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TENSE AND MOOD IN INDO-EUROPEAN SYNTAX*

1. THE HISTORICAL PRESENT

The 'historical' or 'dramatic' present tense used in narrating past events, which is common in many Indo-European languages, has always been interpreted in essentially semantic terms. A typical traditional formulation is that in using the present tense the narrator becomes closely involved in the story and relates it as if he were an eyewitness to the action, or wished to convey to the listener the dramatic feeling of being an eyewitness.[1] While this is undoubtedly a correct intuition about the historical present as found in the modern European languages (cf. Weinrich, 1964), I shall argue that it is quite mistaken to transfer it to the earlier stages of Indo-European. In Greek, Old Irish, and Old Norse, for example, the historical present has quite different syntactic and semantic properties, to which the traditional idea, or any of its variants[2], must utterly fail to do justice.

In the first place, the historical present behaves syntactically as a past tense with respect to sequence of tenses where the older Indo-European languages have this feature. Thus in Old Irish sequence of tenses the historical present counts regularly as a past (Strachan, 1895–8, 236). It is quite different in modern languages, where the historical present is treated in the same way as other presents.

A second syntactic fact which the traditional theory leaves unexplained is

[1] See Emery (1897) for a concise summary of earlier discussion, and Leumann, Hofmann and Szantyr (1965), Schwyzer (1950) for more recent references.

[2] There are several: (1) The historical present expresses timelessness (Brugmann, 1883; von Fritz, 1949). (2) The historical present expresses simultaneity with the action denoted by the preceding verb (Rodemeyer, 1889; Wood, 1965). (3) The historical present has an inceptive meaning (Koller, 1951). The range of examples that will come up here is sufficient, I think, to show that none of these special meanings is inherent to the historical present. In fact, any consistent semantic difference between historical presents and narrative past tenses has not been successfully demonstrated. Recognizing this, some have proposed, equally unacceptably, that the use of the historical present can be purely arbitrary (e.g. Humbert, 1954, 138).

the propensity of the present for appearing in sentence conjunction after a true past tense in early Indo-European. This alternation of past and present is particularly surprising when it occurs, as frequently happens, in closely parallel structures. Compare the following typical Greek examples from Thucydides with their quite ungrammatical literal English translations:

> *háma dè têi hēmérai têi pólei prosékeito kaì haireî* 'at daybreak he attacked the town and takes it' (7.29).

> *élabon dè kaì tò phroúrion kaì toùs phúlakas ekbállousin* 'they captured the fort and drive out the garrison' (8.84).

> *hai mèn pleíous epì tês Ímbrou diéphugon, téssares dè katalámba- nontai* 'most of them escaped towards Imbros, but four are caught' (8. 102).

Numerous further Greek examples will be found in Stahl (1907, 92), Kühner and Gerth (1963, 157–8, 132–4), and Schwyzer (1950, 271–2). Schwyzer also provides a very full bibliography concerning this use of the present both for Greek and for some other languages, and it will not be necessary to repeat this information here.

Old Irish is rich in similar examples. The following are taken from the Scéla Mucce Meic Dathó (The Tale of MacDatho's Pig; Thurneysen, 1935):

> *Īar sin at·racht* (Pret.) *sūas ocus no·mbertaigedar* (Pres.) 'After that he arose and exults' (4. 1).

> *Do·luid-seom* (Pret.) *fessin ara cenn ocus feraid* (Pres.) *fáilti friu.* 'He came to meet them himself and welcomes them' (5. 4).

> *Is and ro·lá* (Pret.) *Conchobar in cennidi dia chinn ocus nos·mber- taigedar* (Pres.) 'Then Conchobar took off his headgear and brandishes it' (15. 4).

> *Luid* (Pret.) *īarum Conall do rainn na-mmucce. Ocus gebid* (Pres.) *dano cenn in tarra ina bēolo* . . . 'Then Conall went to carve the pig. And he takes the end of the big belly into his mouth...' (17. 5).

