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*Proceedings of the 2nd Annual Meeting of the Berkeley Linguistics Society* (1976), pp. 413-425

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The Shift from Postposition to Preposition:  
 Evidence from Early Greek  
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Abel Bergaigne was the first scholar to investigate word order in a number of early Indo-European languages from a systematic historical point of view. He summarized his conclusions in a 'double formule: le terme qualifiant précède le terme qualifié et le terme régi précède le terme régissant' (1875/8:27). Bergaigne was of the opinion that both preverbs and case-governing particles (adpositions) developed out of earlier adverbs, and that when these particles were associated with nouns they followed them (1875/8:180). Berthold Delbrück arrived at the same view independently in his study of the word order of the Satapatha-brāhmaṇa (1878:46), and repeated it in the Grundlagen der griechischen Syntax (1879:153), but in the Ver-gleichende Syntax III (1900:104-109; cf. I, 1893:643-774) he no longer felt that the usage of the oldest Sanskrit prose could be reconstructed to Proto-Indo-European. His new opinion was based on the fact that in Vedic Sanskrit and in most of the other IE languages either a mixed system, with some adpositions preposed and others postposed or variable, or a fully developed prepositional system prevailed. Delbrück concluded: 'Diese Zustände sind nur begreiflich, wenn man annimmt, dass in der Urzeit die Präpositionen sowohl vor als hinter dem Kasus stehen konnte' (1900:105). Furthermore, Delbrück maintained that this variation in position was a consequence of the use of these particles as preverbs, in which function they could occupy two positions, either sentence initial or immediately before the verb (1893:648ff.). Thus, for Delbrück, adpositions were originally preverbs which came to be associated with nouns only because of the ambiguity of reference in sentences such as

dāśvā́msam úpa gachataṃ RV 1,47,3  
 'come to the worshipper'  
 blepháron ápo dákrua píptei Od. 14.129  
 'tears fall from (her) eyelids'

for the origin of the postpositional uses, and

pári dyā́m anyáḍ īyate RV 1,30,19  
 'the other surrounds heaven'  
 metà dè mnēstērsin éelpe Od. 17.467  
 'and he spoke among the suitors'

for the origin of the prepositional uses (1893:654-659, 1900:105), while the development of a consistent order, whether postpositional or prepositional, took place only in the individual IE languages. This view is similar to that defended by Antoine Meillet, who believed however that both the preverbal and the adpositional uses evolved from earlier adverbial functions (1964:193-194). W.P. Lehmann (1974:212-214, 234) expresses similar views on the function and development of these particles, but with the added realization that when they came to be associated with nouns they must have followed them, since Proto-Indo-European was an Object-Verb language, and on typological grounds one would expect postpositions and not prepositions (cf. Greenberg 1963). Moreover, when late PIE and the individual IE languages were in the process of changing from OV to VO order, they would have shifted postpositions to prepositions (1974:234). Very little has been said about the operation of such a shift; in this paper I propose to describe one part of it and to call attention to a parallel development with verbs and their objects.

It is now generally accepted that PIE was a SOV language with *inter alia* the verb-final order and the postpositions characteristic of this order type (cf. Watkins 1963, 1964 and Dressler 1971 in addition to Lehmann 1974). In fact, precisely this state of affairs is found in Hittite alone (1); the other IE languages show either SVO or VSO order, or some mixture of SVO, VSO and SOV types. This mixture of types is characteristic of the classical languages, and Greek has notoriously 'gone farther than any other IE language in the elaboration of a "free" word order' (Watkins 1964:1039, and cf. Dover 1960). Word order was consciously exploited as a literary device in Classical Greek, and a rather great freedom was made possible by the inflectional system of the language. For example, Hjalmar Frisk gives percentages of OV and VO for selected passages in Herodotus (49.5% OV), Thucydides (61.7% OV), Plato (70.3% OV) and Lysias (76.1% OV) among others (1932:16, in each case the number of examples is 900). The wide variation between authors shows that at least verbs and objects were freely transposed for literary purposes. Yet it seems safe to claim that some correlates of word order types are much less subject to literary rearrangement than are others. Thus, in spite of its otherwise "free" word order, Classical Greek is prepositional (2).

