hang it on a hanger.' $([S_{GER}] S)_{NEG}$

Due to the lack of finite coordinate clauses in sequential linkage, the normal way of sequencing propositions (irrespectively of their modal and operational value) in Japanese is by using such 'suspensive' (*chuushi-kei*) or 'conjunctive' (*ren'yoo-kei*) non-finite forms (**-te** ,**-Ø**) with temporal and modal dependence on the finite verb or main clause:

(32) **sono michi o hidari e itte tsukiatatte migi e orite massugu oide nasai**
    'Go to the left on that street, and having got (or: when you have got) to the end of it, turn right and go straight ahead!' (Martin 1975, p. 479)

Note that the gerund **tsuki+atat-te**, which can be paraphrased and translated by a temporal clause '(after) having reached the end', ranks relatively lower in transitivity or kinecity and discourse prominence (information value) than the formally identical gerundial clauses ...**it-te** 'having gone...' and ...**ori-te** 'having turned...', which hence cannot be paraphrased or translated by temporal clauses or phrases.

This confirms the previous point, viz that when there is a choice between a finite and a non-finite construction for a certain semantic function, the non-finite construction is constrained to a *backgrounding* discourse function according to the *language/system-specific constraints on its modal-operational integration* which may be different for non-restrictive and restrictive relations. In non-restrictive relations operational integration implies *elliptic* transfer of main clause operators, in restrictive relations it means *contrastive* transfer of main clause operators (which hence have scope over the non-finite clause but not over the

main clause itself). The Indo-Aryan gerund shows greater operational integration in non-restrictive additive-sequential linkage than in temporally/circumstantially restrictive linkage, implying that it may replace a coordinate clause more freely than a subordinate clause.

The *level of operational integration* provides thus a typologically relevant parameter for distinguishing non-finite constructions in various languages or systems. In other words, it is not enough to define a non-finite form or construction in terms of its temporal, aspectual, interpropositional and coreferential features. Without knowing the inherent constraints on its elliptic and contrastive operational integratability we do not know the conditions under which it may paraphrase or translate finite subordinate and/or coordinate clauses.

1.3. CORPUS

When describing some features of a 'dead' literary language such as Sanskrit it is possible to use only written and more or less pre-edited documents for data. It is therefore essential that the corpus is as representative and exhaustive as possible, especially if the object of the study is to describe all major periods and genres of that language.

Previous analyses of the Sanskrit gerund and its various systems have drawn material from a rather limited number of texts (mainly R̥gveda, Black Yajurveda, Śatapatha- and Aitareyabrāhmaṇa, parts of the Epics and major Purāṇas, Kālidāsa's and Bhāsa's dramas, Pañcatantra, Hitopadeśa and Kathāsaritsāgara). Although much valuable data have already been made available and variously analyzed in earlier (but somewhat scattered) accounts (cf. 1.5.B-), there are several neglected or insufficiently studied texts which I have added to the corpus, e.g. Sāmaveda, Atharvaveda (Śaunaka- and Paippalāda-saṁhitā), Vājasa-neyīsaṁhitā, the principal Upaniṣads, Śrauta- and Gr̥hyasūtras, technical Sūtras and Tantric texts, early Sanskrit inscriptions, etc. The main stress has been on Sanskrit texts that were composed in the Old or Early Middle Indo-Aryan period, which is why e.g. Purāṇas and Buddhist Hybrid Sanskrit texts do not figure very prominently in the corpus.

As for comparative and typological data on Middle and New Indo-Aryan and other Indo-European and non-Indo-European languages, I have relied mainly upon secondary material,[18] which has been revised and extended especially for Hindi and Old Tamil.

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[18] I.a. Hendriksen's analysis of Pali non-finite syntax, Sukumar and Subhadra Sen's studies of Prakrit syntax, Chatterji's diachronic study of Bengali, Schumacher's, Dwarikesh's and Davison's studies of the Hindi gerund, Grierson's, Konow's and Morgenstierne's accounts of Dardic, Nuristani and Eastern Iranian languages, Reichelt's, Spiegel's and Benveniste's accounts of Avestan, Wackernagel's, Humbert's, Schwyzer's, Chantraine's and Haas' studies of Greek (and Latin) syntax, Aalto's and Risch's analyses of the Latin gerund and gerundive, Sieg's (& al.), Krause's and W. Thomas' accounts of Tocharian, Zubaty's, Endzelin's, Gater's and Eiche's accounts of Baltic, Lorimer's and Berger's accounts of Burushaski, Bray's, Bloch's, Winfield's, Emeneau's, Arden's, Andronov's, and Steever's accounts of modern Dravidian, Pinnow's and several Indian scholars' accounts of Munda, Lalou's, Jäschke's, Poucha's and P. Andersen's accounts of Tibeto-Burman, etc. In the absence of more detailed descriptions, a general source of data on modern Indian languages has been Grierson's and Konow's Linguistic Survey of India.

1. INTRODUCTION

The following is a list of the Indo-Aryan and Old Dravidian texts that constitute the principal corpus of this study:

Early Vedic literature (ca. 1200-700 B.C.±200)
> Rksaṁhitā, Śaunaka- and Paippalāda-saṁhitā, Maitrāyaṇī-, Taittirīya- and Kāṭhaka-saṁhitā (metrical passages, i.e. *mantras*); Vājasaneyī-saṁhitā

Middle Vedic literature (ca. 800-400 B.C.)
> Black Yajurveda (prose passages, i.e. *brāhmaṇas*), Aitareya-, Jaiminīya- and Śatapathabrāhmaṇa; Aitareya-āraṇyaka, Bṛhad-āraṇyaka-upaniṣad, Chāndogya- and Taittirīya-upaniṣad

Late Vedic literature (ca. 500-200 B.C.)
> Śāṅkhāyana-, Jaiminīya- and Āśvalāyana-śrautasūtra; Gobhila-, Āśvalāyana- and Mānava-gṛhyasūtra; Kaṭha-, Śvetāśvatara- and Praśna-upaniṣad; Bṛhaddevatā;

Epic literature (ca. ?500 B.C.-500 A.D.)
> Nala- & Sāvitrī-upākhyāna and Bhagavadgītā; excerpts from Rāmāyaṇa

Early Classical Sanskrit literature (ca. 100-400 A.D.)
> (excerpts from Patañjali's Mahābhāṣya); Sanskrit inscriptions from 150-500 A.D.; Buddhacarita (Aśvaghoṣa); Mānava- and Āpastamba-dharmasūtra; Vaikhānasa-smārta sūtra; Suśrutā; Vātsyāyana-kāmasūtra; Kauṭilīya-arthaśāstra; Tantrākhyāyikā

Middle Classical Sanskrit literature (ca. 400-700 A.D.)
> Svapnavāsavadattā, Pratijñāyaugandharāyaṇa (Bhāsa); Mṛcchakaṭikā (Śūdraka); Abhijñānaśakuntalā, Vikramorvaśī; Meghadūta, Ṛtusaṁhāra, Raghuvaṁśa (1-5) (Kālidāsa); Ratnāvalī, Priyadarśikā (Harṣa); Kāvyādarśa, Daśakumāracarita (Daṇḍin); Aphorisms (Bhartṛhari's Śatakatrayam)

Late Classical Sanskrit literature (ca. 700-1500 A.D.)
> Kūrmapurāṇa, excerpts from Viṣṇu-, Brahma- and Bhāgavata-purāṇa; Kāśyapasaṁhitā; Kathāsaritsāgara, Pañcatantra, Hitopadeśa, Vetālapañcaviṁśati, Śukasaptati

Middle Indo-Aryan literature (ca. 250 B.C.-700 A.D.): Aśokan inscriptions; Pāli Jātakas and Dhammapada; the Prakrit passages of (the above-mentioned) Classical dramas

New Indo-Aryan literature
> Premcand: Godān (1936)

Old Tamil literature (ca. 200 B.C. - 500 A.D.)
> excerpts from Puranāṉūṟu, Aiṅkuṟunūṟu, Kuṟuntokai, Cilappatikāram

The editions referred to are specified in the references. When a passage has been quoted from a secondary source as based on some identified or unidentified edition (noted as 'quoted from/according to X'), I have maintained the given reading (with normalized transliteration) and reference (if there is one), except when I have not been able to ascertain the original edition, in which cases I have tried to provide cross-references [in square brackets] to some better known (critical) edition.

35

1.4. NOTES ON TERMINOLOGY

The gerund has appeared under a number of denominations in Western and Indian Sanskrit studies.[19] The Paninean tradition refers to it simply by the term '**ktvā**', which simultaneously represents its prosodic features and basic morpheme (**-tvā**), the major allomorph being known as '**lyap**' (for which Vopadeva's Mugdhabodha has '**ktvāc**' and '**yap**'). But, of course, convenient as these terms are formally, they give no hint about either meaning or use. It may, however, be noted that commentators (e.g. Bhavatrāta on JŚS 1.5.1) have been known to refer to '**ktvā**' also semantically as '**paurvakālikapratyayaḥ**' (≈ 'having the suffix indicating temporal priority of action'; cf. ex. 213).

The basic problem in choosing a sufficiently universal and transparent name for this category is that its formal, syntactic, semantic and etymological features point in different directions. Formally, the gerund is indeclinable, explaining the indigenous classification of the gerund with the infinitives and verbal adverbs as an '**avyaya**'. However, syntactically it often resembles a conjunctive or absolute participle, accounting for the early and still common European terms: 'adverbial/indeclinable/conjunctive participle' (cf. Carey 1806, p. 155f.; Wilkins 1808, p. 434ff.; Frank 1823; LSI; Masica 1976, p. 109ff.).

The problem with these terms is that Indo-European 'participles' are adjectival, unless adverbialized in a fossilized case form (like the Baltic and Slavonic gerunds and Modern Greek adverbial participle). The epithet 'conjunctive' is of no help, because almost any participle may be construed conjunctively, which is not the only construction of the gerund. Neither can one accept Schlegel's (1820, p. 124f.) arguments for considering this an 'absolute participle', because in its normal use it is simply not absolute.

The term 'gerund' was first used in this context by Franz Bopp (1816, pp. 43-58), who compared the allmorphs in **-tvā** and **-(t)ya** formally and syntactically with the (instrumental) ablative of the Latin gerund (**-ndo**). Bopp's term has been adopted by several scholars, e.g. Speyer (1886, 1896), Whitney (1879, 1889), Wackernagel (1920), and it is also commonly used for the Slavonic and Baltic adverbial or indeclinable participles, which are petrified participles with copredicative construction (cf. Kurylowicz 1973, p. 83f).

The most common objection against the term 'gerund' is that unlike the Latin gerund, the Sanskrit gerund is not connected with a proper gerundial paradigm, unless we may postulate a defective Vedic gerundial-infinitival paradigm (**-tum, -tvā, -tave, -toḥ**). On the other hand, the lack of a synchronically valid paradigm has not prevented the use of this term in some form or other for the sporadic reflexes of the ablative case of the otherwise extinct Latin gerund in the Romance languages (cf. Aalto 1949, p. 73ff.).

In other words, given that the gerund once belonged to a defective infinitival-gerundial paradigm, the term 'gerund' should have at least the same justification in Sanskrit as it has

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[19] For a discussion of the terminology in a larger areal framework, see Masica (1976, p. 109ff.).

in the Romance languages. Moreover, the ablative of the (Classical) Latin gerund was often used as a verbal adverb, and, as such, this term has been used to designate syntactically analogous non-finite categories in many of the world's languages, e.g. Japanese, Altaic, Dravidian, Tibeto-Burman and Slavonic. If there has been abuse of this term, it is in English grammar, where 'gerund' may stand for a plain action noun with nominal function and rection (cf. Huddleston 1984, p. 312ff.; see 1.5.N).

According to a different tradition that stresses the non-adnominality or indeclinability of this form, it is called 'absolutive' ("Absolutiv[um]", "l'absolutif"). This term, which originated around the middle of the nineteenth century in generally anti-Boppian German-speaking circles (cf. Boller 1847, Benfey 1852a, p. 424ff.), is also reminiscent of Schlegel's (1820) and Frank's (1823) cumbersome nomenclature ("participium praeteriti indeclinabile (adverbiale, absolutus).")

This term has been widely used especially by the Neogrammarians for corresponding categories in other Indo-European languages as well. But while it has had the undeniable advantage of being unambiguous, it is semantically rather misleading. Another problem is that 'absolutive' has acquired quite a different meaning in modern linguistics, viz as denoting the case of the 'intransitive subject' and 'transitive object' in ergative languages.

Although not entirely satisfactory and unambiguous, the term 'gerund' thus appears to be more neutral and convenient than any other current name for this category. The only denomination that could compete with it is 'verbal adverb' (Söhnen 1985), but the latter is inconvenient, since we cannot very well derive an adjectival phrase from it (e.g. 'verbal adverbial clause/phrase'). Moreover, some of the categorial features of the gerund are not compatible with verbal adverbs in other Indo-European languages (cf. 1.2.A).

1.5. SURVEY OF RESEARCH

The following brief chronological survey of research is included to facilitate subsequent references and discussions. The focus is on the various theories on the syntax, semantics and etymology of the gerund.

1.5.A. THE PANINEAN TRADITION

Pāṇini's Aṣṭādhyāyī classifies the gerunds with the infinitive(s) among the category of in-declinables ('avyaya'). The affixes of the gerunds ('ktvā', 'lyap' and 'ṇamul') and infinitive ('tumun') belong to the same class as the personal endings of a finite active verb

37

('tip'), which by the rule 3.4.67 ('kartari kṛt') express the case relation ('kāraka') of 'agent' ('kartṛ'), which according to 3.4.21 (= 33) should be identical for the gerund and the main verb(al item):

(33) P 3.4.21

  samānakartṛkayoḥ pūrvakāle
  '(The affix ktvā is applied to a root expressing that of two actions which) is situated earlier in time when (two successive actions) have the same agent.'
  Kāś: bhuktvā vrajati; pītvā vrajati. dvivacanam atantram. snātvā pītvā bhuktvā dattvā vrajati. samānakartṛkayoḥ iti kim. bhuktavati brāhmaṇe gacchati devadattaḥ. pūrvakāle iti kim. vrajati ca jalpati ca.
  'Having eaten he goes; having drunk he goes. The dual form is irrelevant: "having bathed and drunk and eaten and paid he goes". Why is it said: "In the case of two roots having the same agent"? [Because otherwise the absolute locative is used:] "When the brahmin has eaten, Devadatta goes". Why is it said: "to (the root which expresses an action) occurring earlier in time"? [Because the affix ktvā is not added to a root expressing a simultaneous action:] "He goes and at the same time he talks".'