The same is true of Old Norse. Heusler (1962, 128) notes that the historical present is never sustained over longer passages but normally alternates with preterite forms in rapid succession, and cites a typical case: *þeir hlíópo á hesta sína ok riþa ofan á Fýresvǫllo, þa sǫ́ þeir, at Aþils konungr reiþ epter þeim ... ok vill drepa þá* 'they leaped on their horses and ride down to the Fyres-fields; then they saw that King Athils rode after them and wants to

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kill them'. Cf. Wood (1965) for a discussion of this syntactic feature in Old Norse.

Old Latin fits into the same pattern. Compare the following sentence from an inscription to the Scipios: *Taurasia Cisauna Samnio cepit subígit omne Loucanam opsidesque abdoucit* (Diehl, 1964, 59). Similarly in the Euhemerus of Ennius: *tum Iunonem Saturno in conspectum dedere atque Iouem clam abscondunt dantque eum Vestae educandum celantes Saturnum* (cited from Watkins, 1963, 9).

Some modern languages which remained relatively isolated from the Sprachbund area of Western Europe have still retained this old alternation of past and present in conjoined structures. Cf. Icelandic *báturinn kom inn fyrir oddann á hraðri siglingu, en allt í einu hvolfir honum* 'the boat rounded the cape in swift sailing, but all of a sudden it capsizes' (Einarsson, 1949, 137). Lithuanian (folktales) *meškà įlipo į mẽdį ir žvalgosi* 'the bear climbed on the tree and looks around', *àš einù einù iř priejaũ tókią ùpę* 'I go and go and came to a river' (Senn, 1966, 450). If the one example of the historical present cited in Haebler's grammar of Salamis Albanian (1965, 159) is typical, then Albanian, or this dialect of it, may be another modern Indo-European language that has preserved this feature: *e'ðe 'bari 'vajza, čə 'kej por'siturə 'pλaka, 'vete ndə štə'pi, 'merr γu'dinə 'rri ndə 'skamnə e'ðe 'θotə* 'and the girl did what the old woman had told her to do, she goes home, takes the mortar, sits down on a bench, and says...'.

In general, however, conjunction of past and historical present is quite untypical of modern languages. Conversely, the sustained use of the historical present in long passages of narrative which is natural in these, is conspicuously absent in earlier Indo-European. In this respect the two systems are completely reversed.[3]

Thirdly, the present tense in Greek appears in conjoined structures not only for an expected past tense but also for an expected future tense. This fact is often ignored, perhaps because the future is of relatively small frequency in the texts compared to the past. The examples are no less clear:

> *keînoi idómenoi agathà pollà trépsontaí te pròs autà kaì hēmîn tò entheûten leípetai...* 'when they see so many good things, they will turn to them and after that there remains for us...' (Herodotus, 1.207).

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[3] A curiously pervasive fact is that verbs of saying are especially frequently put into the historical present in virtually all Indo-European languages. These verbs are so used even in languages in which the historical present otherwise is rare. Cf. Hittite *ḫuḫḫi-šši pāit nu-šši taršikizzi* 'he went to his grandfather and speaks to him' (Friedrich, 1960, 138), Armenian *ew iǰeal* (part.) *ayr mi i kerparans lousoy koč'eac'* (aor.) *zanoun im ew asē* (pres.) *Grigoriē* 'and a man in lightlike form descended, called my name and says: Gregory!' (Agathangelos 102 = Tiflis § 733).

> *doulṓsete ... erēmoûte* 'you will enslave ... you (will) lay waste'
> (Thuc., 3.58).

For more examples of conjoined present and future tenses, see the collection of Mahlow (1883, 601), Jacobsthal (1907, 5), and the references cited there.

And the fourth fact is that in modal contexts, where the meaning of the tenses in a language like Greek is purely aspectual and has nothing to do with time, there is exactly the same alternation of aorist and present in conjoined structures. Consider the following examples of parallel structure with tense shift in non-indicative moods:

Aorist subjunctive followed by present subjunctive:

> *eàn gár tí se phanô kakòn pepoikôs ... eàn méntoi mēdèn phaínō-*
> *mai kakòn pepoikôs...* 'if I shall appear to have done you any
> wrong ... but if I shall not appear to have done you any
> wrong...' (Xen., *Cyr.*, 5.5.13).