Homeric word order is relatively "free", but

according to the figures given in P. Fischer (1923: 200), OV sequences outnumber VO sequences by about two to one (3). As against this preponderance of OV over VO, the poems show an overwhelming predominance of prepositions over postpositions. The following types of constructions are found:

Np	theōn apo Od. 6.12 'from the gods'
	thrōnōi éni Il. 15.142 'in the chair'
	pónton épi Il. 7.63 'on the sea'
NpA	gaíes apo patrídos Il. 13.696 'from his paternal land'
	Ílion eis eúpōlon Il. 16.575 'to Troy (which has) good horses'
ApN	thoās epí neās Il. 24.1 'on swift ships'
	hierous katà bōmoús Il. 2.305 'onto sacred altars'
ApNA	emà pròs dómata kalá Od. 8.41 'to my beautiful house'
	thoēi sun nēi melainēi Od. 3.61 'with a swift black ship'
pN	apò khthgnós Il. 5.13 'from the ground'
	epí karpōi Il. 24.671 'by the wrist'
pAN	pròs makròn Ólumpōn Il. 24.694 'towards blessed Olympus'
pNA	sun nēi poluzúgōi Il. 2.293 'with a many-benched ship'.

A.S. Haggett (1902) counted the adpositions in Homer and found that of 8198 examples some 255 were postpositions governing single nouns (4). This is, as he points out, about 3.1% of the total. With phrases consisting of an adjective and a noun, some 390 (4.7%) have the adposition between the noun and its modifier in that order, while 600 have the adposition between the adjective and the noun (7.3%). The remainder are prepositional and have the order pN, pAN or pNA etc. (adjectives and nouns are freely rearranged). If the figures for all the non-preposed examples are combined, the total is 1245 (somewhat less than 15.2%). Haggett explains the postposed examples in the following words: 'In Homer where the transition from local adverbs to prepositions proper was not yet complete and the position of the preposition had not yet become rigidly fixed, postposition is to be regarded as a freedom of the language' (1902:182). Virtually the same explanation is given by Chantraine (1953:83), who maintains that the position of the prepositions 'était originellement fort libre'.

Even without the considerations made possible by syntactic typology there are two strong arguments against the explanation of the placement of these particles as free. First, the usual accentuation of the prepositions in Greek is proclisis: apò epì perì hupò amphì prò eis etc. (5). These elements are orthotonic only if they are placed after their nouns:

theōn ápo Od. 6.12 'from the gods'  
 pónton épi Il. 5.63 'on the sea'  
 hēn perí Il. 15.142 'about her'  
 khersin hupo Trōon Il. 11.827 'at the hands of the Trojans'.

That this accentuation, and not proclisis, is inherited from PIE is shown by Vedic Skt. ápa ápi pári úpa abhí prá (Vendryes 1938:69-71, 243-244; Schwyzer I, 1953:386-387, II 1953:420) (6). In view of the statistics presented above, this position (anastrophe) and accentuation of the adpositions is clearly an archaism in Homer. Second, adpositions do not occur after sequences of adjective plus noun or noun plus adjective in these poems (7). If the governed noun has a modifier, the adposition must either precede both, or be placed between the noun and its modifier. If the arrangement of these particles and their nouns were free, it would be difficult to account for this restriction. A further peculiarity in the accentuation of these particles is found in the phrases where they are interposed between their noun and its modifier. According to the ancient grammarians anastrophe occurs only in the sequence NpA, and not in ApN (Vendryes 1938:247). Thus, the accentuation of eni in

néess' éni pontopóroisi Il. 3.240 'in seafaring ships'

contrasts with that in

plōtēi enì nēsōi Od. 10.3 'on a floating island'.

Delbrück thought that the type NpA was the older of the two, and that the type ApN had its origin in a 'modifizierende Nachahmung' of the earlier sequence (1900:106).

Mycenaean Greek, in contrast to Homer, seems to show no trace of the postpositional use of these particles (cf. Villborg 1960:119-122, 139; Ventris and Chadwick 1973:90). This fact is surprising because of the early date of the tablets, yet Mycenaean syntax in general seems to represent a later stage in

the history of Greek than does the syntax of Homer. The absence of postpositions in Mycenaean can be correlated with the fact that although all three of the principal word order sequences SOV, VSO and SVO are attested, SVO is by far the most common, and SOV (with no postverbal material) by far the least frequent (8). In fact, objects may precede their verbs only if they are one word long (not counting preceding adnominal genitives). If the object is more than one word long, or has following dependent material, either the whole phrase is placed after the verb, or it is broken up after the first accusative nominal form so that the latter precedes the verb and the remainder of the phrase follows. Examples of the various orders are (in all instances I cite the text and translation given in Ventris and Chadwick 1973):

