

PROTO-INDO-EUROPEAN VERBAL SYNTAX

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It is argued that the PIE thematic flexion can be compared with the objective conjugation of the Uralic languages. The thematic vowel referred to an object in the absolutive (asigmatic nominative) case.

I.

In 1901 C. C. Uhlenbeck concluded from the identity of the nominative and the accusative of the neuter in the Indo-European languages that the differentiation of these cases is secondary. For an early period of the proto-language he assumes the existence of an agentive case in *-s*, which expressed the subject of transitive verbs, and a general case in *-m* (after *o*-stems) or zero (in other flexion classes), which expressed the object of transitive verbs and the subject of passive and intransitive verbs. The sigmatic nominative developed from the original agentive case, while the accusative in *-m* and the asigmatic nominative continue the general case. Uhlenbeck follows Bopp in the identification of the ending *-s* with the PIE demonstrative pronoun *so*.

A few years later Holger Pedersen presented a much more elaborate view of PIE verbal syntax (1907: 148-157). His exposition seems to have fallen into total oblivion. In the new handbook on ergativity (1979), K. H. Schmidt does not even mention Pedersen's article, which is for several reasons one of the most remarkable publications in the history of linguistics. Since Pedersen's view has not lost any of its significance since it was written 75 years ago, the following rather extensive quotation seems to be justified.

"In einer vorhistorischen periode haben, wie ich vermuthe, die folgenden regeln gegolten: bei intransitiven verben stand das subjekt in der (u. a. auch als objekt fungirenden) grundform (bei *o*-stämmen die form auf *-om*, bei den *-ā-*, *-n-*, *-r*-stämmen die historische nominativform); bei transitiven verben stand das objekt in der grundform, das subjekt aber im genitiv, wenn

wirklich von einer thätigkeit desselben die rede sein konnte, also wenn es der name eines lebenden wesens war; dagegen stand es im instrumentalis, wenn es ein unpersönlicher begriff war. Die beiden sätze: "der bruder tödtet das thier" und "der baum tödtet das thier" wurden also als "des bruders thiertödteten" und "durch den baum thiertödteten" ausgedrückt. Dabei ist der subjektsgenitiv natürlich als possessiver genitiv aufzufassen (. . .). Allmählich differenzirt sich jedoch der subjektsgenitiv (der casus activus) von dem genitiv in seinen sonstigen verwendungen (. . .). Nachdem sich in dieser weise ein selbständiger casus activus entwickelt hatte, konnte dieser casus seine gebrauchssphäre erweitern, sodass er auch bei intransitiven verben als subjekt fungirte; eine zeitlang wird er in dieser funktion mit der grundform regellos abgewechselt haben, bis schliesslich bei den *o*-stämmen die grundform auf die nicht-subjektivische verwendung beschränkt und dadurch zum accusativ gestempelt wurde. Die endung *-m* wurde dann als accusativendung auf die übrigen stammklassen übertragen; so trat beispielsweise eine form **ekūā-m* 'die stute' (acc.) an stelle des älteren **ekūā*, das nur noch als nominativ bewahrt blieb, in dieser verwendung aber den casus activus ganz verdrängte" (Pedersen 1907: 152f).

Concerning the original function of the ending *-m* Pedersen remarks: "Ich dachte damals auch an die arabische nunation, die beim determinirten substantiv fehlt (*farasun* 'ein pferd', *al farasu* 'das pferd'), und ich will jetzt diese vermuthung nicht verheimlichen. Falls das idg. *-s* des genitivs (und des casus activus) ursprünglich ein artikel war (was nicht ausgeschlossen ist, da eine verwendung des artikels beim genitiv, während es beim regens fehlte, mit mehreren lebendigen sprachen parallel sein würde), so wäre die indogermanische regel für das vorkommen des beweglichen *-m* mit dem Arabischen parallel" (1907: 156).

The next major step in the reconstruction of PIE verbal syntax was taken by H. Pedersen in another article which modern investigators have ignored (1933: 311-315). The title is not mentioned in Collinder's survey (1974), for example. Pedersen bases himself on the assumption that there were three series of personal endings in the Indo-European proto-language: 1. the 'normal' endings, which are best preserved in the athematic flexion, 2. the perfect endings, which are also found in the thematic present, and 3. the middle endings. He puts forward

the hypothesis that the perfect endings belonged originally to the flexion of intransitive verbs, and the 'normal' endings to the flexion of transitive verbs. The distinction between these two sets of personal endings thus corresponds to the difference of verbal government between intransitive verbs, where the subject was in the nominative, and transitive verbs, where it was in an oblique case. Pedersen points to the identity of the 'intransitive' 1sg ending $-\bar{o}$ with the ending of the nominative pronoun $\acute{\epsilon}\gamma\acute{\omega}$, and to the identity of the 'transitive' endings 1sg $-m$ and 3sg $-t$ with the oblique pronominal stems $me-$ and $to-$. He also points to the possibility of identifying 3pl 'intransitive' $-r$ and 'transitive' $-nt$ with the formative suffix of nom. $\acute{\upsilon}\delta\omega\rho$, obl. $\acute{\upsilon}\delta\alpha\tau- < -nt-$.