Aorist optative followed by present optative:

> *Ei mèn gàr prosdéksaito ... ei dè mḕ prosdékhoito...* 'if he should
> accept ... but if he should not accept...' (Dem., 19.318).

Aorist imperative followed by present imperative:

> *eispraksántōn autÒs hoi hēirēménoi ... suneisprattóntōn de autoîs*
> *kaì hoi stratēgoí* 'let the elected men exact money from them,
> and let the commanders also help them to exact money'
> (4th-century Attic; Schwyzer, 1950, 342).

Further examples are given in Schwyzer (1950, 342) (3rd person imperatives) and (1950, 341) (2nd person imperatives). An especially striking case is analyzed in Humbert (1954, 177).

It would be absurd to seek in such examples any semantic differences, however subtle, between aorist and present. But this simply highlights the impossibility of adequately characterizing the so-called historical present on a semantic basis alone. Rather, a syntactic solution is called for. It is beginning to look as if the historical present in early Indo-European is a present tense only in its superficial form. It functions syntactically as a past tense, as shown by sequence of tenses, it is semantically indistinguishable from the past tenses, and it alternates with these in conjoined structures.

Everything points to its being an underlying past tense, and its conversion into the present tense in the surface structure must be governed by a syntactic

rule, evidently some form of conjunction reduction[4], which optionally reduces repeated occurrences of the same tense to the present. Such a rule not only accounts for the historical present, but at the same time for the alternation of aorist and present in modal contexts, and also for the alternation of future and present, which in the traditional theory remain separate and unexplained facts.

2. CONJUNCTION REDUCTION OF TENSE AND MOOD

In fact, when looked at in terms of conjunction reduction in this way, the phenomenon turns out to be even more general. Another inflectional category which in early Indo-European shows the effect of conjunction reduction is mood. Thurneysen (1961, 558) gives the following rule for Old Irish:

"Where the protasis of a general conditional sentence contains two parallel conditions, only the first has the verb in the subjunctive; e.g. *má beid ní di rúnaib do·théi ar menmuin ind fir ... et ad·reig* (ind.) 'if aught of the mysteries should come before the mind of the man ... and he rises' Wb. 13ª12."

Similarly,

> *cía beid Críst indib-si et is béo ind anim tri sodin, is marb in corp immurgu trisna senpect[h]u* 'though Christ be in you and the soul is alive thereby, the body nevertheless is dead through the old sins' Wb. 4ª6 (Thurneysen, 1961, 562).

Analogous facts in Homer have been well discussed by Chantraine (1953, 354–5): "Dans quelques exemples remarquables, une proposition coordonnée à l'indicatif appartient encore, pour le mouvement, à une proposition précédente qui, elle, est au subjonctif."

A typical example is *mế min kertoméōsin, emoì d'ákhos éssetai ainón* 'I fear they might revile him, and I will be badly distressed' (*Od.*, 16, 87).

The reason that conjunction reduction yields presents and indicatives is evidently that they are the zero or unmarked tense and mood in the sense of Prague School linguistic theory. For syntactic markedness in general, and

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[4] I am using the term conjunction reduction rather loosely for all the various rules that factor out shared constituents in coordinate structures. It is apparent that most languages have several such rules. English has one rule, discovered by Ross and Lakoff, which pulls out shared items from co-ordinate sentences and attaches them higher up in the constituent structure, deriving for example *John and Bill like swimming* from *John likes swimming and Bill likes swimming*. Another rule, subject to heavy restrictions, deletes recurrent verbs on a left-to-right basis without altering the constituent structure; thus *John likes swimming and Bill likes sailing* yields *John likes swimming and Bill sailing*. Finally, there are certain discourse phenomena which resemble conjunction reduction. In *Yesterday I went to Boston. I bought two shovels,* the adverb *yesterday* is understood as pertaining to both sentences just as it is in *Yesterday I went to Boston and bought two shovels.*

for the unmarked value of the present tense and indicative mood in particular, see Jakobson (1964). The unmarked value of the present and indicative in their respective categories is supported by many grammatical facts apart from those just described concerning conjunction reduction. For example, nominal sentences are normally interpreted as present indicative. Also, while verbs may lack other tenses and moods, no verb lacks a present indicative (though the present tense may be inflected as a perfect in certain verbs, e.g. Gk. *oîda* 'know').