These somewhat ambiguous grammatical rules gave rise to a long indigenous controversy, partly due to different views regarding whether the rule 3.4.21 should be read with the rule 3.4.67 or not (Murti 1986, p. 573).[20] This controversy has been discussed in considerable detail by Deshpande (1980, pp. 47-55; 1981) and Murti (1986), and the following summary and reflections draw mainly on these investigations.

    Already Kātyāyana realized that the said affixes cannot denote the same case relation as the main verb (of the sentence) when there is a difference in voice, e.g. rāmeṇa grāmaṁ gatvā jalaṁ pīyate 'by Rāma (agent: 'kartṛ'), having gone to the village, water (patient: 'karman') is drunk'. In his supplementive rule to P 3.4.26 he therefore suggested that the said affixes denote the same case relation as the main finite verb affix, regardless of whether this relation is agent or patient. In other words, the gerund would have to share the voice of the main verbal item of the complex sentence.

    But as pointed out by Patañjali in his comment on P 3.4.26, this solution does not work, because the case relation denoted by the gerund may still be different from that denoted by the main verb. Patañjali's solution was that the affixes of the gerund and infinitive do not denote any case relation at all, but merely verbal action or state as such ('bhāva').

    However, this would not account for why, in the standard construction, the gerund is

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[20] Similarly, with regard to the sense of temporal antecedence of event, the philosophers and grammarians were at variance whether the expression pūrvakāle is to be interpreted as a *bahuvrīhi* or a *karmadhāraya,* in which latter case the rule 3.4.21 would not ordain invariable relative past sense to ktvā (cf. Murti, ibid.)

coreferentially constrained at all. Thus, in a sentence like **rāmaḥ grāmaṁ gatvā jalaṁ pibati** 'Rama, having gone to the village, drinks water', the shared (logical) agent of the gerund and main verb would be expressed ('**abhihita**') by the '**tip**'-affix of the latter, but not by the '**ktvā**'-affix, despite the (expected) coreference.

This problem was sensed by several later grammarians and philosophers, and the most satisfactory solution was offered by the medieval grammarian Bhartṛhari (Vākyapadīya 3.7.81-83), whose explanation has been accepted by the later Paninean tradition.

Bhartṛhari conceded that the said affixes denote action ('**bhāva**') rather than agent ('**kartṛ**'), but this, he claimed, does not prevent them from indirectly denoting ('**abhihitavat prakāśate**') the (logical) agent by means of a more general syntactic rule saying that an element simultaneously related to a main action ('**pradhāna**') and a subordinate action ('**gauṇa**') abides by the case relation determined by the main action.

Translating into more modern terms we could paraphrase Bhartṛhari by saying that constituents higher up in the constituent hierarchy may suppress the form of coreferential constituents lower down. This solution has the advantage of not postulating deleted underlying constituents as proposed by the Mīmāṁsā philosopher Khaṇḍadeva, whose method of analysis reminds us of the more or less *ad hoc* equi-NP-deletion rules of traditional transformational grammar.

However, it may be questioned how well even Bhartṛhari's formalism works in the instances where the (logical) agent of the gerund is e.g. a dative or genitive experiencer, rather than a nominative or instrumental agent of the main clause.

Another controversial issue was the temporal value of the gerund. Exceptions to the sense of antecedence of event were found by both Kātyāyana and Patañjali in idioms like **āsyaṁ vyādāya svapiti** and **cakṣuḥ saṁmīlya hasati**. Patañjali comments on these roughly as follows: 'A superaddition to the general rule is to be provided (for expressions like) **āsyaṁ vyādāya svapiti**, because of the lack of temporal antecedence (of the action expressed by the gerund in such cases). For first he sleeps and then he opens his mouth (in the example).' (Mbhṣy. on P 3.4.21, vt. 5: **vyādāya svapityupasaṁkhyānam apūrvakālatvāt. pūrvaṁ hyasau svapiti paścād vyādadāti.**) However, Kātyāyana pointed to the ambiguity of such idioms, as recognized also by Patañjali: 'Or else not, because of the relative posteriority of the sleeping. For certainly he will sleep at least for a while after opening his mouth' (ibid.: **na vā svapnasya avarakālatvāt. avaśyam asau vyādāya muhūrtam api svapiti**).

Curiously, neither Kātyāyana nor Patañjali seem to have been aware of the interpretation that at least to the modern reader would seem more natural than   any of the suggested ones: 'he sleeps with his mouth open', lit. 'he sleeps having opened his mouth'. Similarly: 'he laughs with his eyes closed', lit. '...having closed his eyes'.

Less ambiguous exceptions to the sense of antecedence would have been idioms like

jhaṇatkṛtya patati 'it falls making [the sound] *jhaṇat*', i.e. "it falls going Bang!" (vt. on P 3.4.21, see Renou 1947, p. 167).

In addition to this basic rule, Pāṇini provided some further general rules pertaining to the use of the gerund(s). Thus, the next rule 3.4.22 prescribes the distributive or iterative-durative repetition ('āmreḍita') of either the past or non-past gerund:

(34) P 3.4.22

ābhīkṣnye ṇamul ca

≈ 'In the repeated form also **ṇamul** (the non-past gerund) may (in addition to **ktvā**) be used to express reiteration (of action).'

Kāś.: **bhojaṁ bhojaṁ/bhuktvā bhuktvā vrajati** 'he goes having eaten repeatedly', or: 'he goes eating and eating all the time'

It may be noticed, however, that in the Sanskrit literature, the repeated non-past gerund is of extremely rare occurrence, while the repeated past gerund is often used to gloss the simple non-past gerund in the Veda (cf. Renou 1935, p. 367).

The following rule forbids the use of subordinating conjunctions in connection with the gerunds:

(35) P 3.4.23

na yady anākāṅkṣe

≈ 'None (of these forms) is to be used (under the above conditions) in connection with **yad** ('when'), unless there is dependence on a superordinate clause.'

Thus one may say **yad ayaṁ bhuktvā vrajati tato 'dhīte** 'When he has walked after eating, then he studies', but not *****yad bhuktvā vrajati** 'When having eaten he goes'.

The following rule refers to a construction of the gerund that does not seem to occur in the literature:

(36) P 3.4.24

vibhāṣāgre prathamapūrveṣu

≈ '(**ktvā** and **ṇamul**) are optionally used (under the above conditions) with the words **agre, prathamam**, or **pūrvam** ('[at] first').'

Kāś.: **agre/prathamam/pūrvam vā bhojam/bhuktvā vrajati = agre bhuṅkte tataḥ vrajati**

These general rules are preceded by a few rules referring to more specific cases. Of particular interest is 3.4.18, which mentions the idiomatic and originally dialectal use of the

(past) gerund with dependence on certain particles in expressions of (preventive or inhibitive) prohibitions:

(37) P 3.4.18

alaṁkhalvoḥ pratiṣedhayoḥ prācāṁ ktvā

≈ 'According to the eastern (grammarians), **ktvā** is used in combination with the particles **alam** ('enough') and **khalu** ('indeed') to express a prohibition.'

Kāś.: **alaṁ bāle ruditvā** 'No good crying, baby!'

The particle **khalu** has been found to occur in this construction only a couple of times in the literature (e.g. Śiśupālavadha 2.70 = ex. 397, 4.4.C; cf. BW, Nachträge, s.v.). On the other hand, both the interrogative pronoun **kiṁ** 'what, why' and the regular prohibitive particle **mā** 'don't' are used in this way. Though common in the Epics and Classical literature, this originally colloquial construction never ousted the older and formally more cumbersome construction with **mā** + injunctive (or optative) in Sanskrit.

The following rule 3.4.19 is traditionally interpreted as independent, but Speyer (1886, p. 296 § 379 Rem. 1) has to my mind presented some rather pertinent arguments for considering it a continuation or elaboration on the previous one:

(38) P 3.4.19

udīcāṁ māṅo vyatihāre

(Traditional rendering: ≈) 'According to the northern (grammarians) **ktvā** is used in connection with the root **māṅ** ('exchange') to express alternation of action.'

Kāś.: **apamitya yācate** = **yācitvā apamayate** ('having offered an exchange he begs', i.e. 'he begs in turns')

Speyer assumed that it is the prohibitive particle **mā** and not the root **mā-** that is referred to, translating: "The eastern grammarians, it is said, teach the use of **alam** and **khalu** in prohibitions *in exchange* for (= *instead of* (**vyatihāre**)) **mā**, prescribed by the Northern ones." [original emphasis].

This interpretation would, indeed, make more sense in the immediate context. It is also supported by the absence of any textual verification of the correctness of the traditional interpretation and by the fact that the verbal root **mā-** is normally referred to as **meṅ** and not **māṅ**, which invariably refers to the prohibitive particle **mā**.

The last rule of this series refers to the idiomatic use of the gerund of certain verbs of motion in adpositional (= pre- or postpositional) phrases:

41

(39) P 3.4.20

    parāvarayoge ca

    ≈ '(**ktvā**) is also used to express what is situated across or near (something or somebody).'

    Kāś.: **aprāpya nadīṁ parvataḥ sthitaḥ, atikramya tu parvataṁ nadī sthitā**

    'The mountain is situated before reaching [= in front of] the river, but the river is situated after crossing [= behind] the mountain.'

This construction is somewhat aberrant if analyzed in the normal way, since the (implicit) subject of the gerund cannot be recovered from among the expressed core arguments (actants) of the main clause. However, the implicit subject of the gerund can be identified with the unexpressed 'Observer' (i.e. focus of orientation).

In addition to these rules, there are some 40 rules (3.4.24-64) pertaining specifically to the use of the non-past gerund in -**am** ('**ṇamul**'). Many of these uses are sheer idioms or lexicalizations, some of which have never been attested in the literature, although they may have been used in the colloquial. What is peculiar is that the most common type of formation in the Veda (preverb + root + -**am**, e.g. **pra+ṇód-am** 'pushing away') is not mentioned (cf. Gune 1913, p. 29). The only cases of some general interest are those mentioned in the group 3.4.59-64, referring to the adverbial use of both gerunds in constructions of the type *adverb* + **kṛ**- 'do' or **bhū**- 'be(come)', e.g. **nīcaiḥ+kṛtya/nīcaiḥ kāram/nīcaiḥ kṛtvā** 'putting down' (cf. Renou 1935, p. 373ff.).

1.5.B. FRANZ BOPP

What with the indigeneous Indian tradition, the gerund was treated in early Western Sanskrit studies as a paradigmatically isolated category corresponding to an adverbial or indeclinable past (active) participle (cf. Carey 1806, p. 155; Wilkins 1808, pp. 473-440 § 736f.). Although Forster (1810, p. 463) and Wilkins introduced Western methods in the description of Sanskrit, the first European Sanskritist to completely break away from the tradition was Franz Bopp.

Not satisfied with having a paradigmatically isolated 'indeclinable participle' in an otherwise so highly inflected language, Bopp suggested already in his pioneering work, *Über das Conjugationssystem der Sanskritsprache* (1816, pp. 43-58), that the indeclinable form in -**tvā** is really the instrumental case of a defective feminine verbal noun in -**tu**-, the accusative of which could be identified in the Sanskrit infinitive and Latin supine in -**tum**. Later (Bopp 1834, p. 237) these comparisons were extended to the other -**tu**-infinitives.

The forms in -**tya** and -**ya** Bopp derived analogically from infinitival stems in -**ti**- and

-i-, with secondary shortening of the case ending due to adverbialization (cf. **atha** vs. **kathā**, **yathā**, etc.; Bopp 1816, p. 54f.). Later when the Ṛgvedic variant in -(t)yā came to be known, Bopp found a parallel to this shortening in the instrumental case of polysyllabic **a**-stems in Avestan, e.g. **zaôša** "mit Willen" (< **zaôša-**, contrast **xā** < **xa-** 'own' = Sanskrit **sva-**; Bopp 1832, p. 250 § 638; 1834, p. 290 § 569).

Bopp was well aware of the differences in the root grade between the gerund in -**tvā** and infinitive in -**tum**, e.g. **śrutvā** vs. **śrotum** from **śru-** 'hear'. But apart from the observations that this is sometimes brought about by the frequent addition of the union-vowel -**i**- before the ending of the infinitive and that the gerund may have alternative forms, the only general explanation he could find for this was the "different [prosodic] weights" of the endings (Bopp 1834, p. 286). In some way this anticipated the later Neogrammarian approach to accent shift and apophony in nominal paradigms.

But further problems for Bopp's etymological theory arose due to the Vedic variants in -**tvī́**, *-**tvīnam** (accent and use unknown) and -**tvā́ya** (cf. P 7.1.47-48). The former Bopp believed were based on a spontaneous weakening of the final vowel of -**tvā** (cf. **yunī́-mas** : **yu-nā́-mas**) with the optional addition of an enclitic element -**na-m**, as reflected in Vedic personal endings like **dadhā-ta-na** and reanalyzed derivatives like **nū́-nam** 'now'. Alternatively the form in -**tvī́** was explained as an irregular locative of a feminine **tu**-stem (Bopp 1832, p. 264ff. § 630). The ending -**tvā́ya** he explained as -**tvā́** + -**ya**, to be compared with other pleonastic formations in the Veda (Bopp 1832, p. 247).