In an article which has received more attention than Pedersen's studies, André Vaillant presented three arguments in favour of the hypothesis that the nom.sg. ending $-s$ is an ancient ergative ending, which he identifies with an original ablative ending (1936). First, there is a morphological opposition between animate and inanimate in Indo-European, which is reflected in nom. $\pi\omicron\lambda\acute{\upsilon}\varsigma$, acc. $\pi\omicron\lambda\acute{\upsilon}\nu$, neuter $\pi\omicron\lambda\acute{\upsilon}$. Following Meillet (1931a), Vaillant assumes that the rise of the feminine gender is a recent development, which did not reach the Anatolian languages. Second, there is a suppletive nominative in pronominal paradigms, which is reminiscent of the suppletive ergative in Chechen. Third, there are two types of verbal flexion, which correspond to the Hittite conjugations in $-hi$ and $-mi$. Vaillant assumes that the Hittite flexion in $-hi$ corresponds to the Indo-European perfect, which is originally intransitive, while the flexion in $-mi$ originated from the addition of pronominal elements to a verbal noun in $-t-$:

- 1sg $*g^w\acute{h}enmi < *g^w\acute{h}ent-m-i$
- 2sg $*g^w\acute{h}ensi < *g^w\acute{h}ent-t-i$
- 3sg $*g^w\acute{h}ent-i$
- 1pl $*g^w\acute{h}enmes < *g^w\acute{h}ent-m-es$
- 2pl $*g^w\acute{h}entes < *g^w\acute{h}ent-w-es$
- 3pl $*g^w\acute{h}nont-i$ (participle)

The final $-i$ may be the vestige of a copula.

In his monograph on Hittite (1938), H. Pedersen repeated some of the considerations from his 1933 article. This account is again disregarded by K.H. Schmidt (1979). The cardinal point of Pedersen's theory is the existence of a relation between the

two types of verbal flexion in Hittite (*-hi* and *-mi*) and the two types of nominative ending (with and without *-s*). The sigmatic nominative expressed the subject of transitive verbs, which correspond to the Hittite flexion in *-mi*, whereas the asigmatic nominative expressed the object of transitive verbs and the subject of intransitive verbs. The Indo-European perfect, which corresponds to the Hittite flexion in *-hi*, was originally intransitive. The original distribution of *-hi* and *-mi* has been obscured and cannot be recovered.

I think that the principal flaw in the conception of Pedersen and Vaillant is the insufficient distinction between flexion types. The identification of the intransitive perfect with the thematic flexion, which is predominantly transitive at the earliest reconstructible stage, cannot be substantiated. The same unwarranted assumption, among others, is made by Watkins (1969: 107-112). Similarly, we have to make a strict distinction between transitive and intransitive middle paradigms.

II.

The status of the thematic flexion in the PIE verbal system has been the subject of much controversy. According to Meillet, the thematic type was originally limited to suffixed stems, e.g. in *-ske-* and *-ne-*, and to the subjunctive of athematic stems (1931b: 202). Vaillant assumed a twofold origin of the thematic present: on the one hand the sixth class of Sanskrit (*tudāti*) corresponds to the thematic flexion in *-mi* of Hittite (*wassezzi*, *lukezzi*, *-skezzi*), and on the other the paradigm of *φέρω*, *-εις*, *-ει* can be identified with the Hittite flexion in *-hi* of denominative stems in a laryngeal, e.g. *newahhi* (1937). These theories must now be reconsidered in the light of the Hittite evidence, which has recently gained much wider accessibility thanks to the publication of Norbert Oettinger's monograph (1979). It follows from Oettinger's analysis that the flexion in *-mi* is found with athematic stems, simple thematic stems, and derived stems in *-ske-* and *-ie-*, whereas the flexion in *-hi* is characteristic of old perfects, causatives and iteratives, denominative stems in *-ahh-*, and derived stems in *-ie-* after a root-final laryngeal. In the course of the historical development, the flexion in *-hi* is gradually eliminated. Stems in *-ahh-* generally belong to the flexion in *-mi* after the Old Hittite period.