Schematically, then, the sequence ...Past...and...Past... is reduced to ...Past...and...zero..., and since it is the present which is the zero tense, the reduced structure ...Past...and...zero... is realized morphologically as ...Past...and...Present.... Repeated futures and subjunctives reduce in just the same way. The peculiarity of these facts is that conjunction reduction here seems to be applying to inflectional categories, namely tense and mood. This apparently contradicts the otherwise valid generalization that conjunction reduction does not apply below the word level. For example, *to sing and to dance* can reduce to *to sing and dance*, but *singing and dancing* cannot reduce to '*singing and dance*', and *sang and danced* cannot reduce to '*sang and dance*'. Indeed, this generalization is a special case of the broader fact that syntactic transformations in general respect word boundaries (thus there are also no permutations that transport part of a word across other words) – all this being one of several reasons why the word emerges as a necessary entity in a generative grammar. Are we now forced to conclude that the conjunction reduction rule must be stated in a rather different form for the early Indo-European languages than for the modern ones, and that the cross-linguistic generalizations just mentioned are false?

I shall argue that conjunction operates in substantially the same way in all Indo-European languages, and that the facts just pointed out give no occasion to abandon the generalizations about conjunction. Instead, the difference in this respect between the older and the modern Indo-European languages is one of several reflexes of a difference in the representation of tense and mood in the deep structure. But before attempting to place the facts into the larger pattern in this way, let us consider an even earlier stage of Indo-European, still tangible in Vedic, Greek, and Celtic, in which conjunction reduction operated on a different tense and mood system, and with different results.

3. THE INJUNCTIVE IN VEDIC

In all instances dealt with so far in this paper, the zero or unmarked exponent of a category has also been endowed with an independent function. The pres-

ent tense, besides serving as a zero tense, also has the positive function of denoting present time, and analogously in the case of the indicative mood. The system is like that of Biblical Hebrew, in which a narrative is begun by a perfective verb, which places the action in the past, and subsequent verbs connected with waw consecutivum are thrown into the imperfective. But this is not the only conceivable situation. It is perfectly possible that a language should have a form whose unique function is that of unmarked, zero exponent of a category, just as in phonology the realization of an archephoneme need not coincide with the realization of any fully specified phoneme (cf. the second segment of *spit*). E.g. Maasai (Tucker and Mpaayei, 1955) has a special 'N-tense', which serves precisely to neutralize the category of tense and the category of mood. Thus in conjunction, all verbs but the first are put into this 'N-tense', with the first verb indicating the underlying tense of the entire string of coordinated sentences, e.g. *ki-etuo* (past) *aŋ ni-k-irrag* (N-tense) 'we came home and slept'. The second of two commands is likewise rendered in the N-tense, e.g. *imput-a* (imper.) *emoti n-i-pik* (N-tense) *enkima* 'fill the pot and put it on the fire'. The N-tense is also used in complements, where Indo-European languages neutralize tense by means of infinitival forms. Exactly such a system is also found in the unrelated (Bantu) language Tswana (Cole, 1955, 445); Cole, however, calls the zero tense a 'subjunctive', perhaps because it is used, beside in conjunction, also in complements. Other Bantu languages with 'narrative tenses' that neutralize tense and mood in conjoined structures are Herero, Duala (the form is here called an 'aorist'), and Swahili (Meinhof, 1948, 188–9).[5]

The Indo-European counterpart to these forms which at once suggests itself is the so-called injunctive. The unaugmented forms with secondary endings which this term refers to were characterized by Thurneysen in a classic study (1883) as forms which in effect neutralize the verbal categories of tense and mood, expressing only person, number, and voice. Subsequent semantic studies of the injunctive in the Gathas by Kuryłowicz (1927) and in the Rig Veda by Renou (1928), Gonda (1956), and now by Hofmann (reported in Meid, 1963) have fully supported this analysis of Thurneysen.