To support these etymological hypotheses, Bopp (1816, p. 43ff.) set out to prove that, unlike the participles, the gerund is adverbial by construction and rather indifferent to voice and (relative) tense. He pointed also to the syntactic parallel in the ablative of the Latin gerund when answering the question 'Whereby?' ("Wodurch?"). The conspicuous difference in relative temporal value he thought was mainly a consequence of the frequent use of the Sanskrit gerund to signify the means, background or reason of an action, and hence liability to be translated by a past participle in European languages:

(40) Hit. [2.3]

  tvam uccaiḥ śabdam kṛtvā svāminam katham na jāgarayasi
  "Tu vocibus clamorem faciundo [**kṛtvā**] dominum cur non evigilas? —
  Warum weckest du nicht deinen Herrn durch Lärmenmachung, oder Lärmen
  gemacht habend?" (Bopp 1816, p. 45)

(41) BhG [2.37]

  hato vā prāpsyasi svargam | jitvā vā bhokṣyase mahīm
  "Interfectus obtinebis coelum, vincendo [**jitvā**] regnabis terram. —
  Durch Siegung oder gesiegt habend." (ibid.)

43

A more fruitful approach would have been to study the conditions under which the Latin present participle or gerund can be translated by the Sanskrit gerund. In that case, it would be possible to argue with some confidence for a 'non-preterital' sense of the gerund in only one of Bopp's examples:

(42) Rm [1.64.2]
    maunaṁ varṣasahasrasya kṛtvā vratam uttamam
    cakārāpratimaṁ rāma tapaḥ paramaduṣkaram
    "Silentium mille annorum faciundo [**kṛtvā**] votum supremam faciebat incomparabilem, o Rāma!, poenitentiam perdifficilem factu." (Bopp 1816, p. 48)
    Cf. "Having fulfilled the unequalled vow of thousand years' silence he completed, o Rāma, the most difficult course of sacred mortification." (Carey & Marshman, quoted according to Bopp, ibid.).

But attractive as Bopp's rendering of the gerund as a temporally neutralized instrumental complement in (42) is, the preceding and succeeding contexts (43)-(44) would nevertheless support the standard reading, as given in the English translation of (42):

(43) Rm 1.64.1
    atha haimavatīṁ rāma diśaṁ tyaktvā mahāmuniḥ
    pūrvaṁ diśam anuprāpya tapas tepe sudāruṇam
    'Then having left the snowy quarter and reached the eastern quarter, O Rāma, the great sage performed a most hideous penance.'

(44) Rm 1.64.3
    pūrṇe varṣasahasre tu kāṣṭabhūtaṁ mahāmunim
    vighnair bahubhir ādhūtaṁ krodho nāntaram āviśat
    'And after a thousand years had elapsed, anger no longer entered that great sage, who had become like a piece of wood, shaken by so many impediments.'

In support of his theory Bopp also stressed the use of either the gerund or an instrumental action noun as a complement of the particles prescribed by P 3.4.18 in 'prohibitive' constructions: **alaṁ/khalu bhuktvā** "Genug des Essens, o weg mir Essung" = **alaṁ/khalu bhojanena** "weg mir Speise" (Bopp 1816, p. 52; cf. Forster 1810, p. 463). However, this construction does not necessarily support the etymological theory, since it can very well be derived on the basis of the relative past tense of the gerund ('enough/no good upon eating [any more or in the future]!' > 'no good eating!' > 'don't eat!').

    Bopp explained the predominantly past relative tense of the gerund by assuming a gradual generalization of the sense of anteriority as following from the instrumental or

causal meaning of the instrumental case. A similar semantic development he sought in instrumental time expressions like **acireṇa** 'after a short time' (analogically: **gatvā** 'after going').

But such expressions denote actually only the temporal extent or duration of the action (*instrumentalis prosecutivus*). The literal sense of **acireṇa** is 'within the course/lapse of a brief spell', cf. Greek διὰ βραχέος/χρόνου 'within (after) a short while/time' and χρόνῳ 'with (the lapse of) time > 'after some time' (cf. Krahe 1972, p. 98; Gonda 1963, p. 74f.). While it would be possible to derive the sense of 'after X' from such expressions, the problem is that the 'temporal' interpretation of these instrumental nouns is linked with their lexical meaning. We do not find purely temporal (let alone preterital) interpretations of instrumental *action nouns* in Sanskrit and other Indo-European languages.

In other words, given a form like **bhojanena** < **bhojana-** 'eating', it could mean 'by/in the manner of eating' or 'because of eating' but not 'while eating' or 'after eating' (Speijer 1886, p. 57 § 78; Delbrück 1888, p. 128ff.; Whitney 1889, p. 94 § 281d; Delbrück 1893 = Grundriss III:1, p. 231ff. § 102ff.).

Similarly, the expression of cause or background circumstance cannot lead to the generalization of the sense of temporal antecedence as later argued also by Delbrück (1888, p. 405) and more recently by Haudry (1970, p. 46), since the said temporal inference is parasitic on the causal implicature. A reduction of logical implicature to purely temporal implicature would be as counter-intuitive and unprecedented as the semantic change 'because'/'by the means of' > 'after'. The reason why the opposite development occurs is that the logical implicature is not dependent on a specific time relation, i.e. a temporal conjunction may change into a causal one independently of whether it refers to preceding or simultaneous time, cf. 'since', 'while', etc.

1.5.C. CONTEMPORARY CRITICISM OF BOPP'S THEORY

Bopp's theory was received with scepticism by many of his contemporaries. In particular, the difference of root grade in infinitival vs. gerundial forms (cf. **gan-tum** vs. **ga-tvā**) arose suspicion against a connection between the gerund and the (defective) infinitival paradigm. Thus to Bopp's reviewer August Wilhelm von Schlegel (1820, p. 124ff.) the gerund still held the character of an absolute or conjunctive participle, corresponding to the indeclinable compound participles of French and English: **taṁ dṛṣtvā** = *"eo viso"*, **ityuktvā** = *"ita locutus"*, **kṛtvā** = *"ayant fait/having done"*. Schlegel also emphasized that the ability of the gerund to express a simultaneous state in no way cancels its basically past relative tense, since the sense of a simultaneous state can usually be derived from the

45

sense of completed action. Moreover, only *relative* past tense can explain cases where the gerund has the temporal value of a *futurum exactum*:

(45) Nala 10.22
    katham buddhvā bhaviṣyati
    "Wie wird ihr sein, wenn sie erwacht sein wird?" (Schlegel 1820, p. 125)

Bopp defended his theory by maintaining that the literal (read: [quasi-]etymological) translation of an expression such as **taṁ dṛṣṭvā** is not *"eo viso"*, but *"post actionem videndi eum"* or *"nach Sehen ihn"* (Bopp 1861, p. 250ff. § 849 fn.).

    Christian Lassen (1830, p. 103ff.), on the other hand, did accept Bopp's theory about the nominal origin of the forms of the gerund, but rejected the connection with the infinitival stems. Moreover, instead of deriving the longer variants from the shorter ones, he preferred the opposite derivation: **-tvan-** > ***-tvānam** (acc.)[21] > **-tvā** and (by weakening of **-ā-** >) **-tvīnam** > **-tvī**; alternatively: **-tva-** > **-tvāya** (dat.) > **-tvā**. A basic problem with this solution is the accusative case of the 'older' gerund. He could find no explanation for the variants in **-ya** and **-tya**, but realized that the position of the accent must have something to do with the suppletion of the forms.

    Kuhn (1844, p. 114) presented quite a different explanation of **-tvī**, which has been revived by Bader (1977), viz as the instrumental of an extended feminine stem ***-tu-ī-**, formed from **-tu-** with the addition of the secondary derivative affix **-ī-**, cf. **dhṛṣṇu-** > **dhṛṣṇvī-** > **dhṛṣṇvī** (instr.). Bopp (1861, p. 252 fn.) suggested at this point a more cumbersome derivation: ***-tu-y-ā** (instr., cf. **amuyā, dhṛṣṇuyā**) > **-tvī** (cf. **dhṛṣṇvī**, as if from **dhṛṣṇuyā**).

1.5.D. WILHELM VON HUMBOLDT

Whereas Bopp had approached the gerund with the expressed objective of proving an etymological theory, Humboldt professed a more modern linguistic approach, where historical matters are to be kept at bay in the synchronic description. Despite his meagre corpus (Hitopadeśa, Nala and (the first books of the) Rāmāyaṇa), Humboldt (1823-1824) produced an impressive account and comparative analysis of the Sanskrit gerund, the major results of which study are summarized below:

    The category in question belongs to the verbal paradigm, because it takes an accusative object. It functions as the predicate verb of an active, more seldom passive, subordinate

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[21] ***-tvānam** is really based on a misprint in the Kāśikāvṛtti, although it could be supported by Middle Indo-Aryan **-ttāṇam** (cf. 6.3.A).

clause, which is (typically) asyndetically connected to another, active or passive, finite or non-finite clause, which may be called the superordinate clause. It denotes a preceding, simultaneous or qualifying action referring to (part of) the subject, agent, or some other constituent of the superordinate clause as determined by the context. More seldom it refers to an independent subject of its own, which, however, is rarely expressed.

It is functionally associated with the system of participles, gerunds, infinitives and supines in that it participates in the formation of non-finite temporal and circumstantial clauses. It resembles the class of infinitives and gerunds in being indeclinable (except for the suppletion -tvā/-(t)ya), and in being relatively indifferent to voice and tense and etymologically derived from nominal stems. But being sporadically capable of taking an independent subject it shows also some affinity with the participles, which fact points to some degree of (language-specific) recategorization.

These synchronic features were found to be more or less compatible with Bopp's etymological explanation of the form in -tvā. On the other hand, Humboldt did not consider the variant in -(t)ya to be derived from an instrumental form. Finding no case ending here, he concluded that it is an uninflected form or a kind of 'status absolutus' of the gerundival stem -(t)ya-. The form in -am, which contrasts functionally with the two previous forms, was explained in the usual way as the accusative of a thematic action noun.

All of these statements are not, however, borne out by Humboldt's examples. In particular, the alleged temporal indifference of the gerund is not verified by the ambiguous and meagre evidence:

(46) Hit. (ed. London [?Hamilton], p. 22, 1. 10 = ed. Schlegel & Lassen 1.4, p. 26, 1. 17)
   kim atrāvasthāya mayā kartavyam
   "Was soll ich im hier bleiben thun? / Was sollte ich thun, nachdem ich hier geblieben wäre, oder sein würde?" (Humboldt 1823, p. 459 [ex. 33])

(47) Nala 10.10
   kiṁ nu me syād idaṁ kṛtvā kiṁ nu me syād akurvataḥ
   "Was kann mir nun sein beim dieses thun, was nun mir, dem nicht thuenden?" (Humboldt 1823, p. 460 [ex.34])

In (46) two possible readings are given, but judging from the primarily dynamic aspect of **ava+sthā-**, the literal sense is in accordance with the second reading. In (47) it may be argued that the gerund expresses the preceding cause of a following future event, allowing a normal rendering of the gerund: 'What, I wonder, might happen to me upon doing this, and what, on the other hand, might happen to me not doing it?' Humboldt's main argument for not rendering the gerund in this way was the syntactic parallel **kṛtvā** (gerund):

akurvataḥ (present participle). But as pointed out by Schlegel in his editorial note to the passage, it is the use of the present participle here that requires explanation, and, in fact, can also be explained as implying a continuous state with potential future implicature.

Similarly, we may doubt the passive sense and absolute construction in many cases, where the interpretation is ambiguous or normalized in a variant reading, e.g.:

(48) Hit. (ed. London, p. 7, l. 2 = ed. Schlegel & Lassen 1.1.3)
utthāyotthāya boddhavyaṁ mahad bhayam upasthitam
"Jedesmal beim Aufstehen muß man erkennen eine große sich erhebende Besorgniß."
(Humboldt 1823, p. 445 [ex. 20])

(49) Hit. (p. 35, l. 12-13 = ed. Schlegel & Lassen 1.8, p. 40, l. 10)
tato dūtī (ed. Serampore: **dūtikayā**; ms. Paris: **dūtyā**) **gatvā tat sarvaṁ tuṅgabalasyāgre niveditam**
"Darauf da die Botin gegangen (gekommen) war, ward dies alles vor dem T. gemeldet." (Humboldt 1823, p. 448 [ex. 23])

(50) Hit. (p. 54, l. 16-17 = ed. Schlegel & Lassen 2.5, p. 60, l. 1)
tato vānaraiḥ (ed. Serampore & ms. Paris: **vānarāḥ**) **ghaṇṭāṁ parityajya phalāsaktā babhūvuḥ**
"Darauf, nach Verlassung der Glocke durch die Affen, wurden sie (nämlich die Affen) auf die Früchte aufmerksam." (Humboldt 1823, p. 450 [ex. 25])

(51) Hit. (p. 8, l. 27 = ed. Schlegel & Lassen 1.2, p. 12, l. 4)
ityuktvā śanaiḥ śanair upagamya tena vyāghreṇa dhṛtaḥ sa pāntho 'cintayat
"Nachdem er (nämlich der Tiger) also gesprochen hatte, und langsam herangekommen war, überlegte der von dem Tiger festgehaltene Wanderer."
(Humboldt 1823, p. 445 [ex. 15])

In (48) the gerund is actually not passive in sense, but impersonal, with an understood generic subject (cf. Schlegel's editorial note and translation: "Quotiescunque surrexeris, cogitandum: *Ingens periculum imminet*" [original emphasis]).

The allegedly absolute constructions in (49) and (50) are probably nothing but anomalous readings rectified in the Serampore edition.

In (51) we do not have a fully independent agent of the gerund, since this is coreferential with the head of the conjunctive participle **dhṛtaḥ**, which refers to the subject of the sentence. Thus we could in principle connect the gerundial clause with the conjunctive

48

participial clause: 'the wayfarer who was caught by the tiger having approached him slowly upon saying this thought'.