In my opinion, the principal step toward a solution of the

problem of the thematic flexion was made in 1953 by J. Knobloch, who identified the thematic vowel with an object marker. His article does not seem to have evoked any response in the literature, probably because he limited himself to a typological comparison with Circassian and did not adduce any historical evidence in support of his view. Against Pedersen's identification of the flexion in *-mi* with the transitive conjugation Knobloch objects that the distribution of Hittite *-mi* and *-hi* does not correspond to a distinction between transitive and intransitive verbs, e.g. *ešmi* 'I am', *pāimi* 'I go' vs. *dāhhi* 'I take', *pihhi* 'I give'. Athematic root verbs in *-mi* are particularly often intransitive in the Indo-European languages.

Referring to an article by Jakolev, Knobloch cites the following Kabardian examples as an illustration of the three types of syntactic construction which are found with Circassian verbs:

ś'ále-r mǎ-že 'le garçon crie'

ś'ále-r txǎtǎ-m yó-že 'le garçon lit (dans) le livre'

ś'ále-m txǎtǎ-r ye-ž 'le garçon lit le livre (en entier)'

In the first example, the subject is in the absolute case. Knobloch compares this intransitive construction with the Indo-European type with a verb in *-mi*. In the second example, the subject is in the absolute and the (indirect) object in the relative case. The verb has a zero subject prefix and an indirect object marker *yó-*. This is the construction which Knobloch compares with the Indo-European thematic flexion, the thematic vowel corresponding to the object prefix. In the third example, the subject is in the relative and the (direct) object in the absolute case, while the verb has a zero object marker and an actor prefix *ye-*. Knobloch compares this transitive construction with the Indo-European perfect, where the thematic vowel is absent. Thus, he arrives at the following reconstruction of the Indo-European verb phrase:

- construction of the ergative type:
 - objective flexion: *-o-H-* (thematic present)
 - athematic flexion: *-H-* (perfect)
- construction of the nominative type:
 - objective flexion: *-o-m* (thematic aorist and imperfect)
 - athematic flexion: *-m(i)* (present and aorist)

Knobloch adds that the thematic vowel of nominal *o*-stems can also be regarded as a petrified object marker. For a more detailed and accurate description of the Circassian case system I refer to Kuipers 1962.

The main objection which can be raised against Knobloch's reconstruction is that the Indo-European perfect was undoubtedly intransitive at the earliest reconstructible stage, so that the hypothesis that it was construed with an ergative is highly unnatural. Moreover, the conjecture that the thematic present was construed with an ergative while the thematic aorist was construed with a nominative or absolutive case runs counter to the expected state of affairs. It seems preferable to return to Pedersen's suggestion that the flexion in *-H-* corresponds to an intransitive type of construction whereas the ergative case correlated with the endings 1sg *-m*, 2sg *-s*, 3sg *-t*.

III.

As I have indicated elsewhere (1979: 67f), I think that we have to assume six Proto-Indo-European classes of verbal stems, which were characterized by the following sets of endings:

			imperfective	perfective
dynamic:	subjective:	1sg	<i>-mi</i>	<i>-m</i>
		2sg	<i>-si</i>	<i>-s</i>
		3sg	<i>-ti</i>	<i>-t</i>
		3pl	<i>-nti</i>	<i>-nt</i>
dynamic:	objective:	1sg	<i>-oH</i>	<i>-om</i>
		2sg	<i>-eH₁i</i>	<i>-es</i>
		3sg	<i>-e</i>	<i>-et</i>
		3pl	<i>-o</i>	<i>-ont</i>
static:		1sg	<i>-H₂</i>	<i>-H₂e</i>
		2sg	<i>-tH_o</i>	<i>-tH₂e</i>
		3sg	<i>-o</i>	<i>-e</i>
		3pl	<i>-ro</i>	<i>-r</i>

These sets of endings correspond to the historically attested athematic present and aorist, thematic present and aorist, stative (intransitive middle) and perfect. The opposition between the laryngeals was neutralized in the neighbourhood of PIE **o* (cf. Kortlandt 1980: 128). The six types of paradigm were interconnected by a network of derivative, not flexional relations. For the origins of the middle paradigms I refer to the exposition which I have given elsewhere (1981). The stative and the perfect were inherently intransitive, while the objective flexion was transitive and the subjective flexion could be either.