It is no accident that tense and mood, but not person, number, and voice are exactly the verbal categories which we found to be subject to conjunction reduction. I shall now suggest that the picture sketched above of tense neutralized as present and mood neutralized as indicative in conjunction reduction does not represent the original state of affairs. In particular, the historical present is not proto-Indo-European. It is rather the reflex of an earlier

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[5] Kay Williamson has told me that Igbo, representing a third linguistic family, has a similar system of narrative tenses. According to J. Eulenberg and J. Ritter, the same is true of Hausa. We are evidently dealing with an area feature of African languages.

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system, in which both tense and mood were in conjoined structures neutralized by the injunctive. Only when the special set of forms constituting the injunctive no longer survives (or at most survives as morphological debris) is the function of the injunctive as a point of neutralization of tense and mood taken over by the present and the indicative.

And now we come to a fact which is sufficiently striking in itself to have received incidental notice in virtually all treatments of the Vedic injunctive, but which acquires a new significance in terms of the theory here developed. It is the fact, which we can now for the first time explain, that a large proportion of the Vedic injunctives are conjoined to non-injunctive forms. Indeed, injunctives which are clearly derived by the rule of conjunction reduction from underlying verb forms which are fully specified for tense and mood constitute one of the three major groups of injunctives in the Rig Veda, the other two being the injunctives that appear with the prohibitive adverb *mā*, and those that stand independently in contexts where tense and mood can be left unspecified, as in ritual and mythological passages.

Thus the injunctive appears conjoined with each of the four moods. The conjunction of indicative and injunctive has been documented by Avery (1885) and corresponding examples for subjunctive, optative, and imperative conjoined with injunctive have been assembled by Delbrück (1888). Further examples are found in MacDonell (1941, 350–1), Renou (1952, 369), Gonda (1956, 41–2). It will be necessary to give only a few representative instances of each type here.

Indicative with injunctive:

> *nū́ cit sá bhreṣate* (ind.) *jáno ná reṣan* (inj.) *máno yó asya ghorám āvívāsāt* 'that man does not falter nor suffer harm, who seeks to win his terrible spirit' (7.20.6).
>
> *dadāti ... carat* '(Agni) gives ... wanders' (10.80.1).
>
> *rejate ... panāyanta* 'trembles ... they display their glory' (1.87.3).

Imperative with injunctive:

> *pibā ... sadaḥ* 'drink ... sit' (8.17.1).
>
> *kṛṇu ... vidaḥ* 'make ... find' (1.42.7).
>
> *vetu ... juṣata* 'let him come ... let him accept' (7.15.6).

Subjunctive with injunctive:

> *úpa bráhmāṇi śṛṇava* (subj.) *imā́ no, áthā te yajñás tanvè váyo dhāt* (inj.) 'mayst thou listen to these our prayers, and then may the sacrifice bestow vigor on thyself' (6.40.4).
>
> *pári bhūtu ... citayat* 'may he encompass ... may he quicken' (2.2.5).

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Optative with injunctive:

> *pári no hetí rudrásya vṛjyāḥ, pári tveṣásya durmatír mahí gāt*
> 'would that the dart of Rudra pass us by, would that the great
> malevolence of the impetuous one avoid us' (2.33.14).

In the same way the injunctive also neutralizes the category of tense. It is
not only conjoined to present tense verbs, as in the above examples, but also
to imperfects and aorists. The resulting situation is described by Renou
(1952, 369) as follows: "En tant qu'imparfait ou aoriste inaugmenté,
l'injonctif équivaut à un prétérit faible, de type narratif et s'étayant sur des
formes voisines augmentées ou sur des parfaits." Thus we have imperfect
followed by injunctive:

> *átiranta ... prá ... tiránta* 'they have surpassed ... they have
> furthered' (7.7.6).
> *apacat ... pibat* '(Agni) cooked ... (Indra) drank' (5.29.7).

Aorist with injunctive:

> *adhukṣata ... vasiṣṭa* 'they have extracted ... he has immersed
> himself' (9.2.3.).

For further examples and discussion see Renou (1928, 67–72).