There are also semi-absolute constructions where the subject of the gerund is part of a non-singular subject (e.g. Nala 5.34-35) or where the subject of the gerund is an oblique noun with personal reference, some physical or psychological part of which is affected and expressed as the subject in the superordinate clause:

(52) Rm 1.2.19 (ed. Calcutta)
tasyedam uktvā vacanaṁ cintābhūt
"Diese Rede gesagt habend, war sein Gedanke." (Humboldt 1823, p. 444 [ex.11])

(53) Hit. (p. 24, l. 18-19 = ed. Schlegel & Lassen 1.6.110)
suveśaṁ puruṣaṁ dṛṣṭvā bhrātaraṁ yadi vā sutam
yoniḥ klidyati nārīṇāṁ satyaṁ satyaṁ hi nārada
(Humboldt 1823, p. 444f. [ex. 13])
'Upon seeing a beautifully dressed man, be it a brother or a son, the vagina of women gets wet, and that's a fact, Nārada!'

1.5.E. THEODOR BENFEY

Benfey's *Vollständige Grammatik der Sanskrit-Sprache* (1852a) contains the first more comprehensive account of the formation of the gerund ("Absolutiv[um]") in Vedic and Classical Sanskrit. Like Lassen, Benfey believed the specifically Vedic forms of the gerund to be older than the Classical forms, which he derived by assuming an unlikely shortening of the underlying stem suffix: -**tvana**- > -**tvan**- (> *-**tvānam**) > -**tva**- : -**tvāya** (dat.), -**tvā** (instr.), *-**tve** > -**tvī** (loc.) + **na-m** (cf. **purā-ṇa-m**) > -**tvīnam** (Benfey 1852a, p. 424ff. § 908ff.; 1852b, p. 215ff.).

As for the variant in -(**t**)**ya**/-(**t**)**yā**, he was the first to prove that the long vowel cannot be just a metrical lengthening in the Ṛgveda (Benfey 1879; cf. Zubaty 1889). Unlike Bopp, but in agreement with Humboldt, he derived this allomorph from the gerundival (**t**)**ya**-stem, which he thought underlay neuter action nouns in -(**t**)**ya**-.

In 1873 Benfey published a different theory, according to which -**tvā** would represent the instrumental of a lost active past participle in *-**tva**- (cf. the variants -**na**- and -**va**-), as supposedly reflected in Latin **mortuus** (< **mortuos**) and similar formations now mostly explained by analogy (cf. **vīvus**, see Brugmann 1911 = Grundriss[2] II:1, p. 448 § 338b and Debrunner 1954 = Ai. Gr. II:2, p. 711 § 526a). According to this derivation, a

form like **mṛtvā** would have originally meant: "mit dem Vollzogenhaben der Handlung des Sterbens" (Benfey 1873, p. 186).

Benfey's theory was critically reviewed by Barth (1875), who, however, joined him in his chastising of Bopp. Barth's theory was that there may have been both a strong and a weak **tu**-stem as well as a weak and a strong **tva**-stem, accounting for the multifarious formations, e.g. **kár-tu-** (> **kártum**) vs. *****kṛ-tú-** (> **kṛtví**, possibly also > **kṛtvâ**) and **kár-tva-** (= gerundive) vs. *****kṛtvá-** (> **kṛtvâ**). Similarly, de Saussure (1878, p. 205) supported a derivation of -**tvā** from a secondary thematic stem in -**tva-** < -**tu-**.

1.5.F. WILLIAM DWIGHT WHITNEY

In the first edition of his *Sanskrit Grammar* (1879, pp. 340-343 §§ 989-995) Whitney defined the gerund simply as a petrified instrumental verbal noun used as an adjunct to the logical subject (left undefined) of a clause, and having "the virtual value of an indeclinable participle, present or past". This definition would be partly in accord with the syntactic theory that regards all verbs as categorically secondary to nouns, due to their combinatorial properties (cf. Lyons 1968, p. 327). But there are verbs that take no nominal complements at all, yet occurring in the gerund form (e.g. **vṛṣ-** 'rain': **vṛṣṭvā** 'having rained').

In the second edition of this work (1889, pp. 358-359 § 994) we find in addition to the morphological description also a somewhat more comprehensive description of the syntax of the gerund. Whitney noticed i.a. the occasional semi-absolute and periphrastic constructions as well as the Brāhmaṇic use of the gerund in complements of **man-** 'think, believe' (+ **iva** 'as if'), e.g. **tám hiṁsitvèva mene** (ŚB) "he thought he had hurt him". No changes in the syntactic and semantic character of this category were observed for the post-Vedic language, except for the conspicuous increase of its use. The number of gerunds is reported to be three times greater in the Nala and Bhagavadgītā than in the Ṛgveda, which has ten times more verb forms.

With the following example Whitney (1889, p. 355 § 989) also claimed that the gerund is essentially indifferent to (relative) tense: **śrutvaiva cābruvan** "and hearing (or having heard) they spoke". But evidently the temporal reference of the gerund 'hearing' is not to a simultaneous action even in the English translation (≠ 'and while/at the time of hearing, they spoke'). Thus one gets the disturbing impression from Whitney's reasoning that the mere possibility of translating the Sanskrit gerund by a presential or non-preterital verb-form in English (or any other European language) is a sufficient proof of its then referring to a simultaneous action. (Contrast the much more critical view presented by Delbrück 1888, p. 405 and Hendriksen 1944, p. 113f.)

1.5.G. JULIUS SPEYER

As mentioned in 1.2.A., Speyer (1886, pp. 296-300 §§ 379-382; 1896, p. 68f. § 223 f.) tried to explain the characteristics and use of the gerund syncretistically as a category intermediate between infinitive and participle.

The original infinitival character of the past gerund he thought was reflected in its being able to take a generic subject and be construed with the particles **alam** and **kim**. The relative past tense he explained as following from its original aorist meaning as encoded in its weak root grade. Accordingly a form like **kṛtvā** would originally have meant something like: "in Folge der (vollzogenen) Handlung" (Speyer 1896, p. 69 § 223). From this stage it was supposed to have gradually developed into something like an aorist participle of the active, as seen in its construction with **man- + iva** and in its ability to "cut short subordinate and coordinate clauses" (Speijer 1886, p. 297 § 380 and p. 7 § 14).

The original temporal indifference Speyer thought was reflected in its use in periphrastic constructions with durative or stative auxiliaries that are also construed with the present participle, e.g. **ās-** 'sit; keep on', **sthā-** 'stand; be in a state', etc.:

(54) Manu 7.195

> ... **uparudhyārim āsīta**
>
> "he (= the king) must keep the enemy invested" (Speijer 1886, p. 299 § 381)

(55) Kum. 1.1cd

> ... **pūrvāparau toyanidhī vagāhya** (ed. Scharpé: **vārinidhī vigāhya**) **sthitaḥ pṛthivyā iva mānadaṇḍaḥ**
>
> "extending to both oceans, the eastern and the western, (Mount Himālaya) stands as the measuring stick of the earth." (ibid.)
>
> Lit. 'Having penetrated both the oceans, ... (Mount Himalaya) stands...'

However, unlike constructions with the present participle, these constructions do not signify continuous actions, but continuous states, where the gerund denotes a completed action and the auxiliary the continuity of the implied resulting state. Thus we must, contrary to Speyer's contention, contrast periphrastic constructions based on the gerund with such based on the present participle or non-past gerund, which do express continuous action, cf. **uparudhya arim ās-** 'keep on having besieged the enemy' (= "keep the enemy invested") vs. **uparundhann arim ās-** 'keep/continue besieging the enemy'.

The only convincing examples of the occasionally non-preterital sense of the gerund are the following, where the gerund functions as a temporally neutralized adjunct or complement of manner:

(56) Rm 3.43.9 (ed. Bombay = cr. ed. Poona 3.41.8)

evaṁ bruvāṇaṁ kākutsthaṁ prativārya śucismitā | uvāca sītā

"Laxmana thus speaking and dissuading her." (Speijer 1886, p. 298 § 381)

Lit. 'To the descendant of Kakutstha, thus speaking dissuadingly (**prativārya** ≠ having dissuaded) , Sītā said smiling sweetly'

(57) Daś. p. 182 [6. ucchv.; ed. Kale, p. 169]

ahaṁ yuṣmadājñayā pitṛvanam abhirakṣya tadupajīvī prativasāmi

"by your orders I guard the cemetery and in virtue of this function it is there that I dwell" (ibid.)

Lit. 'by your order guarding the cemetery, subsisting on that, I live there'

In (56) the temporal neutralization of the gerund could also be explained by the super-ordinate present participle, inasmuch as two present participles are not usually combined in a subordinate relationship (cf. Hendriksen 1944, pp. 109, 115).

In (57), which is somewhat anacoluthic, the gerund seems to function as an obligatory manner complement of the main verb **prativasāmi** in apposition with the verbal adjective **tadupajīvī**, which refers anaphorically to the gerundial clause. This use can be compared with similar cases of temporal neutralization of the Pali and later Indo-Aryan gerund (cf. Hendriksen 1944, p. 114; see section 6.3).

1.5.H. BERTHOLD DELBRÜCK

Delbrück's *Altindische Syntax* (1888, pp. 401-409 §§ 225-226) contains the first more detailed syntactic account of the Vedic gerunds ("Absolutiva"), especially the allegedly always compounded non-past gerund. The gerunds are syntactically distinguished from the participles on the basis of their being adverbal rather than adnominal by construction.

The past gerund is derived in the usual way as a petrified instrumental action noun that has come to acquire more or less the function of a past active conjunctive participle, as seen in its gradually supplanting the perfect participle (-**vas**-/-**āna**-) in the nominative in Vedic prose (Delbrück 1888, p. 377).

Contrary to all his predecessors, Delbrück stated that he had never found a case of the gerund (in the Veda) where it could not be interpreted as denoting a specifically anterior action in relation to the "main action". In particular, he realized that the gerund may express relative anteriority even in connection with stative or durative "auxiliaries" like **car**- 'move; keep on', **sthā**- 'stand; be in a state', **ās**- 'sit; keep on', etc.

In spite of this he pointed also to cases, where the past gerund is paralleled by the non-

past gerund, but he was unable to account for this sort of alternation, e.g.

(58) TS 3.1.2.3
   abhikrámya juhuyát (quoted as **juhoti**)
   "er giesst, nachdem er hinzugetreten ist" (Delbrück 1888, p. 405)

(59) TS 2.6.1.4
   abhikrámam juhoti
   "er giesst unter Hinzutreten" (ibid.)

Considering that in reality the libation cannot occur before the stepping up to the sacrificial fire, the past rather than the non-past gerund would seem more natural here. On the other hand, the actions may overlap partly and the stepping up to the fire can alternatively be viewed as the manner of performing the rite. These considerations might provide a rational explanation for the use of the non-past gerund as well.

Among the anomalous constructions, the most interesting are those absolute constructions in the Śatapathabrāhmaṇa where the gerund has an expressed independent subject, e.g.:

(60) ŚB 2.3.1.10 (cf. 1.3.1.25, 2.6.3.7)
   té paśávo 'mūlā óṣadhīr mūlínīr jagdhvā́paḥ pītvā́ tā́ta eṣá rásaḥ sáṁ bhavati
   "Wenn nun die wurzellosen Thiere die bewurzelten Pflanzen gegessen und das Wasser getrunken haben, dann entsteht der Lebenssaft." (Delbrück 1888, p. 408)

Note, however, also the anaphoric connective **tátaḥ** which establishes a thematic connection between the gerundial and main clause.

1.5.I. THE NEOGRAMMARIANS

The partial clarification of the rules of paradigmatic accent shift and apophony in Indo-European was suited to shed new light on Bopp's theory about the etymology of the gerund in -**tvā**. The reduced (zero) grade and terminational accent of the gerund in -**tvā́**, as against the normal(ized) '**guṇa**' grade and radical accent of the infinitives in -**tum**, -**tave** and -**toḥ**, could now be explained as a relic of a proto-Indo-European shift of accent (and subsequent apophony) in nominal paradigms (cf. Brugmann 1889 = Grundriss II:1, p.

305ff. § 108).

The reconstructed **tu**-paradigm was thus supposed to have had the accent on the root or stem in the 'strong cases' (nom., acc.sg. and du., nom.pl.), but on the termination in the 'weak cases' (cf. **sán-uḥ** : **sn-óḥ** 'summit'). Thus: √**ei**- 'go' > *__eitu__- 'going' > **étum** (acc.), **itvā́** (instr. = ger.), *__itáve__ (> **étave** = dat.), *__itós__ (> **étoḥ** = abl.-gen.). The paradigmatic leveling within the infinitival paradigm on the basis of the strong accented root grade of the accusative form was thought to have escaped the instrumental (= gerund), owing to its early isolation from the paradigm due to its functional differentiation (cf. Kretschmer 1892, p. 328; Kurylowicz 1968, pp. 38-40; Haudry 1979, p. 85f.).

However, the picture was somewhat disturbed by Pedersen's discovery (1925) that there may have been two distinct types of paradigmatic accent shift in Indo-European nominal inflection. In 'hysterodynamic' paradigms the accent was on the (non-reduced) stem suffix in the strong cases, shifting to the termination in the weak ones (with subsequent weakening of the stem), while in 'proterodynamic' paradigms the accent was on the root in the strong cases, shifting to the stem in the weak ones, with weakening of the termination, e.g. *__-u-ós__ vs. *__-eú-s__ (gen.sg.), cf. Ved. **madhv-aḥ** : Cl. Skt. **madho-ḥ**.

The suffixal accent and weakened termination of the infinitives would point to a proterodynamic type of inflection, while the terminational accent of the gerund would suggest a hysterodynamic type of inflection (Kuiper 1942, pp. 195, 213). This meant that the gerund and infinitives stem from different **tu**-paradigms, or that the inflection of the said **tu**-paradigm has changed after the separation of the instrumental (gerund). But considering that the expected proterodynamic instrumental *__-áv-ā__ for **-v-ā́** has never been attested for any **u**-paradigm, the only synchronic discrepancy is the weak grade of the root.

Another difficulty was the derivation of the variant in **-(t)ya** from **i**- and **ti**-stems, which show no sign of suppletion either with each other or with **tu**-stems, besides being morphologically opaque. It was suggested that **-(t)ya** contains the ancient Indo-European instrumental ending *__-e/-o__ (for non-thematic stems), as reflected in Latin **ped-e** and perhaps the Greek adverbs πεδά, παρά, ἄμα, etc. (cf. Brugmann 1911 = Grundriss² II:2, p. 194 § 193; Debrunner & Wackernagel 1930 = Ai. Gr. III, p. 35 § 12b; Hirt 1892, p. 13ff.: **-a** < *__-m̥__). A form like **pratibhídya** was then to be etymologized as **prati**+**bhíd-y-a** "mit Spalten" (Brugmann, ibid.). Contrary to the R̥gvedic evidence (Benfey 1879, Zubaty 1889), this would, however, imply that the long vowel is secondary.