The distinction between subjective and objective flexion is

characteristic of the Uralic languages. In Hungarian, for example, the verb *várni* 'to wait' has the following paradigms:

		subj.	obj.
present	1sg	<i>várok</i>	<i>várom</i>
	2sg	<i>vársz</i>	<i>várod</i>
	3sg	<i>vár</i>	<i>várja</i>
preterit	1sg	<i>vártam</i>	<i>vártam</i>
	2sg	<i>vártál</i>	<i>vártad</i>
	3sg	<i>várt</i>	<i>várta</i>

The objective flexion is used with a definite direct object, e.g. *várom a fiamat* 'I am waiting for my son'. The subjective flexion is used if there is no definite direct object, e.g. *várok valakit* 'I am waiting for somebody'. The objective personal endings are identical with the possessive suffixes, cf. *karom* 'my arm', *karod* 'thine arm', *karja* 'his arm'.

It is usually assumed that the opposition between subjective and objective conjugation cannot be traced back to Proto-Uralic (e.g., Collinder 1960: 244, Hajdu 1975: 101). There are two weighty arguments against this view. Firstly, the objective conjugation is common to Hungarian, Ob-Ugric, Samoyed, and Mordvin, and traces have been claimed for Lapp and, less convincingly, for Cheremis and the Permian languages (see Tauli 1966: 171f for references). It is improbable that the rise of the objective flexion is an independent development in all branches of Uralic. Secondly, there is to a certain extent formal agreement between the languages. In Yurak, which is in several respects the most archaic of the Uralic languages, the endings of 1sg subj. *madāu* 'I cut' and obj. *madādm* 'id.', where *-d-* is an infixed object pronoun and *-m* is the subject marker, correspond formally to those of Hung. *váro-k* and *várom*, respectively, and the 2sg obj. endings of Yurak *madān* 'you cut', Yenisei *motadd-o* 'id.', Selkup *noand* 'you hunted', and Hung. *várod* all point to Proto-Uralic **-nt* (cf. Pedersen 1933: 323f), cf. also 2sg subj. Selkup *noal*, Hung. *vártál*.

The main argument against the hypothesis that the verbal system of the Uralic languages is very ancient is the widespread identity of the flexional endings with the personal or possessive pronouns. This argument is inconclusive because the identity may be the result of analogic remodelling. Thus, the identity of the Polish 1pl ending *-my* with the personal pronoun *my* is comparatively recent but cannot be used as evidence for a recent

origin of the flexional system. The ending *-my* replaces Old Polish *-m*, which had merged with the athematic 1sg ending as a result of the loss of final jers. There is evidence that the Uralic endings were subject to a similar type of restructuring at various stages in the development of the separate languages. In Hungarian, the objective personal endings are identical with the possessive suffixes, as opposed to the subjective personal endings. In Yurak, which is representative for the Samoyed languages, the subjective endings are identical with the possessive suffixes after singular nouns, while the objective endings for dual and plural objects are identical with the possessive suffixes after dual and plural nouns, in contradistinction to the differing objective endings for singular objects. This distribution is undoubtedly secondary. The infixed object pronoun which is present in 1sg obj. Yurak *madādm*, Yenisei *motaro'*, is also present in 3sg subj. *madāda*, *motara*, Selkup *ńoed*, but absent from 3sg obj. *madā*, *mota*, *ńoe-k*. This reversal of the 3sg subj. and obj. endings must be attributed to the influence of the possessive suffixes. In Selkup, the 1sg subj. and obj. suffixes have also interchanged places, e.g. subj. *ńoap* < **-m*, obj. *ńoa-k* 'I hunted', cf. Yurak subj. *madāu*, obj. *madādm*, Hung. subj. *váro-k*, obj. *várom*.

The hypothesis that there was a distinction between subjective and objective flexion in Proto-Indo-European cannot be proven in any strict sense of the word, but it offers an explanation for at least three sets of data in the oldest material of the historically attested languages: the distribution of the Hittite thematic flexion, the origin of the sixth class of Sanskrit (*tudāti*), and the rise of the subjunctive. It may also offer an explanation for the distribution of the thematic aorist in Greek, which will not be discussed here.

In the course of the historical development, the Hittite flexion in *-hi* is gradually replaced with the flexion in *-mi*. It is probable that this development had started before the earliest texts already, so that we can assume that some of the verbs which belong to the flexion in *-mi* in the oldest material had been transferred to that class at an earlier stage. The thematic 3sg ending **-e* was identical with the perfect 3sg ending **-e* at the very outset, while the 1sg endings **-oH* and **-H₂e* were sufficiently alike to induce analogic levelling. As a result of the loss of **H₁*, the 2sg ending **-eH₁i* merged with the 3sg ending