SVO PY Ea 800 ke-re-te-u e-ke o-na-to pa-ro mo-ro-go-ro po-me-ne WHEAT 2 'Kretheus holds a lease from Molog<sup>u</sup>ros the shepherd: 240 l. wheat.' (No. 110, p. 240)

VSO PY Vn 06.1 o-di-do-si du-ru-to-mo  
 .2 a-mo-te-jo-na-de e-pi-pu-ta 50  
 .3 a-ko-so-ne 50  
 'Thus the woodcutters contribute to the chariot workshop: 50 saplings, 50 axles.' (No. 252, pp. 349-350)

SOV PY Ae 264 pi-ra-jo / ai-ki-pa-ta su-ra-te du-ni-jo-<jo> me-tu-ra su-ra-se MAN 1 'Philaios the goat-herd (who is acting as?) seizer has seized the cattle of Dunios.' (No. 30, p. 169)

SOV plus additional postverbal material PY Ep 01  
 .2 ai-ti-jo-go o-na-to e-ke pa-ro da-mo ke-ke-me-na ko-to-na 'ko-to-no o-ko' to-so pe-mo WHEAT  
 1 T 4 3 'Aithioq<sup>u</sup>s holds the lease of a communal plot from the village (being himself) a plot owner: so much seed: 174 l. wheat,' (No. 131, p. 251)

SOV where 0 is an infinitive phrase PY Ep 704  
 .5 / da-mo-de-mi pa-si ko-to-na-o  
 .6 ke-ke-me-na-o o-na-to e-ke-e to-so pe-mo WHEAT  
 3 T 9 'but the village says that he/she (merely?) holds the lease of communal plots: so much seed: 468 l. wheat,' (No. 135, pp. 252-256).

The last example shows clearly the mechanical operation of the rule which breaks up long object phrases: the accusative enclitic pronoun -mi 'he, she' (min) is the subject of the infinitive e-ke-e 'to have'

(ékhein), but it occurs in the enclitic sequence after the first word of the matrix clause, and it is separated from the remainder of its own clause by the verb pa-si 'says' (phēsi) (9). The breaking up of long object clauses is a feature of Homeric Greek as well:

ándra moi énnēpe, Mō̃sa, polútropon Od. 1.1 'Tell me, Muse, about the man of many turns'  
 pólemón te pepheugótes édē thálassan Od. 1.12 'having escaped war and the sea'  
 nóstou kekhrēménon édē gunaikós Od. 1.13 'longing for his return home and his wife'  
 tōi hoi epeklōsanto theōi oíkonde néesthai/eis Itháken Od. 1.16-17 'in which (scil. year) the gods allotted him to sail home to Ithaka'.

In the last example, the dative enclitic hoi serves both as object of epeklōsanto and as subject of the infinitive néesthai, so that the structure of this sentence is analogous to that of the Mycenaean example discussed above (10).

In a classic essay, Jan Gonda has discussed sentences in Vedic Skt. which have a SOV nucleus with additional material after the verb, and has characterized them as 'amplified, that is to say: they are from their beginning until the verb complete in themselves and all the words following the verb may be left out without mutilating the sentence' (1959:7). Gonda however includes embedded infinitives, e.g.

ko hi tvaivaṃ bruvantam arhati pratyākhyātum BARU. 6, 2,8 'for who can refuse you when you speak like this?'

(1959:15), where the infinitive pratyākhyātum 'refuse' follows arhati 'is able', and its object tva 'you' is in enclitic position after the first element of the matrix clause, so that one can scarcely characterize this sentence as 'complete' up to the inflected verb. It seems best merely to note that embeddings are broken up in the same manner as other lengthy objects are:

phenam asyanti bahulāṃś ca bindūn AV. 12,3,29 'they hurl foam and abundant drops' (1959:65)  
 yo vai taṃ puruṣaṃ vidyāt sarvasyātmanaḥ parāyaṇam BARU. 3,9,10 'who knows that Person as the ultimate support of every soul' (1959:16).