A different solution to these problems was presented by Neisser (1906), who connected the gerund in **-(t)ya** etymologically with neuter action nouns in **-(t)ya-** by the following criteria: Both formations are almost always compounded and exhibit reduced grade and accent of the root as well as an automatic **t**-increment after a short root vowel (e.g. **havir**+**ád-ya-**, **vr̥tra**+**há-t-ya-** : **alaṁ**+**kr̥-t-ya**, **vi**+**há-t-ya**). By contrast, like the gerund in **-tvā**, neuter action nouns in **-tu-** show a marked preference for simplex bases

(e.g. **gātú-, pitú-, r̥tú-, dâtu-**).

Despite certain obvious morphological differences between the said gerundial and nominal formations in **-tu-/-(t)ya-**, Brugmann accepted Neisser's theory in the second edition of Grundriss II:2 (p. 189 § 188 Anm. 1), where he proposed that the shortening of the final vowel of the gerund in **-(t)yā** may be compared with the (alleged) shortening of Vedic instrumentals of compound non-thematic stems like **prá+yukti** (cf. **prá+yutī**).

With the qualification that **-(t)ya** may be the pure stem or a *casus absolutus* (as otherwise occurring only in compounds), this theory was supported by Debrunner in Ai. Gr. II:2 (p. 788 § 641).

The most problematical form was that in **-tví**, which had generally come to be considered an (irregular) locative of the infinitival **tu**-stem (cf. Bopp 1832, p. 264ff.; Bartholomae 1889, p. 239ff.; Brugmann 1911 = Grundriss[2] II:2, p. 1417 § 1090; Macdonell 1907, p. 412 § 589a). But in view of the fact that neither regular nor irregular locatives that could match **-tví** have actually been attested in Indo-Aryan **u**-paradigms, the only possible terminations being **-au/-ā**, **-avi**, **-vām** (fem.), **-o** and **-uni** (neutr.) (cf. Debrunner & Wackernagel 1930 = Ai. Gr. III, p. 154f.), the tenacity of this explanation is surprising. The only chance for **-tví** to be a locative is if it derives from an **ī**-stem.[22]

A widely supported explanation was finally offered by Blankenstein (1907, p. 106), according to which **-tvī** is the contamination of a lost gerund in *-tī < -ti- with **-tvâ** (cf. Debrunner 1954 = Ai. Gr. II:2, p. 654 § 484b).

These theories by no means exhaust the ingenuity and imagination displayed during this period in finding explanations for the many problematical forms and functions of the gerund. It was even suggested that the category as such goes back to the parent language, but was lost in the other branches. Ludwig (1896/7) thus argued that the bare root could originally have functioned as "Absolutivum" (gerund), explaining why such 'dummy morphemes' like **-(t)ya** could be adapted to this function.

A somewhat similar hypothesis was proposed by Hermann Jacobi (1897), who pointed to the lack of a common Indo-European set of relative pronominal stems and conjunctions. Comparing with (allegedly) typologically similar cases, he concluded that proto-Indo-European subordinate clauses ·must have been based on non-finite (gerundial and participial) constructions, as e.g. in Altaic, Uralic, Dravidian and Japanese. Then with the independent development of conjunctions and absolute participles, the gerunds disappeared outside Indo-Aryan, except for mainly relic-like verbal adverbs in Latin and Homeric Greek (cf. Meyer 1857), accusative gerunds in (mostly young) Avestan (cf. Bartholomae 1901, p. 141ff., against which Benveniste 1935) and adverbially used instrumentals of feminine **ā**-stems in Baltic (cf. Zubaty 1894).

This hypothesis has been revived in a less stringent form by e.g. Lehmann (1979) on

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[22] Even **-tvâya** was once explained by Bartholomae (ibid.) as an old locative < *-**tváyā** or *-**tvaya** (alternatively the instrumental of a feminine stem in **-tvâ**), comparable to Avestan locatives in **-ā** or **-a**.

the further basis of the probably SOV-order and lack of postposed subordinate clauses in proto-Indo-European. Hermann (1894) had postulated as many as twelve different formal criteria by which a clause may be classified as syntactically subordinate (e.g. subordinating conjunctions, obligatory switch of mood, tense or person, and constraints on word order or prosody), but concluded that proto-Indo-European did not consistently formalize the distinction between coordinate and subordinate clauses.[23] This 'classical' view has been contested by Bednarczuk (1971, p. 155) on the basis of the final stressed position of the verb and tendency to avoid *tmesis* in the subordinate clause in proto-Indo-European.

More recent syntactic investigations have shown that the most ancient pattern of complex (vs. compound) sentence formation in Indo-European was actually not by the means of non-finite or subordinate clauses but by the means of finite *correlative* structures where the initial (> 'relative' or 'subordinate') clause had the discourse function of 'topic' or 'background' and the correlative or resumptive (> 'superordinate') clause had the discourse function of 'comment' (Holland 1984; cf. also Porzig 1923; Minard 1936; Haudry 1973; Rousseau 1984).

1.5.J. PANDURANG GUNE

Gune's dissertation (1913) on the gerunds in the Ṛgveda, Aitareya- und Śatapatha-brāhmaṇa, contained some new material and discoveries, but did not significantly differ in its method from previous studies. The focus was on the Brāhmaṇas, which is understandable in view of the much greater frequency of the gerund there.

In the traditional vein, the point of departure is a discussion of the etymology of the forms. Following Benfey (1852a, 1852b), -tvā, -tvāya, -tvī, -tvīnam and *-tvānam are explained as deriving from a stem pair -tva-/*-tvī-, but only -tvāya is considered to contain a case ending (dative), and hence not amenable to be extended by -nam.

It will be remembered that a similar analysis for the form in -(t)ya had been proposed by Humboldt (1824), and later it was to be advocated by Burrow (1949, p. 22f.; 1973, p. 172; see 6.2). The long vowel in -tvā was explained by Gune as a spontaneous lengthening as in the ending of the middle present participle -māna- (cf. Greek -μενος).

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[23] Apparently, Hermann did not, however, deny the distinction between "subordination" and "co-ordination" for proto-Indo-European on a semantic level in terms of asymmetric vs. symmetric interpropositional relations. Symmetric relations (e.g. additive, disjunctive, adversative and alternative) are functionally opposed to asymmetric ones (e.g. temporal, conditional, causal, comparative, relative and complemental) in that they do not logically imply a head-modifier distinction. (Cf. Bednarczuk 1971.) The problem is that the formal coding of these relations is not transparent: asymmetric relations are sometimes expressed by specifically coordinating conjunctions, cf. the conditional and various circumstantial uses of the conjunction 'and' in English and many other languages.

An interesting observation about the morphology of the gerund is that after the Ṛgveda, gerunds in -(t)ya/-(t)yā compounded with a nominal stem (e.g. hasta+gṛhya 'having taken by the hand') are recast as compounded gerunds in -am (cf. hastagrāham, padāvagrāham, aṅgasamākhyāyam, nāmagrāham) or analyzed as complement + simplex gerund. Gune's conclusion was that the gerund in -am could originally be freely formed from both simplex and compounded verbs, although the simplex forms were less favored (Gune 1913, p. 18). Most of the Vedic examples of the uncompounded gerund in -am have nevertheless been rejected by Renou (1935).

Concerning the use of the gerunds, there are two particularly interesting observations. First, the past gerund is found to be more frequently used in the ritual and descriptive portions of the Brāhmaṇas than in the narrative portions (Gune 1913, p. 44ff). This partly explains the uneven distribution of the non-past and past gerund, since the ritual descriptions favor chronological linkage. Secondly, the past gerund has a partly mnemonic discourse function in the language as a device for concatenating sentences or clauses by repeating the finite verb of a preceding clause before proceeding with the discourse (Gune 1913, p. 40). This function is particularly prominent in the procedural discourse of the ritual Sūtras and the narrative discourse of Pali and Buddhist Sanskrit.

Like most of his predecessors, Gune was convinced that the gerund is temporally undifferentiated, although unable to substantiate this with unambiguous examples. In one instance he claimed that the gerund is used as an infinitive with final sense, but a closer examination shows misinterpretation of the meaning of the verb underlying the gerund:

(61) AB 5.27.6

    aśanāyām ha vā eṣā yajamānasya pratikhyāya vāśyate

    "sie brummt um dem Opferherrn den Hunger kund zu thun" (Gune 1913, p. 38)

The translation follows Sāyaṇa's commentary, but as Keith (1920, p. 252) has pointed out, the meaning of the verb prati+khyā- here, as in the parallel Atharvaprāyaścitta 2.4 (samprakhyāya cf. Weber, 1865, p. 291), is 'perceive, see' rather than 'proclaim, notify'. The sentence thus means: 'She (Agnihotra cow) calls aloud having perceived hunger for the sacrificer'. Cf. also AĀ 1.2.4, where pratikhyāya is used explicitly in the sense of 'having seen, perceived': pratikhyāya bhakṣam avarohed eṣā vā apacitir yāṃ paśyati karoti tasmāt pratikhyāyaiva bhakṣam avarohet "Let him descend after seeing the food. For that is honour indeed to one who sees it. Therefore only after seeing the food, let him descend." (Keith 1909, pp. 86, 178).

1.5.K. LOUIS RENOU

Also Renou (1930, p. 128ff. § 103) defined the gerund as a petrified (at least partly instru-
mental) verbal noun, mostly having the value of an active present or past (conjunctive)
participle. The apparent conflict between the putative etymology of the form and its use he
explained by calling attention to the special discourse function of the gerund:

> La nuance d'antériorité, qui es la plus fréquente, s'est développée surtout à la faveur
> des commodités de la phrase narrative cl. et grâce à l'absence de tout participe passé
> vivant; mais le sens de simultanéité apparaît couramment, surtout à date ancienne,
> hors des passages narratifs, ainsi AĀ. 65; 179 [= AĀ. 1.3.1] **hiṅkṛtya** (=
> **hiṅkāreṇa**, ibid.) **pratipadyate** "il commence (le jour) en prononçant **h**."[24] [...]
> Ragh. II 62 **māyāṁ mayodbhāvya parīkṣito 'si** "je t'ai mis à l'épreuve en te
> suscitant un fantôme" [....] L'emploi, impliqué par un Vārt. (et qui est à la base du
> tour signalé P. **apamitya yācate = yācitvāpamayate [udīcām]**, cf. Pat.) coïncide
> dans les textes avec la décadence du participe. (Renou 1930, p. 129 § 103)

It will, however, be observed that Renou based his argumentation on ambiguous
examples. The sentences can just as well be translated: '(by/upon) having pronounced **hiṅ**,
he commences the day' and '(by) having produced a phantom, I have tested you'. The
parallel **hiṅkṛtya : hiṅkāreṇa** is no more meaningful than e.g. **ījāna-** '(by) having
sacrificed' : (yajñe) **iṣṭe** 'upon sacrificing' : **yajñena** 'by the sacrifice', since a preceding
action may often be conceived of as instrumental in bringing about a subsequent state.

In a note on the Ṛgvedic gerund Renou (1940, pp. 208-214) explicated his notions
about the etymology and history of the gerund. His main thesis was that the predominantly
relative past tense value and high frequency of the gerund in the Classical language is not
just a linear development of the preclassical gerund, which he equated more or less with a
temporally undifferentiated modal or instrumental adjunct. The tendency to reduce the
number of finite verbs in a sentence while maintaining complex structures, together with
the absence of productive past active participles, is supposed to have led to the
transformation of the (Ṛgvedic) gerund into an "instrument généralisé de subordination
temporelle" (Renou 1940, p. 214).

Renou's conclusions have been accepted and reiterated by Gonda (1971, p. 135f.), but
unfortunately they will not stand up to closer examination based on the actual data and a
critical view of the method of analysis.

A typical example of the alleged temporal unmarkedness of the Ṛgvedic gerund is RV
1.161.12 **sammílya yád bhúvanā paryásarpata** "lorsque vous vous êtes insinués

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[24] Cf. Œrtel (1941, p. 108f.): "Er beginnt (diesen Tag) indem er 'Hiṁ' macht. [...] **hiṅkṛtya** ist
funktionell äquivalent dem Instr. **hiṁkāreṇa** in dem vorausgehenden **hiṁkāreṇaitad ahaḥ
pratipadyate**."

parmi les êtres vivants, tenant les yeux fermés" (Renou 1940, p. 211). Here the 'presential' rendering of the gerund is possible only if we (mis)interpret the verb **sam+mīl-** as having durative or stative inherent aspect (Aktionsart), i.e. as meaning 'keep one's eyes closed', rather than 'close one's eyes'. But according to the correct aspectual analysis of this verb, the gerund **sammílya** would mean 'while closing your eyes' (not: 'while keeping your eyes closed'), if presential. In the given context (62), it is clear that this cannot be the intended meaning. This leaves us with the standard interpretation of the gerund as expressing a preceding action from which the sense of a continuous state is derived by pragmatic implicature: 'having closed your eyes [and keeping them closed]':

(62) RV 1.161.12-13

> **sammílya yád bhúvanā paryásarpata kvà svit tātyā pitárā va āsatuḥ**
> **áśapata yáḥ karásnam va ādadé yáḥ prábravīt pró tásmā abravītana ‖**
> **suṣupvāṁsa ṛbhavas tád apṛchatāgohya ká idáṁ no abūbudhat**
> **śvānam bastó bodhayitāram abravīt saṁvatsará idám adyā vy àkhyata**
>
> [12] 'Having closed your eyes [i.e. with your eyes closed], when you moved around the beings, where then, I wonder, were your darling parents? You cursed the one that embraced your forearm; he who spoke to you, him you spoke to as well.'
> [13] 'Having slept, O Ṛbhus, you inquired thus: "Agohya, who is it that has now awaken us?" The goat announced the dog as the awaker. In a year you have come to perceive this (world) today.'