when the latter took the characteristic **-i* from the athematic flexion: it was therefore predisposed to replacement with a more distinctive ending. In view of all this, it is remarkable that the thematic present did not entirely merge with the perfect. I think that the reason must be sought in the addition of **-i* from the athematic present to the perfect endings at a stage when the thematic present was still a distinct inflexional type. The transfer of causatives and iteratives to the flexion of the perfect can be understood if we assume that the final vowel of 3sg **-eie* was dropped before the loss of intervocalic **i*, so that the ending merged with the corresponding perfect ending at a stage which was posterior to the addition of **-i* to the perfect endings but anterior to the loss of the thematic present flexion. This explanation is far more probable than the complicated mechanism which Oettinger suggests (1979: 452ff). The remaining thematic presents were subsequently transferred to the flexion in *-mi*, perhaps under the influence of the secondary endings. The transfer was late in the case of the denominatives in *-ahh-* < **-eH₂e-*, which in Old Hittite belong to the flexion in *-hi*.

Thus, the expected reflex of the PIE thematic flexion in Hittite can be found in the simple flexion in *-ami*, the derived flexions in *-skami* and *-(j)ami*, the causatives and iteratives in *-ahhi*, and the denominatives in *-ahhahhi* (e.g. *happinahhahhi*, Oettinger 1979: 41). All of the simple verbs are transitive with the exception of *papre-* 'unrein sein' (Oettinger 1979:282ff). The inherited verbs in *-ske-* are transitive, and so are the causatives and iteratives and the verbs in *-ahh-*. The numerous verbs in *-je-* constitute a heterogeneous class, the non-denominatives among them being almost exclusively transitive. Oettinger's view that *šišzi* < **sisd-ti* represents PIE **sisde-* 'sit' with analogical athematic flexion (1979: 216) must be rejected because no such verb existed in the proto-language. The intransitive meaning of Skt. *śīdati* 'sits' and *tīṣṭhati* 'stands' is the result of a secondary development, as P. Thieme has demonstrated (1929: 55), cf. ἵζω, ἰστέμυ.

The sixth class of Sanskrit (*tudāti*) has punctual meaning in Vedic, except in the case of originally athematic verbs which were transferred to the thematic flexion (e.g. *kṣiyati* 'dwells' next to *kseti*, 3pl *kṣiyānti*, cf. Renou 1925: 310). The verbs of this class are characteristically accompanied by an implicit or

explicit definite object. In addition to the examples which Renou adduces (l.c.), the following instances can serve for illustration (the translation is from Geldner 1951).

I 67.7-8 *yā īm cikēta gūhā bhāvanta ā yāḥ sasāda dhārām ṛtasya, vi yé cṛtānty ṛtā sāpanta ād id vāsūni pra vavācāsmāi.*
 “Wer ihn entdeckt hat, da er sich versteckt hielt, wer zum Strom der Wahrheit gelangt ist — jedem der (den Strom der Wahrheit) *entbindet*, die Wahrheit pflegend, — dem hat (Agni) darnach Gutes verheissen.”

III 29.14 *prā saptāhotā sanakād arocata mātūr upasthe yad āśocad ūdhani, nā nī miṣati surāṇo divēdive yad asurasya jaṭharād ajāyata.*

“Von sieben Opferpriestern umgeben erstrahlte er seit alters, wenn er im Schosse der Mutter, an ihrem Euter erglühte. Nicht *schliesst* der Erfreuliche Tag für Tag die Augen, nachdem er aus dem Leibe des Asura geboren wurde.” (cf. Latin *micāre* ‘to twinkle’)

V 30.13 *supēśasaṃ māva sṛjanty āstaṃ gāvāṃ sahasrai ruśāmāso agne,*

“Reich geschmückt *entlassen* mich die Ruśama’s mit Tausenden von Kühen nach Hause, o Agni.”

V 53.6 *ā yām nāraḥ sudānavo dadāśuṣe divāḥ kōsam acucyavuh, vi parjānyam sṛjanti rōdāsī:*

“Wenn die gabenschönen Herren für den Opferspender des Himmels Eimer heraufgezogen haben, so *lassen* sie den Parjanya (Regen) über beide Welten sich ergiessen.”

VI 36.3 *tām sadhrīcīr ūtāyo vṛṣṇyāni páuṃsyāni niyūtaḥ sascur índram, samudrām ná síndhava ukthāśuṣmā uruvyácāsaṃ gíra ā viśanti.*

“Den Indra begleiten vereint die Hilfen, die Bullenkräfte, die Manneskräfte, die Gaben. Wie die Ströme in das Meer, so *gehen* die Lobreden, durch Loblieder verstärkt in den Geräumigen *ein*.”