Larry Hyman has investigated analogous sentences in Niger-Congo languages and has suggested 'afterthought' as a cover term for the postverbal material in such

sentences (1975:141). Furthermore, he proposes that afterthought can serve to 'activate' a change from SOV to SVO because

'...speakers may find it necessary to append additional information after completing the basic sentence with the inherited SOV syntax. In so doing, a certain point is reached at which a restructuring of the syntactic order takes place, yielding a preferred syntax with the verb no longer final--and ultimately, a standardized syntax with the verb second.' (1975:141-142)

Hyman's proposal goes much farther in explaining the shift from SOV to SVO than do any of the alternative theories he discusses. However, there seems to be no manner in which afterthought can be used to explain postverbal embedded infinitives with subject and/or object pronouns still to the left of the matrix verb as in the Sanskrit and Greek examples cited above. Infinitive complements are readily shifted past the verb in all older IE languages with the exception of Hittite (11). Moreover, the IE languages that are characterized by the presence of SOV nuclei with post-verbal material seem also to be characterized by the presence of adpositional phrases with the adposition interposed between the noun and its modifier, and just as the SOVX structures seem to be transitional between SOXV and SVOX, so the NpA and ApN sequences seem to be transitional between ANp and pNA.

As further support for the claim that NpA/ApN sequences are transitional between the more consistent ANp and pNA I cite the following Umbrian examples:

Np asa-ku IIa 39 'at the altar'  
 pNA pre-veres treplanes Ia 2 'before the Trebulanian gate'  
 NpA tuta-per ikuvina Ia 5 'for the Iguvine community'  
 ApN testru-ku peři Ia 29 'at the right foot'  
 todcom-e tuder VIa 10 'in the city limits'.

Umbrian and Oscan seem also to share with Homeric Greek the limitation of placement in these phrases, since no examples of ANp are found in the texts, with the exception of the 'improper prepositions' Osc. amnud 'for the sake of' (formally an ablative sing. noun, cf. Lat. causā) and Umbr. paca 'for the sake of' (another ablative sing.):

Osc. Tabula Bantina (Vetter 2) egm[as . touti-]/cas.  
 amnud 'rei publicae causa'

Umb. Via 19-20 ocrer / pehaner . paca 'arcis piandae causa'.

Neither of these words is an inherited adposition, and both take genitive objects (cf. von Planta 1897:440-441 on the placement of adpositions in Oscan and Umbrian, and Buck 1928:205-211) (12). In general, word order in Oscan and Umbrian is very similar to that found in Homer and in archaic Latin inscriptions (von Planta 1897:490).

Latin has postpositions only with pronouns: mecum 'with me' tecum 'with you' quo ab 'from which'; there is no NpA in prose (Delbrück 1900:107), although this pattern is well represented in early poetry:

NpA Ennius arbusta per alta 'through the high trees'  
 NpAA Plautus damnō cum magnō meō 'with my great injury'  
 ApN magnā cum curā 'with great care'.

There seems to be no ANp, with the possible exception of the 'improper prepositions' gratiā and causā; Latin shares this restriction on the placement of inherited adpositions with Greek and Oscan and Umbrian.

This restriction on the placement of adpositions is in sharp contrast with the situation in Vedic Sanskrit and in Hittite. In Vedic Sanskrit virtually all of the possible combinations of N, A and p are found (I cite examples from Delbrück 1900:105-106 and Delbrück 1888:440-470):

ANp imāñī lokāñ āti ŚB 1,2,1,12 'beyond these worlds'  
 Nap jātāñ ubhāyāñ antār RV 4,2,2 'between the two races'  
     prāvato mahīr ānu RV 10,14,1 'along the great slopes'  
 NpA rōdasī antār urvī RV 7,12,1 'between the two broad worlds'  
     tanvām pari svām RV 3,53,8 'over one's own body'  
 ApN ubhé antā rōdasī RV 4,7,8 'between the two worlds'  
     hiranyāyāt pari yōneḥ RV 2,35,10 'from the golden womb'  
 pAN ā tṛtīyāt pūruṣāt TS 5,4,10,4 'to the third generation'  
 pAANA antār mahī bṛhatī rōdasīmē RV 7,87,2 'between these two great high worlds'.

The word order of Vedic prose is basically SOV, although postverbal material is tolerated; adpositions usually follow their nouns (with the exception of ā

and pura 'before', Delbrück 1878:46). In poetry, on the other hand, the word order is free, although still predominantly SOV, and the placement of adpositions shows a corresponding freedom, as the examples cited above demonstrate. Delbrück notes further (1888:21) that in distinction to the inherited adpositions the 'improper' prepositions usually precede their noun (13).