It must, however, be stressed that the common stative implicature of the gerund is never part of its (literal) meaning, since it is wholly determined by the context or pragmatic inferences: In a different context **sammílya** might mean only 'having closed your eyes [and again opened them]'.

Similar aspectual misinterpretations are at hand in the following examples:

(63) RV 3.48.3a

> **upasthāya mātáram ánnam aitta**
> "se tenant devant sa mère il réclamait de la nourriture"
> Lit. 'Having stepped up to his mother, he (Indra) asked for food.'

(64) RV 1.118.5a

> **ā vāṁ ráthaṁ yuvatís tiṣṭhad átra juṣṭvī narā duhitā sūryasya**
> "la fille du soleil est montée sur votre char, la vierge, car elle y avait plaisir"
> Lit. 'The young lady, the daughter of the sun, has ascended your wagon here, O men, having found pleasure in it.'

(65) RV 8.66.2c

yá ādṛtyā śaśamānáya sunvaté dātā jaritrá ukthyàm

"lui qui, ayant égard à qui peine et presse le soma, donne au chantre (en trésor) digne d'être célébré"

Lit. 'who having paid attention is the giver of praiseworthy things to the laboring, pressing singer.'

(66) RV 10.42.9ab

utá prahám atidívyā jayāti kṛtám yác chvagní vicinóti kālé

"le joueur gagnera le prix, dominant au jeu (l'adversaire), si au moment décisif il jette le coup kṛta"

Lit. 'And he will win by playing ahead of the lead, just like a gambler picks the best hand when his time comes.'

(67) RV 10.71.9

imé yé nárvāṅ ná paráś cáranti ná brāhmaṇāso ná sutékarāsaḥ

tá eté vācam abhipádya pāpáyā siríś tántram tanvate áprajajñayaḥ

[cd] "quands ils recourant au verbe méchamment, (c'est comme s')ils tissaient sur le trame de mauvaises étoffes"

Lit. 'These ones who do not move near or far, being neither brahmins nor active with the Soma, stretch out bad yarn (? flowing water [Geldner]) into (? as [Geldner]) a fabric by having resorted to (abhipádya) the holy speech in an evil manner, lacking wisdom.'

(68) RV 10.131.2

kuvíd aṅgá yávamanto yávaṁ cid yáthā dánty anupūrvám viyūya

ihéhaiṣāṁ kṛṇuhi bhójanāni yé barhíṣo námovṛktiṁ ná jagmúḥ

[ab] "comme en vérité les possesseurs d'orge fauchent l'orge en tenant chacun un écart (par rapport au faucheur) qui précède"

Lit. 'I take it you know how the corngrowers cut the corn after separating it into bunches in due order. So do you bring here and there the possesions of those who have not gone to the strewing of the sacrificial grass for the worship of the gods!'

(69) RV 10.174.1-2

abhīvarténa havíṣā yénéndro abhivāvṛté

ténāsmán brahmaṇas pate 'bhí rāṣṭráya vartaya ||

abhivṛtya sapátnān abhí yā́ no árātayaḥ

abhí pṛtanyántaṁ tiṣṭābhí yó na irasyáti

60

[1] "l'oblation (dite) celle-qui-l'emporte, grâce à laquelle I. l'a emporté, fais-nous l'emporter grâce à elle, ô B., en vue de la souveraineté royale"

[2] "l'emportant sur nos rivaux, sur ceux qui nous sont hostiles, dresse-toi contre celui qui nous assaille, qui se soulève contre nous"

Lit.[1] 'With the sacrifice called "Overcomer", with which Indra overcame, by that make us overcome, O Bṛhaspati, for dominion.'

[2] 'Having overcome our rivals, those who are our enemies, thread upon the attacker, upon him that grudges us!'

There is only one case in Renou's collection of approximately 20 gerunds, where there can be any serious doubt about its non-stative aspect and past relative tense:

(70) RV 1.92.9

víśvāni deví bhúvanābhicákṣyā pratīcī́ cákṣur urviyā́ ví bhāti
víśvaṁ jīváṁ caráse bodháyantī víśvasya vā́cam avidan manāyóḥ

[ab] "considérant tous les êtres la déesse brille au loin, face à (chaque) regard" (Renou 1940, p. 211)

Lit. 'Watching over (or: having beheld, turned her eye towards) all the beings, the goddess, facing every eye, shines widely out. Awakening everything alive to motion, she has found the speech of every devoted one.'

One could adduce numerous examples in support of the basically stative or durative aspect of abhi+cakṣ- ('watch over, survey'), e.g. RV 2.40.5ab víśvāny anyó bhúvanā jajā́na víśvam anyó abhicákṣāṇa eti, RV 1.108.1ab yá indrāgnī citrátamo rátho vām abhí víśvāni bhúvanāni caṣṭe. However, there is also some independent evidence for the alternatively dynamic aspect of this verb in the gerund form:

(71) RV 8.1.34

ánv asya sthūráṁ dadṛśe purástād anasthá ūrúr avarámbamāṇaḥ
śáśvatī nā́ry abhicákṣyāha súbhadram arya bhójanam bibharṣi

'His stiff one has shown itself in front, the boneless thing (previously) loosely hanging by his thigh (or: the boneless "thigh" hanging loose). Having set her eye at it (≠ while watching it), his wife Śaśvatī exclaimed: "What a wonderful treat you carry, my lord!"'

A problem may now be sensed, because so many verbs (especially if unprefixed) are aspectually ambivalent, e.g. sthā- 'stand (up)', sad- 'sit (down)', juṣ- 'taste, enjoy, find pleasure in'. On the other hand, aspectually ambivalent verbs are frequently disambiguated by the tense of the verb: the stative meaning tends to go with the presential tenses, while

the non-stative meaning with the non-presential (esp. preterital) tenses. If the Ṛgvedic gerund was temporally quite undifferentiated, then we should expect it to denote mainly a simultaneous action or state when formed from aspectually non-ambivalent verbs (cf. 62) and especially when formed from stative and atelic verbs. But since it obviously does not do so (see 2.3.B, 3.2), it follows that it is more or less marked for relative past tense. Renou's insistence on analyzing all the ambiguous cases in favor of the non-preterital value of the gerund can only be attributed to a strong etymological bias.

Convinced about the instrumental origin of the gerund, Renou also stressed the juxtaposition of the gerund with two instrumental action nouns in RV 1.110.4a viṣṭvī́ sámī taraṇitvéna (cf. 3.60.3d and 10.94.2c), suggesting an etymological rendering as: "avec du travail, avec de la peine, avec de l'energie" (Renou 1940, p. 212). However this juxtaposition had no synchronic significance even in the Ṛgvedic period, since there were no nominal stems like viṣṭvi- or viṣṭvī- (< viṣ-) to connect forms like viṣṭvī́ with.

The frequent logical association between the action denoted by the gerund and the action denoted by the main verb does not necessarily prove the instrumental origin of the gerund, since any two actions expressed as occurring in (close) sequence and performed by the same participant are liable to be logically associated even by conversational inference.

Thus we need not look to prehistorical origins to explain locutions like RV 1.177.4 (& passim) píbā niṣádya "assieds-toi et bois", RV 3.40.7 pītvī́ sómasya vāvṛdhe "(Indra) a crû, ayant bu (i.e. d'avoir bu ou: de boire) le soma", RV 3.35.8 āgátya... pāhi "viens et bois, (i.e. bois en résultante de ta venue)", RV 9.55.4 yáḥ... hánti śátrum abhítya "celui qui tue l'ennemi en fonçant sur lui", RV 2.15.9 svápnenābhyúpyā cúmuriṁ dhúniṁ ca jaghántha "(Indra) qui a tué C. et Dh. en jetant sur eux le sommeil comme une graine", RV 2.17.6 yénā... ní kṛviṁ śayádhyai vájreṇa hatvy ávṛṇak "le foudre avec lequel (Indra) a tué K. le terrassant en sorte qu'il restât gisant", RV 10.68.3 vitū́ryā, RV 7.21.7 viṣáhya "victorieusement" (lit. 'having conquered'), RV 10.51.5 araṁkṛ́tyā "de façon à être pret", etc. (Renou 1940, p. 212f.).

There is no reason to believe that the gerund expresses simultaneousness of action in any of these instances: the coming to the sacrifice must precede the drinking of Soma, the going against (abhítya) or confounding of the foe must obviously precede the slaying of him, etc. Similarly, in (72), the standard rendering of the gerund makes perfectly good sense, despite the juxtaposition with an instrumental action noun:

(72) RV 2.12.3ab

> yó hatvā́him áriṇāt saptá síndhūn yó gā́ udā́jad apadhā́ valásya
> "(Indra) qui, par le fait qu'il a tué le dragon, a libéré les sept rivières"
> Lit. 'He who having killed the dragon released the seven rivers, who drove out the cows by unclosing the closure [Vala]'

Renou seems also to have ignored the fact that the use of the French gérondif and present adverbial participle (which goes back to the Latin gerund) does not require strict co-occurrence of actions.

In the following examples, the context itself indicates that the action expressed by the gerund must be completed before or at the moment when the action expressed by the main verb begins:

(73) RV 2.38.6c

śáśvāṁ ápo víkr̥taṁ hitvy āgād

"(le soir venu) chacun rentre laissant le travail à demi fait"

Lit. 'everybody, having left his work half-done, has returned'

(74) RV 1.125.1ab

prātā́ rátnam prātarítvā dadhāti táṁ cikitvā́n pratigŕhyā ní dhatte

"le sage qui reçoit (en qualité d'hôte) se confère à lui-même (un bien)"

Lit. 'The morning visitor (or: itinerant singer) puts forward a jewel in the morning; having received it (or: taken it up), the wise man puts it down for him-self.'

(75) RV 5.53.14

átīyāma nidás tiráḥ svastíbhir hitvā́vadyám árātīḥ

vr̥ṣṭví śáṁ yór ápa usrí bheṣajáṁ syāma marutaḥ sahá

"quand, ô Marut, vous faites pleuvoir à l'aurore salut, eaux, remède, souhaitons d'être là" (Cf. Müller [1891], p. 320.)

Lit. ? 'May we transcend the scorn successfully, leaving behind (= having left behind) abuse and enmities. After raining, the waters (will be) prosperity, health, in the morning, remedy, O Maruts, let us be with (you; or: that all)!'

Cf. Geldner (Rigveda II, p. 60): "Wenn es geregnet hat, sollen die Wasser in der Morgenfrühe Glück und Heil und Arznei sein. Wir möchten dabei sein, ihr Marut."

Renou (EVP 10, p. 30): "Quand il a plu, que les eaux à l'aurore (nous soient à) salut (et) bonheur (nous soient) un remède! Puissions nous être avec, ô Marut's!"

(76) RV 7.80.2

eṣā́ syā́ návyam ā́yur dádhānā gūḷhví támo jyótiṣoṣā́ abodhi

ágra eti yuvatír áhrayāṇā prácikitat sū́ryaṁ yajñám agním

[b] "en cachant (= du fait qu'ainsi elle cache) les ténèbres"

Lit. 'Conferring new life, this here Dawn, having covered up the darkness with light, has awaked. In front she walks, the young lady, unembarassed, she has made known the sun, the sacrifice, the fire.'

(77) RV 10.34.11ab

stríyaṁ dṛṣṭvâya kitaváṁ tatāpānyéṣāṁ jāyâṁ súkṛtaṁ ca yónim
[a] "le joueur se repent en voyant sa femme"
Lit. 'Upon seeing his wife, and other men's wife and happy home (= wives and happy homes), it distresses the player.'

In the following example, Renou's rendering is in conflict with what is generally thought to be the normal order of the ritual acts referred to:

(78) RV 1.162.18cd

áchidrā gâtrā vayúnā kṛṇota páruṣ-parur anughûṣyā ví śasta
"découpez membre à membre en prononçant chaque fois (le nom du membre)"
Lit. 'Put the intact limbs in order, having announced each limb cut it off!'

Thus one must conclude again that Renou's argumentation against the almost exclusively past relative tense of the Ṛgvedic gerund is motivated only by irrelevant etymological considerations: The fact is that the Ṛgvedic gerund is even more strongly marked for relative past tense than the post-Ṛgvedic gerund.

On the other hand, the claim that the Ṛgvedic gerund figures mainly in short phrases and backgrounded or non-emphatic contexts seems to be essentially correct, although it may be questioned to what extent this is an indirect consequence of the constraints of the genre itself. Nevertheless, we can hardly deny that there has been a conspicuous expansion of the frequency and discourse functions of the gerund after the Ṛgveda. As for the historical explanation of this development, the alleged lack of productive active preterital participles cannot account for why an originally even less productive formation like the prehistorical gerund was chosen for functions that until then had been expressed partly by finite paratactic and hypotactic structures, partly by the more productive perfect participle. In Greek the original situation must have been more or less the same, but this did not prevent the aorist participle from developing more or less the same functions as the Sanskrit gerund.

Renou also wrote a fairly exhaustive account of the non-past gerund in -am (1935). Though never as frequent as the past gerund, the non-past gerund became more productive toward the later Vedic period (especially in the later Brāhmaṇas and early Śrautasūtras), after which it got stereotyped (cf. P 3.4.24-64) and finally lost. This form has usually been derived as an adverbial or cognate accusative of content, to be compared with the accusative verbal adverbs of Greek and Latin (cf. Delbrück 1893 = Grundriss III:1, p. 604f. § 255 and Brugmann 1911 = Grundriss[2] II:2, p. 680f. § 558). In harmony with the assumed infinitival origin of the past gerund, Renou (1935, p. 366) proposed that the non-

64

past gerund is a mere reinterpretation of the accusative root infinitive in -am, but although there are cases where these forms cannot be distinguished on either formal or functional grounds (thus especially when there is dependence on a verb of motion), this is unlikely in view of the fairly long coexistence and partial formal differentiation of these categories (cf. 2.1).