In all of these instances, it is the object rather than the subject which experiences a change of state as a result of the action. Renou regards the verbs of the sixth class as originally modal forms and compares them with the subjunctive, which he considers to be the starting-point for the formation of numerous thematic indicatives (1925: 315).

The Vedic subjunctive is a thematically inflected stem: “le seul trait qui caractérise le subjonctif est la voyelle théma-

tique" (Renou 1932: 14). As Renou points out, the original meaning of this form is best preserved in those cases where the athematic stem does not constitute an indicative paradigm: "pour rendre compte des notions liées au système thématique, il faut tabler sur les formations autonomes, non sur celles qui ont adhéré à un système particulier de présent et d'aoriste" (1932: 15). And here we find that "une forme telle que *karati*, que rien ne rattache à un thème spécial, possède une valeur trouble, mi-réelle mi-modale, et telle qu'il serait vain de restituer un *karati* indicatif à côté d'un *karati* subjonctif" (ibidem). The best example is precisely the stem *kara-*, which is attested 75 times in the Rgveda: "en majorité subjonctif, mais subjonctif indéterminé, éventuel, plutôt que modal," without regard to the presence of either primary or secondary endings. Compare the following examples:

II 35.1 *apām nāpād āśuhēmā kuvīt sá supésasas karati jóṣiṣad dhí.*

"Gewiss wird Apām Napāt, der Rossetreiber, (meine Lobrede) zieren, denn er soll seine Freude daran haben," "peut-être Apām Napāt, animateur de coursiers, *rendra-t-il* (mes chants) richement ornés?"

VII 88.1 *prá śundhyúvaṃ varuṇāya prēsthām matīm vasiṣṭha mīlhuṣe bharasva, yá īm arvāñcam kárate yájatram sahásrāmagham vṛṣanam brhāntam.*

"Vasiṣṭha! Bring ein sauberes, recht angenehmes Gedicht dem belohnenden Varuṇa dar, der den verehrungswürdigen, tausend Gaben bringenden grossen Bullen herwärts *lenken* soll," "présente à Varuṇa la prière la mieux aimée, qui amène (qui amènera) le taureau."

VI 18.14 *ánu tvāhighne ádha deva devā mādān víśve kavítamam kavīnām káro yátra váriṃvā bādhitāya divé jánāya tanvè grṇānāh.*

"Da jubelten alle Götter dir, o Gott, dem Weisesten der Weisen im Drachenkampf zu, in dem du gepriesen dem bedrängten Himmel, dem Volke, dir selbst einen Ausweg *schufest*," "alors, ô dieu, les dieux se réjouirent à ton sujet, ô tueur du Dragon, quand à l'opprimé tu *procuras* le libre espace."

V 31.11 *sūras cid rátham páritakmyāyām pūrvam karad úparam jūjuvāmsam, bhārac cakrām étaśaḥ sam riṇāti puró dādhat saniṣyati kratum nah.*

"Auch den Wagen der Sonne, der vorausgeeilt war, *brachte* er im entscheidenden Augenblick ins Hintertreffen. Etaśa trug das

Rad davon; er stellt es her. Wenn er (ihn) an die Spitze bringt, wird er unsere Absicht erreichen."

In connection with the last two examples K. Hoffmann remarks: "Auch an der zweiten Stelle VI 18.14, wo *kārah* allgemein präterital übersetzt wird, braucht durchaus kein präteritaler Tatbestand vorzuliegen: 'Da jubeln (*mādan*, Inj. Präs.) dir alle Götter beim Drachenkampfe zu, in dem (*yātra*) du Weite dem bedrängten Himmel, dem Volke, dir selbst schaffen wirst (*kārah*)'. Wenn man aber an einer präteritalen Situation festhalten will, so lässt sich auch rechtfertigen: 'Da haben dir die Götter beim Drachenkampfe zugejubelt, in dem du . . . schaffen solltest (d.h. damit du dabei schaffest)' . (. . .) Geldner übersetzt *karat* auch V 31.11 präterital, doch schon die auf *karat* folgenden Verbformen (*bhārat*, *sām rināti*, *saniṣyati*) machen das unwahrscheinlich" (1967: 55³⁷).