Hittite is a rigid SOV language, and it is exclusively postpositional with the exception of a few examples in early texts where the object of the adposition is an enclitic pronoun (Friedrich 1960:129-130, 134; Otten and Souček 1969:70-73). Thus only the following types are found:

Np HUR.SAG-1 šēr 'on the mountain'  
 ANp ANA LÜ.MES KUR Amurra šēr 'because of the people  
 from Amurru'

and with an enclitic possessive pronoun

šēr-šit 'for him'  
 piran-tet 'in front of you'  
 katti-mi 'with me'

(Friedrich 1960:130, 134). The adpositions with a suffixed enclitic possessive pronoun appear to be also capable of governing a preceding genitive noun:

LUGAL-aš SAL.LUGAL-ašš-a šēr-šemet 'over the king and the queen'

(Otten and Souček 1969:71). In these examples, the postposition is treated as if it were a noun (Friedrich 1960:134), while the disruptive factor is the enclisis of the pronominal forms.

From the preceding survey it is clear that the shift from postposition to preposition is one of the earliest facets of the change from OV to VO order. The language which is rigidly SOV is also rigidly postpositional, while the languages which seem to be basically SOV but which tolerate postverbal material and break up long object phrases are characterized by adpositions interposed between nouns and their modifiers. These languages are in the process of altering their basic order, and the earlier and later stages of this process can be correlated with the acceptability of the inherited ANp sequence: early if it is still accepted and cooccurs with the more recent interposed and preposed orders, and late if ANp no longer is productive.

## NOTES

- (1) The only sentences in Hittite which do not have the verb in absolute final position are those in which the verb has been moved towards the beginning of the sentence for some contextually determinable reason and those in which the verb is the only non-enclitic element and has to serve as a prop for the enclitics.
- (2) With the exception of the 'improper' prepositions héneka and khárin (and perí in its non-locational meanings). 'Improper' prepositions are traditionally defined as those which do not enter into compounds with verbs, or as those whose origin as nominal forms (or phrases) is synchronically transparent (Delbrück 1888: 21). The boundary between the categories 'proper' and 'improper' cannot be sharply drawn; the latter is the productive category, while the former contains the inherited adpositions, and both contain different chronological layers.
- (3) Fischer's figures are given in terms of 'Anfangs-' 'Mittel-' and 'Endstellung' of the verb; I arrive at the proportion given by reinterpreting these categories and by combining the totals for SOV and for SOV with additional postverbal material. Fischer does give figures for S, O and V in the passage he investigates.
- (4) Haggett counts only the 'proper' prepositions.
- (5) The writing of a grave (or acute) accent on the final syllable of the prepositions is only a graphic convention (Vendryes 1938:66-69).
- (6) The Sanskrit adpositions retain their accent no matter where they are placed. The development of proclisis in Greek prepositions probably took place at about the same time as the obligatory univerbation of verbal prefix and verb.
- (7) Delbrück states that this position is 'unhomerisch' (1900:106); I looked through books 1-5 of the Iliad and 1-3 of the Odyssey and could not find any ANp or NAp.
- (8) Ventris and Chadwick 1973:90, Villborg 1960:137. SOV with additional postverbal material (SOVX) is however relatively frequent, especially in the formula onato eke kekemena kotona.
- (9) This process seems to be responsible for almost all of the examples of Wackernagel's law that apply to the enclitic pronouns of an embedded clause. It is not the pronouns that have been moved but rather the remainder of the clause they go with.
- (10) Or at least hoi is responsible for the deletion of the pronominal subject of the infinitive néesthai: there do not seem to be any examples of two enclitic pronouns in different cases referring to the same NP.
- (11) A Hittite example with a structure analogous to

that of the Greek and Sanskrit examples given above is: apās-ma-mu harkanna san(a)pta 'he sought to destroy me' where the pronoun -mu is object of the infinitive harkanna (Hatt. III 63, cited in Friedrich 1960:144). In Homer, the great majority of infinitives are placed after the inflected verb they depend on. In the passage investigated by Fischer 29 of 34 infinitives follow the matrix verb (1923:201).

(12) Oscan repeats the adposition in Ve. 147 húrtín . / kerríin . This is the only example of this phenomenon in the Italic dialects. Umbrian regularly postposes its monosyllabic adpositions which do not end in consonant clusters; all the other adpositions are preposed.

(13) W.P. Lehmann has recently proposed that the development of postpositions in New High German is related to the fixing of SOV order in dependent clauses in that language (1971). It is interesting to note that almost all of the adpositions in question: entlang zufolge gemäss entgegen etc. are phrasal or nominal in origin. In view of the Hittite, Vedic, Greek and Italic evidence for the placement of newly created adpositions, it would seem that Lehmann's proposal has to be modified.

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