1.5.L. ARMAND MINARD

The most thorough study of the gerund ("absolutif") in any single text is found in the second part of Minard's *Trois énigmes sur les Cent Chemins* (1956, pp. 7-105), which is a treatise on the use of the daṇḍa (I) as a punctuation mark in the Śatapathabrāhmaṇa.

As can be expected, the daṇḍa is not inserted between the gerundial and superordinate clause, when the complex syntagm is very short (A[bsolutif]+V[erbe] < 14 syllables, e.g. ŚB 12.8.2.2 sómeneṣtvá sautrāmaṇyā́ yajeta) or when the gerund is immediately followed by the main verb in a kind of "verbe jointif" construction, e.g. ŚB 2.3.1.15 adhiśrítyaivá juhuyāt, ŚB 10.6.5.8 (= BĀU 1.2.7 K) tám ánavarudhyevāmanyata. When the complex syntagm is longer, or when the clauses are antithetical, the daṇḍa is mostly inserted between the gerundial and main clause, e.g. ŚB 6.2.2.19 sá vā́ iṣtvaìvá paurṇamāséna I átha paśúm ā́ labheta. It is also inserted between gerundial clauses occurring in sequence.

Interesting as these findings are, they do not, however, have any crucial significance for the syntactic analysis, inasmuch as the position of the daṇḍa does not consistently support a formal orthographic distinction between e.g. embedded (or propositionally restrictive) and non-embedded (or propositionally non-restrictive) gerundial clauses or even between peripheral vs. core-layer gerundial clauses or temporal vs. instrumental interpropositional relations.

Also Minard assumed that the original value of the gerund had been that of expressing a simultaneous or attendant circumstance ("valeur de modalité" or "circonstance du verbe principale"). On the other hand, this value was thought to have been abandoned at quite an early stage in favor of the sense of anteriority of action and the tendency to quasi-subordinate construction. The modal value is illustrated by cases such as the following:

(79) ŚB 3.8.1.15
   átha púnar étyāhavaníyam abhyāvŕ̥tyāsate
   "ils retournent s'asseoir face au (foyer) Offertoire" (Minard 1956, p. 61 § 145)
   Lit. 'Then upon returning they sit down having turned themselves toward the sacrificial fire.'

(80) ŚB(K) 4.8.1.12
     átha púnar étyóttareṇāhavaníyaṁ dakṣiṇāvṛ́tyāsate
     "ils reviennent au nord du (feu) Offertoire et s'asseyent face au sud" (ibid.)
     Lit. 'Then after returning from the north of the sacrificial fire, they sit down having
     turned themselves toward (> towards, facing) the south.'

Despite the almost adpositional status of these gerunds, they cannot be considered to have
the 'modal' value, to be rendered as: 'while [or in the manner of] turning towards'.

In support of the temporal indifference of the gerund, Minard (1956, p. 40 § 98a; p. 64
§ 150) pointed also to the parallel ŚB 2.5.2.35 (**pāṇaú**) **kṛtvā** : ŚB(K) 1.5.1.31 **bibhrát**,
but this equation falls on the aspectual difference of these verbs: 'having taken in one's
hand' vs. 'carrying/holding'. Similarly in the following examples, the underlying verbs are
dynamic rather than stative by aspect, which affects the temporal interpretation:

(81) ŚB 4.6.9.22
     áudumbarīm anvārábhyāsate
     "ils s'assoient en tenant le (pilier) d'udumabara" (Minard 1956, p. 61f. § 146f.)

(82) ŚB 1.2.5.15
     parigṛ́hya vai yóṣā vṛ́ṣāṇaṁ śete
     "La femelle étreint le mâle." (ibid.)
     Lit. 'The woman lies united with the man.'

More intriguing are those cases where the past gerund is paralleled by a present participle
of the *same* verb in a variant reading, e.g.:

(83) ŚB 2.2.4.18 & ŚB(K) 1.2.4.13
     **té hutvā́ devā́ḥ (ŚBK: tá evám júhvato devā́ḥ) | imā́ṁ prájātiṁ prā́jāyanta
     yaiṣāṁ prájātiḥ**
     "grâce à l'oblation, les dieux progénièrent cette progéniture qui est aujourd'hui leur
     progéniture" (Minard 1956, p. 25 § 55)

(84) ŚB(K) 4.8.3.22 & ŚB(M) 3.8.3.33
     átha pṛṣadājyásyopahátyāha (ŚBM: juhvā́ pṛṣadājyásyopaghnánn āha)
     'avec la (cuiller) offreuse, il prélève un peu de beurre moucheté en disant' (ibid.)

However, it is the use of the present participle that is peculiar, since the actions in question
are evidently not strictly concomitant (at least not in 83). On the other hand, presential

66

forms are by their relative unmarkedness generally used to express not only strictly simultaneous, but also immediately preceding or succeeding actions.

By the term 'quasi-subordinate' construction, Minard meant the tendency of the gerundial clause to be syntactically demarcated or separated from the superordinate clause ("quasi-apodose") by some connective like átha, 'then', or by an anaphoric pronoun, e.g.:

(85) ŚB 6.6.4.6

sá vái samídham ādhāyātha vratayati

"il pose la bûchette et boit le lait de jeûne (dans lequel il l'a trempée)"

(Minard 1956, p. 71 § 168)

But as can be seen from this example, these connectives mostly only emphasize the succession of actions without implying a specifically subordinate-like or adverbial relation between the gerundial clause and the main clause.

1.5.M. JAN GONDA

Gonda's brief paper on the use of the absolute in Sanskrit ([1967] 1975) presents an interesting but somewhat disorganized supplement to the list of irregular or "remarkable constructions" not fully accounted for by previous accounts. If properly analyzed and classified these examples could, however, be rearranged and subsumed into just six different types of constructions, most of which are quite ordinary:

(i) The gerund refers to (an action on the part of) a shared generic subject or agent, e.g. MGS 2.11.5 gartaṁ khātvā yat taiḥ pāṁsubhiḥ pratipūryeta tad vā "or (a spot) where a pit, which has been dug, can be filled up again by the same earth". Similarly, JB 2.64, KauŚS 60.18, Atharvapariśiṣṭa 23.13.2, Ṛgvidhāna 3.28.4, 2.17.2.

(ii) The gerund refers to the implicit agent of the main verb, e.g. ĀpDhS 2.10.26.21 svāny ādāya nāśyaḥ 'his property is to be confiscated and he is to be banished'. Similarly VSmS 3.1, KāP 93.32, 46.34, Pañc. 4.73, etc.

(iii) The gerund refers to the oblique Experiencer (or 'affected oblique subject') of the main clause, e.g. BC 5.33 puruṣasya vayaḥsukhāni bhuktvā ramaṇīyo hi tapo-vanapraveśaḥ 'for a man having enjoyed youth and pleasures, the entering into an ascetics' grove is, indeed, a wonderful thing.' Similarly, ŚvU 1.11 (682), MBh 1.11.10, 1.41.9, 1.182.12, 3.59.10, Svapn. 5.2, Śak. 2.9, VikrU 2.10, KāP 46.16, Pañc. 1.180.

(iv) The gerund has passive sense and refers to the subject of the main verb, e.g. ĀpDhS 2.11.29.7 puṇyāhne... ubhayataḥ samākhyāpya sarvānumate... satyaṁ praśnaṁ brūyāt "he should answer (the question put to him) according to truth on an auspicious day ... with the consent of all, after having been exhorted (by the judge) to report fully (and be fair) to both sides". Similarly, Kaṭh. 75.127, but not ŚB 1.7.1.18 and BhP 6.2.3.

(v) The gerund is dependent on an active or passive non-finite embedded clause, the nominal head of which is its logical subject: KU 2.4.6 yaḥ pūrvaṁ tapaso jātam — adbhyaḥ pūrvam ajāyata — guhāṁ praviśya tiṣṭhantam yo bhūtebhir vyapaśyata "who distinguished him who was born of old from austerity — before the (primeval) waters he was born — who has permanently entered the hidden place, from things which have come into existence"[25], cf. KU 2.4.7. Similarly, MBh 1.39.23, Kauṭ. 3.14, 87.44, Daś. 2.6 (ed. Nirṇaya 1925, p. 209), Kādambarī (ed. Peterson) § 16, KāśyS ch. 79, KāP 45.102, BhP 6.2.31, Kaṭh. 75.127.

(vi) The gerund is construed absolutely, not referring to any implicit or explicit noun phrase of the main clause (as its subject), e.g. AV 12.4.27 nāsya śrutvā gṛhe vaset "she (the barren cow) may not stay in his house after he has heard (the verses referred to in the preceding part of the stanza)". Similarly, ŚB 1.7.1.18, VSmS 2.12, KauŚS 63.20, KāśyS ch. 22, 23, MarS (Telugu ed. [= ed. Citrodayamañjari]) p. 6.

It may now be observed that the constructions (i)-(iii) are perfectly normal given the respective types of superordinate clauses. The passive gerund (iv) is rare, but not exactly anomalous. The adnominal gerund (v) becomes very frequent in later classical and epic texts, while only the absolute gerund (vi) is exceptional.

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[22] This interpretation is to be preferred to Müller's (SBE 15, p. 16) emended reading: "He who (knows) him who was born first from the brooding heat (for he was born before the waters), who entering into the hearts, abides therein, and was perceived from the elements." (fn.: "abrupt text: 2 acc. tiṣṭhantam and tiṣṭhantīm seem to me to require veda to be supplied from the verse 4.4").

Also Hume (1934, p. 354 & fn.) emended the text: "He who was born of old from austerity (tapas), was born of old from the waters, who stands entered into the secret place (of the heart), who looks forth through beings" (fn.: "This stanza contains an ungrammatical form and impossible constructs. The text here, as also in § 7 is probably corrupt. The reference here is probably to the Sāṁkhya Puruṣa, Person") . Cf. Radhakrishnan (1953, p. 632): "He who was born of old from austerity, was born of old from the waters, who stands, having entered the secret place (of the heart) and looked forth through beings" and Röer (1931, p. 78): "Whosoever beholds the first born from the penance, (of Brahman), who was created before the waters, when he has entered the cave, and dwells (there) with the beings, beholds that (Brahman for which thou hast asked)".

1.5.N. RENATE SÖHNEN

Söhnen's paper (1985) raises the question of the morphosyntactic classification and constructional peculiarities of the gerund especially in the Epics and Purāṇas. She proposes an analysis that also takes account of the syntactic and semantic structure of the superordinate clause, while defending the view of the gerund as a temporally undifferentiated 'verbal adverb'.

The terms 'gerund' and 'participle' are criticized, inasmuch as a 'gerund' is supposed to take a genitive (logical) subject, while a participle should not allow 'free constructions'. The only construction of the gerund that is recognized as genuinely 'gerundial' is the one with **alam**, e.g. **alaṁ te dhūmaṁ pītvā** "Genug/Schluss mit deinem Rauch-Trinken!". The 'nominal' function (in relation to the governing unit) of the gerundial phrase in this construction was noted already by Forster (1810, p. 463), but the internal structure of the gerundial clause remains just as verbal as ever: the optional genitive-dative pronoun is syntactically dependent on the preceding adverbial particle, not the gerund (cf. 255, 4.Ø).

Even so the argument against the term 'gerund' is not valid: the Latin gerund (which should be the model, rather than the English 'gerund') is not particularly liable to have a genitive subject of its own, being, especially when used adverbially in the ablative, mostly controlled by the subject of the main clause.

Moreover, the English 'gerund' in -*ing* is generally recognized to be syntactically ambivalent, being construed either 'verbally' with an 'accusative' direct object and (mostly) coreferential implicit subject and adverbal modifiers or 'nominally' with a genitive (or coreferential) logical subject or object and adnominal modifiers, cf. *smoking cigarettes continuously is forbidden/I abhor smoking cigarettes continuously/by smoking cigarettes continuously you will ruin your health* ('verbal gerund' as subject/object/ prepositional phrase) vs. *the/your continuous smoking of cigarettes is disgusting/I detest your continuous smoking of cigarettes/I was appalled by your continuous smoking of cigarettes* ('nominal gerund' as subject/object/prepositional phrase).

This syntactic and semantic distinction between 'verbal' (or 'sentential') gerunds (i.e. gerunds occurring in nominal, adverbial or prepositional phrases expressing *activities* and having the *internal structure of verb phrases or reduced clauses*) vs. homonymous 'nominal gerunds' (i.e. gerunds occurring in nominal, adverbial or prepositional phrases expressing *facts* and having the *internal structure of noun phrases*) has been amply demonstrated for English by Lees (1960, pp. 64-73), Wasow & Roeper (1972), Thompson (1973) and Huddleston (1984, p. 312ff.). (For a historical account, see Visser 1966, p. 1065ff.; 1973, p. 2228ff.)

On the other hand, the Latin and Sanskrit gerunds (independently of their case) are verbal by construction and mainly adverbial (rather than nominal) by function. It is well-known that the 'declinable' Latin gerund does not even occur in the nominative (except in

the periphrastic conjugation, cf. Aalto 1949, p. 92ff.), being replaced by the infinitive when functioning as the subject of a clause. Moreover, even when used in a predicative complement in construction with **alam**, the Sanskrit gerund corresponds better to a verbal than nominal gerund in English. Thus one would translate **alaṁ (te) dhūmaṁ pītvā** as *Have done with smoking [tobacco]* rather than *...with your smoking [of tobacco]*.

Also the objection against the term 'participle' is somewhat misdirected. Indo-European participles are not always construed adnominally even in the oldest languages, such as Homeric Greek (cf. Chantraine 1953, p. 323) and Vedic Sanskrit, where *ad sensum*-constructions occur. Hence, there are no *synchronically* valid arguments for discarding either the term gerund or indeclinable participle. The Sanskrit gerund is etymologically analogous to the Latin ablative gerund, but synchronically it may just as well be compared with the Baltic and Slavonic adverbial/indeclinable participles. In fact, also the modern Romance and Germanic adverbial participial clauses go back to gerundial (i.e. oblique or prepositional verbal noun) phrases, cf. French *en chantant* 'while singing' < Latin *in cantando* (Aalto 1949, p. 73f.).