Renou concludes from the Vedic facts that the subjunctive was originally an independent formation, characterized by the mere presence of the thematic vowel, with a semi-modal value which could develop either into the historical subjunctive or into the inexpressive and aspectually indeterminate indicative of the first present class: "Le subjonctif prévaudra dans la mesure où le verbe conserve un présent ou un aoriste athématique qui soutient ce mode; l'indicatif, dans la mesure où le thème en *-a-* est senti comme isolé et indépendant" (1932: 29). He remarks that "dans *bhāratī*, en regard de *bībharti*, l'évolution est à son terme, l'incorporation du thème *bhara-* au système indicatif est totale et rien ne décèle immédiatement l'origine modale. Mais on observera que *bībharti* fournit le présent expressif 'tenir en mains, soutenir, maintenir', et aussi 'porter dans son sein'; *bhāratī* 'apporter ou emporter, procurer, offrir' et au moyen 'recevoir', implique une participation de la volonté du sujet (. . .). Au point de vue des désinences, dans le Rv., on observera que, si *bībharti* possède uniquement la série primaire et la voix active, *bhāratī* reçoit aussi la série secondaire et le moyen, avec une répartition des finales qui rappelle celle du subjonctif. Quant à *bhārtī*, la forme fait corps avec *bībharti* pour le sens; exceptionnellement rare, elle ne saurait appuyer l'origine thématique normale de *bhāratī*" (1932: 23f). On the endings of the subjunctive see now Beekes 1981.

The facts which have been adduced here can be understood

if we start from the supposition that the thematic vowel was originally an object marker. Consider the following Bulgarian examples:

spj-a 'I sleep'

spi mi se 'I am sleepy'

In the first example the stem is followed by the 1sg ending *-a*. In the second it is followed by the zero 3sg ending, the enclitic 1sg dative pronoun, and the reflexive particle. The structure of these forms is immediately comparable with that of Skt. *admi* 'I eat', where *-mi* is the 1sg subject marker, and Gr. *ἐδομαι* 'I will eat', where the root is followed by the thematic vowel *-o-*, the 1sg marker *-m-*, and the middle voice marker *-ai*. While the Bulgarian case shows how the subjunctive can have originated from a type of objective flexion, the non-volitional variant which underlies Skt. *bhárati* is found in Polish. In this language, where the translation of the above examples is *spie* and *chce mi się spać* (same syntactic construction with 3sg *chce* 'wants' and inf. *spać* 'to sleep'), the "objective" construction is found in such instances as *spato mi się bardzo smacznie*, which is practically equivalent to *spatę bardzo smacznie* 'I slept very soundly'. The position of Russian appears to be intermediate in this respect, e.g. *mne ne spitsja* 'I cannot sleep' (Polish *nie mogę zasnąć*), but *mne xočetsja spat'* 'I am sleepy' (Bulg. *spi mi se*). As the Slavic parallel demonstrates, the fact that the stem is intransitive is no obstacle to the derivation of a modal category from an objective construction.

The Slavic examples adduced here contain a reflexive particle. As Thieme observed (1929: 53), there is a correlation between thematic flexion and middle voice, as opposed to an athematic active paradigm, in the oldest Indo-European material. "Il est certain qu'il y a plus généralement une tendance vers la voix moyenne dans la plupart des systèmes thematiques; à cet égard le contraste *hánti jǵhnate*, *sacate sisakti* est saisissant (. . .). Le moyen est aussi rare dans les présents et aoristes radicaux, dans le présent redoublé athématique, qu'il abonde dans les présents thematiques" (Renou 1932: 21¹).

IV.

Now we return to the syntax of the PIE finite verb. It has long been recognized that there is a striking resemblance between the verbal systems of Georgian and classical Greek.

It may therefore be profitable to have a look at the syntax of the Georgian verb. The following examples are characteristic of literary Georgian (cf. Boeder 1979: 437):

txa modi-s 'the goat comes' (present)

txa movid-a 'the goat came' (aorist)

txa mosul-a 'the goat has apparently come' (perfect)

txa č'am-s venax-s 'the goat eats the vine' (present)

txa-m šeč'am-a venax-i 'the goat ate the vine' (aorist)

txa-s šeuč'ami-a venax-i 'the goat has apparently eaten the vine' (perfect)

The subject of a regular intransitive verb is always in the nominative, which ends in zero after a vowel and *-i* after a consonant. With transitive verbs, the case forms depend on the tense system. In the present tense, the subject is in the nominative and the object is in the dative, which ends in *-s*. In the aorist, the subject is in the ergative, which ends in *-m* after a vowel and *-ma* after a consonant, and the object in the nominative. In the perfect, the subject is in the dative and the object in the nominative. There is a class of intransitive verbs which have an ergative subject in the aorist, e.g.

c'q'al-i duγ-s 'the water boils' (present)

c'q'al-ma iduγ-a 'the water boiled' (aorist)

is t'iri-s 'he weeps' (present)

man it'ir-a 'he wept' (aorist)

There are transitive verbs which have a dative object in the aorist. There is a class of verbs which have a dative subject and a nominative object in the present (indirect or inverted verbs), e.g. *deda-s uq'var-s švil-i* 'the mother loves the child'.

The verbal syntax of Georgian is more archaic than that of the related Megrelian and Laz languages. In Megrelian, the use of the ergative case was generalized in the aorist, irrespective of transitivity or intransitivity of the verb. In Laz, the use of the ergative case with transitive verbs was generalized, irrespective of tense. A particularly instructive survey of the historical development of verbal syntax in Georgian, including the dialects, can be found in Boeder's contribution to the new handbook on ergativity (1979).

For Proto-Indo-European we can assume that the subject was in the absolutive (asigmatic nominative) case in the stative and the perfect because these categories were intransitive. The original derivative relationship between a transitive present and

an intransitive perfect has been preserved in *πείθω* 'I persuade', *πέποιθα* 'I trust', *ρήγνυμι* 'I break (tr.)', *ἔρρωγα* 'I am broken'. If the agent was mentioned with the perfect, it was probably in the dative if it was animate and in the instrumental if it was inanimate. If this is correct, the original syntactic construction is preserved in *τοῦτό μοι πέπρακται*, where the verb has received an analogical middle ending, while the syntax of *πέπραχα τοῦτο* was taken from the present tense. The original perfect *πέπραγα* has preserved the intransitive meaning.

In the thematic flexion, which always had two arguments, the thematic vowel referred to an object in the absolutive case. I stick to Pedersen's view that the secondary endings *-m*, *-s*, *-t* etc. referred to a subject in the ergative (sigmatic nominative) case. For the thematic present I assume that the subject was originally in the dative if it was animate and in the instrumental if it was inanimate. Thus, the syntactic construction of the thematic present was the same as that of Bulg. *spi mi se* or rather Eng. *me dreamed a strange dream*. The substitution of *I* for *me* in modern English had its analogue in late Proto-Indo-European, cf. also German *mir träumt* and *ich träume*. The fact that Bulgarians are discouraged from saying *az mi se spi*, where *az* is the nominative of the 1sg pronoun, testifies to the same development happening right now in that language.

The hypothesis that the subject of a thematic present was originally in the dative accounts for the correlation between middle presents and active aorists in a number of instances, e.g. *δέρκομαι* 'I see', *έρχομαι* 'I go, come' (often with *ὁδόν* 'road, journey': the original meaning was perhaps 'to cover a distance', cf. Skt. *rcchāti* 'reaches'). aor. *ἔδρακον*, *ἤλυθον*. The PIE transitive middle expressed the identity of the subject with the indirect object: it can be compared with the subjective version in Georgian, e.g. *me vimzadeb sadils* 'I prepare myself a dinner' (cf. neutral version *me vamzadeb sadils* 'I prepare a dinner', intransitive middle *vemzadebi* 'I prepare myself'). Like its Georgian counterpart, the PIE transitive middle had probably the same syntactic construction as the corresponding active forms. The presence of a dative subject in the thematic present prompted the spread of the transitive middle endings, which correlated with the identity between the subject and the indirect object. In its turn, the spread of the transitive middle endings facilitated the substitution of the ergative (sigmatic

nominative) case for the dative with thematic presents in late Proto-Indo-European.

With athematic presents and aorists, the subject was probably in the ergative if the verb was transitive and in the absolutive if the verb was intransitive. The apparent contradiction between Pedersen's view that the endings *-m*, *-s*, *-t* etc. referred to the ergative subject of a transitive verb and Knobloch's observation that intransitive verbs belong as a rule to the flexion in *-mi* has a remarkable counterpart in Samoyed, where intransitive verbs characteristically receive the endings of the objective flexion (cf. Castrén 1854: 207), e.g. Yurak *adm* 'I am'. Indeed, I think that this is a major argument in favour of the Indo-Uralic hypothesis, but that is a topic which is beyond the scope of this paper.

As is commonly assumed, the accusative developed from a directive case (cf. recently Haudry 1977: 155). The same development is attested at a later stage in Romance, e.g. Sp. *la madre quiere a su niño*, Rum. *mama iubește pe pruncul său* 'the mother loves her child', cf. Lat. *ad* 'to', *prae* 'for'. The substitution of the accusative for the absolutive was probably early in the case of effective verbs, individualized objects, and emphasis (cf. Pottier 1968). The generalization of *-m* in the neuter nom. acc.sg. ending of the *o*-stems can perhaps be attributed to the semantics of this category, which supplied an expression for individual members to a collective in *-ā*. It is recalled that the neuter does not function as a subject of transitive verbs in Hittite.

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