Söhnen pleads for the more neutral term 'verbal adverb', but even this term could be misleading: the Sanskrit gerunds are not adverbial formations in the sense that they are derived as adverbs (i.e. by means of specifically adverbial suffixes, cf. Whitney 1889, p. 407f.). It is true that they are petrified oblique verbal nouns that have been recategorized as verbal adverbs, but the paradox is that they are the only verbal adverbs in Sanskrit with *verbal* rection. If they are to be called *verbal adverbs,* forms like **cikit-v-it** 'with consideration' and **gúh-ā** 'secretly' would have to be reclassified as *deverbal adverbs* or even *denominal adverbs* (i.e. adverbialized action nouns).

The fact that not all verbal adverbs are verbal by construction would thus force us to reintroduce a terminological distinction analogical to that between plain *(de)verbal adjectives* (i.e. agent nouns capable of forming noun phrases by modifying nouns) and genuine *participles* (capable of forming reduced clauses by modifying nouns and taking adverbial complements).

In accordance with the instrumental origin of the gerund, Söhnen claims that the gerund is temporally unmarked. Most of her examples of the 'non-preterital' value of the gerund, are similar to Renou's and Minard's dubious examples (cf. 62-78), but some of them must be accepted. In those cases the gerund expresses the manner of an action rather than two co-occurring actions, being interchangable with a present participle or instrumental noun:

(86) MBh 3.264.56
   sītā madvacanāt vācyā samāśvāsya prasādya ca
   "Auf meine Anweisung hin ist Sītā mit Tröstungen und Besänftigungen anzureden!"
   (Söhnen 1985, p. 485)

70

(87) Rm 2.101.5

ity uktaḥ kaikeyīputraḥ kākutsthena mahātmanā
pragṛhya balavad bhūyaḥ prāñjalir vākyam abravīt

"So nochmals unter kräftiger Umarmung angeredet von dem hochgesinnten Sproß Kakutsthas, sprach Kaikeyīs Sohn mit verehrungsvoll zusammengelegten Händen die (folgende) Rede." (Söhnen 1985, p. 482)

(88) BrVaivP 61.43

tat sarvaṁ kathayām āsa gautamāya tapasvine
tasthau prahasya sa munir mahendraṁ ca vinindya ca

"Das alles erzählte sie (Ahalyā) dem Gautama, der über besonderes Tapas verfügte. Lachend und den großen Indra tadelnd stand der Asket da."
(Söhnen 1985, p. 483)

Also in other cases Söhnen makes a point of translating the gerund as far as possible as an instrumental action noun, criticizing the ubiquitous habit of rendering it by a temporal or participial clause, e.g. "nachdem..." or "having V-ed". This criticism is quite justified not only on stylistic grounds, but because past relative time reference does not necessarily entail temporal qualification (S1 when/after S2). On the other hand, it may be questioned whether the instrumental or nominal rendering does better justice to the wide functional potential of the gerund.

The major part of Söhnen's paper is concerned with the coreferentiality constraint of the gerund. It is claimed that the controller (implicit subject or agent) of the gerund can mostly be recovered from the main clause by applying criteria of semantic agenthood or animacy/ personhood. The latter criterion is exemplified by MBh 9.50.9 **tāṁ divyavapuṣaṁ dṛṣṭvā tasyarṣe retaḥ skannaṁ sarasvatyām** 'Upon seeing that divinely looking creature, the semen of that sage lept into the river Sarasvatī'. But note that animacy is criterial only when the said constituent is an oblique 'experiencer/affected possessor': **tāṁ divyavapuṣaṁ dṛṣṭvā tasya ṛṣeḥ/gṛhasya putraḥ skannaḥ sarasvatyām** 'Upon seeing that divinely looking creature, the son of that house/sage lept into the river S.'.

1.5.O. ROBERT JEFFERS & ROBERT KANTOR

One of the most recent contributions in this field is Jeffer's and Kantor's paper on the history of the gerund (1984). This study presents some novel views and explanations, but is somewhat deficient in the analysis of the data and historical perspective.

The authors approach the gerund etymologically. They reject Neisser's theory about the

71

etymology of -(t)ya, because they can find no instrumental ending -ā for thematic nouns. This is strange because -ā occurs sporadically as an inherited instrumental ending for thematic nouns even in the Ṛgveda (Whitney 1889, p. 112 § 327c).

They then contend that the probable derivation of these forms as archaic instrumentals of infinitival i- and ti-stems has been widely rejected. This, too, is curious, seeing that this has been the most widely supported explanation of -(t)ya (cf. Whitney 1889, p. 355 § 993a; Macdonell 1907, p. 412 § 589; Debrunner & Wackernagel 1930 = Ai. Gr. III, p. 34; Renou 1952, p. 314; Thumb & Hauschild 1959, p. 381 § 635ff., etc.). The authors point to the tendency for -i-infinitives to be complementary with -tu- and -ti-infinitives, but this would predict the wrong distribution for the allomorphs of the (allegedly related) gerundial forms, namely as -ya vs. -tya/-tvā.

On the basis of the assumed connection with the secondary Vedic infinitives (i.e. -tum, -tave, -toḥ, -taye, etc.; cf. Jeffers 1972), it is argued that the gerund must originally have had nominal rection. It is then suggested that gerundial phrases were reinterpreted syntactically in analogy with finite temporal clauses introduced by the subordinative conjunction yadā 'when', which is (curiously) analyzed as an instrumental form (cf. Jeffers & Pepicello 1982). However, this analogy fails, because especially in the early language the gerund is not particularly common in paraphrasing temporal subordinate clauses.

As for the semantic or functional development of the gerundial clause, Jeffer's and Kantor's major tenet is that there has been a gradual expansion of the discourse functions of the gerundial clause or phrase, so that in the earliest period (as represented by the Ṛgveda and early Brāhmaṇas) it was still restricted to expressing contextually or pragmatically (incl. culturally) presupposed information (hence liable to be translated by a backgrounded subordinate clause), while towards the end of the Brāhmaṇa period it also came to express non-presupposed, though (logically) presumed new information (as e.g. in connection with commands and directives that stipulate the carrying out of some previous action). Only in the classical period, did it come to acquire the generally non-presumed "asserted consecutive" reading, enabling it to be paraphrased by a coordinate clause independently of the mood of the main clause.

The first stage is exemplified by RV 1.161.6-7 índro hárī yuyujé... rátham... yuktvá rátham úpa devāṁ ayātana "Indra harnessed the fallow pair to the wagon. Having harnessed (them) to the wagon he [sic!] went to the gods" (Jeffers & Kantor 1984, p. 97).

But if we quote the passage in full, it will be seen that there is no coreferential connection between the verb yuyujé and the gerund yuktvā, since the latter occurs in a different sentence and with a completely different subject:

(89) RV 1.161.6-7

índro hárī yuyujé aśvínā rátham bŕhaspátir viśvárūpām úpājata
ŕbhúr víbhvā vájo deváṁ agachata svápaso yajñíyam bhāgám aitana ||
níś cármaṇo gắm ariṇīta dhītíbhir yā́ járantā yuvaśā́ tákṛṇotana
sáudhanvanā áśvād áśvam atakṣata yuktvā́ rátham úpa deváṁ ayātana

[6] 'Indra yoked the two steeds, the Aśvins the wagon, Bṛhaspati drove up the dappled cow for himself. In the capacity of Ṛbhu, Vibhvan, Vāja, you went to the gods, as artificers you got a part of the sacrifice.'

[7] 'Out of the hide you let go the cow so cleverly, those two who were aging, them you made young. O sons of Sudhanvan, you fabricated a horse from a horse, having yoked the wagon, you went to the gods.'

Moreover, contrary to what the authors profess, the Ṛgvedic gerund typically introduces non-presupposed, although often textually backgrounded information. This function is, however, exemplified only from the Aitareyabrāhmaṇa, e.g.:

(90) AB 7.19.4

...tad vai nidhāya svāny āyudhāni brahmaṇa eva āyudhair brahmaṇo
rūpeṇa brahma bhūtvā yajñam upāvartasvaiti

"Lay aside thine own weapons, and with the weapons of the holy power, the form of the holy power, becoming holy power, do thou come to the sacrifice."
(Jeffers & Kantor 1984, p. 99; following Keith 1920)

(91) AB 7.15.11 (pro 7.15.7)

tasya ha śataṁ dattvā sa tam ādāya so... eyāya

"(They made an agreement regarding the middle one, Śunaḥśepa.) Having given a hundred for him, taking him, he went (from the wild to the village)." (ibid.)

In the analysis of the functions of gerundial clauses, the authors rely perhaps too much on the probative value of Keith's translation: if translated by a participle, the gerundial clause is often considered to be presupposed or presumed, if translated by a finite coordinate clause, it is often considered as having the assertive consecutive value, e.g.:

(92) AB 7.5.2

'thainad dakṣiṇena pāṇinā abhimṛśya japati

"then he touches (the rest) with his right hand and mutters" (ibid.)

(93) AB 7.15.1

tam indraḥ puruṣarūpeṇa paryetya uvāca

"to him came Indra in human form and said." (ibid.)

In the oldest stratum of the Aitareyabrāhmaṇa (esp. Pañcikā I) only one of the twenty-five occurrences of the gerund is rendered by a coordinate verb, while in the later strata, where the gerund is more frequent (e.g. Pañcikā VII has 63 occurrences), the gerund is much more often translated by a coordinate finite verb. This would seem to corroborate the said hypothesis about the functional development of the gerundial clause, but it will be observed that any gerundial clause that is not contextually presupposed or propositionally restrictive can principally be rendered by a coordinate clause in a modally/operationally unmarked sentence, cf. (89): "you yoked the wagon and went to the gods". Although such gerundial clauses can often be accounted for as 'presumed', we need more stringent and language-independent criteria for determining the discourse functional development of the gerund.

1.5.P. F. B. J. KUIPER & HANS HENRICH HOCK

The Indo-Aryan (past) gerund is in some respects a unique category in Indo-European, while functionally analogous categories are found in most South Asian languages. The existence of non-Aryan loanwords even in some of the oldest Indo-Aryan documents has long since evoked the idea that the syntactic and semantic development of the (Old) Indo-Aryan gerund was induced or directed by an analogical category in some non-Aryan language, most probably Dravidian (cf. Konow 1903, p. 456; Chatterji 1926, pp. 41, 1008f.; Bloch 1930, p. 734; 1934, p. 328; Emeneau 1954, p. 284; 1956, p. 9; Burrow 1973, p. 374; Kuiper 1967).

On the other hand, this and other hypotheses about foreign (especially Dravidian) influence on the structure of the Indo-Aryan tongue during its early stages has been severely criticized by a number of Sanskritists and Indo-Europeanists (cf. Renou 1956, p. 29 fn. 1; Hock 1975, 1984).

The first scholar to deal more extensively and systematically with the question of prehistorical linguistic convergence in South Asia was Kuiper (1967). The three features which Kuiper concentrated on were the retroflex phonemes, the quotative iti-construction and the (syntactico-semantic reinterpretation of the) gerund. Kuiper's main tenet was that the cumulative force of the evidence proves that all these features both in Indo-Aryan and Munda are due to Dravidian sub- or adstratum influence. Especially as regards the gerund, he concluded on the basis of the archaic morphological nature of the formation that the category must have existed and been commonly used in colloquial speech for quite some time before it was accepted in the highly traditional Vedic religious poetry.

1. INTRODUCTION

A more cautious and critical view was taken by Hock (1975, 1984), who showed that there is still room for reasonable doubt concerning most, if not all, alleged Dravidianisms in (Ṛgvedic) Sanskrit, viz lexical loans in the Ṛgveda, retroflexion, the iti-construction, the (recategorization of the) gerund, the use of participles as finite verbs, the tendency to nominal style and SOV-order, the 'āmreḍita-compounds', the secondary uses of the enclitic particle api 'also', etc..

Hock's position rests to a crucial degree on the alleged difficulty of establishing (i) Dravidian speakers in prehistoric Northwestern India and (ii) Dravidian loanwords in the Ṛgveda. In fact, Hock argues with a somewhat dated reference to Kuiper (1948; 1955b) that more than half of the alleged loanwords in the Ṛgveda are of Munda rather than Dravidian origin. Particularly important are cultural words like lāṅgala 'plough', and the mentioning of enemies with Munda-like names, e.g. Śambara, Arbuda and Śṛbinda.

The origin of many of the alleged Munda words have, however, been questioned, while some of them may have been borrowed through Dravidian (a possibility Hock is well aware of). Being unwilling to accept (pre-)Ṛgvedic contact with Dravidian, Hock has tried to find alternative, mainly spontaneous, explanations for the said features. Thus it is argued that the gerund, which seems to go with SOV-order and quotatival constructions (with postposed marker), could be inherited and/or due to areal linguistic influence in the proto-Indo-European period. Only the distinctly post-Ṛgvedic use of the gerund in "chains of absolute clauses followed by a single clause with finite verb", is recognized as specifically 'Indian' within Indo-European. However, even this use is explained in terms of the originally genre-bound tendency of Classical Sanskrit to non-finite vs. finite syntax in clause linkage (which, incidentally, is a non-genre-bound Dravidian feature).

These views are at least to a certain extent founded on Renou's (1940, 1956) etymologically biased accounts. According to Renou (cf. 1.5.K), the Ṛgvedic gerund has the character of a temporally unmarked manner adverbial, while the predominantly antecedent value and "temporally subordinative function" are post-Ṛgvedic developments appearing first in the descriptive portions of the Brāhmaṇas and Sūtras, from whence they have spread to other genres (Renou 1956, p. 46).

Hock admits the difficulty of deriving the antecedent value from the assumed original concomitant value. But by claiming, against any substantial evidence, synchronic primacy for the concomitant value and an essentially Indo-European basis for the later semantic and syntactic development, he is, as it were, denying the very problem.

On the other hand, he calls attention to a number of systematic discrepancies between e.g. the systems of retroflexion and quotatival constructions in Indo-Aryan and Dravidian, which facts have to be considered in conjunction with the likelihood of Dravidian influence on the development of the gerund (cf. 6.4.H, 6.5).

75