We can now begin to distinguish three chronological layers in Indo-
European with respect to conjunction reduction of verbal categories:

(1) The oldest system, represented by Vedic Sanskrit, in which conjunction
reduction of tense and mood yielded injunctive forms. We shall see in the
next two sections that the outlines of this system can also be reconstructed
from Homeric Greek and Celtic.

(2) A new system, in which the injunctive is lost and its role in conjunction
reduction as the unmarked tense and mood is taken over by the present and
the indicative. This stage is attested most clearly in Greek and Old Irish, but
also in early Latin, Old Icelandic, and even some modern languages.

(3) The newest system, characterized by the loss of conjunction reduction
of inflectional categories. This system is that of most modern European lan-
guages and was already nascent in classical Latin. Thus in classical Latin the
historical present does not always count as a past tense in sequence of tenses,
but already optionally counts as a true present. Also we see the alternation of
historical present and past typical of the other Indo-European languages
being lost in Latin and replaced by sustained sequences of historical presents,
which are frequent e.g. in Caesar.

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4. THE INJUNCTIVE IN GREEK

The syntactic approach to the problem of the Indo-European injunctive turns out to be fruitful in that it causes quite a few stray facts to fall into place. One mystery of long standing in Greek has been the unequal frequency of the augment in different sections of Homer. It has been observed that the augment is most often omitted in narrative, not so readily in speeches and dialog, and virtually never in gnomes and proverbs. There is now a simple explanation for this fact.

In the dialect in which the Homeric poems were originally composed, the old system, substantially that of Vedic at least as regards tense, still prevailed, and conjunction reduction applied to tense to yield not historical presents but their earlier functional counterparts: injunctives. This earlier effect of conjunction reduction is illustrated in a pair of lines like the following:

> *Atreùs dè thnēískōn élipen polúarni Thuéstēi,*
> *autàr ho aûte Thuést' Agamémnoni leîpe phorênai*
> 'Atreus dying left [the scepter] to Thyestes of the rich flocks,
> And Thyestes in turn left it to Agamemnon to carry' (*Il.,* 2.
> 106–7).

The sequence *élipen* (2nd aor.): *leîpe* (injunctive) is thus historically equivalent to the Vedic sequences like *apacat* (imperf.): *pibat* (injunctive), which I mentioned above. Where scholars have previously either regarded the variation as arbitrary (Wackernagel, 1950, 182–3) or have attempted to devise semantic explanations, particularly fanciful in cases of parallel structure like these (Koller, 1951), we can now see here the workings of a proto-Indo-European syntactic process of conjunction reduction. The frequent use of unaugmented forms in narrative is thus due simply to the fact that this is the type of text in which sentence conjunction is most frequently found, and on the other hand proverbs and maxims owe their stable augment to their isolated position in discourse.[6] Speeches and dialog take the middle ground both as regards the frequency of the augment and as regards the frequency of sentence conjunction.

With the eventual disappearance of the injunctive as a syntactic category in Greek, the injunctive forms like *leîpe* were reanalyzed and incorporated into the remaining system of verb forms in two different ways: as 'historical' presents (*leípei*) and as imperfects (*éleipe*).

The historical present was already discussed in Section 1. The other alter-

[6] There is of course another, separate problem which is not hereby solved: why proverbs should be in the aorist in the first place. But given this syntactic fact, their morphological shape can be accounted for by the proposed theory.

native, which we may call the 'historical imperfect', has not yet been touched on here. As is well known, Herodotus, Thucydides, and Xenophon, the same authors who use the historical present in such profusion, also use a historical imperfect, which like the historical present is semantically indistinguishable from the aorist and also alternates in narrative with the aorist in much the same way as the historical present does:

> *taûta eîpe* (aor.) *kaì autíka ággelon épempe* (impf.) 'he said so and immediately sent a messenger' (Herodotus, 1.110).

> *hoi mén tines ... takhù apéthnēskon* (impf.), *hoi d' épheugon* (impf.), *hoi dé tines kaì heálōsan* (aor.) *autôn* 'some of them were killed at once, others fled, and some of them were taken prisoner' (Xen., *Cyr.*, 3.2.10).

This historical imperfect, along with the historical present, is simply a reinterpretation of the original narrative injunctive.

My analysis receives some support from Koller's observation (1951) that the verbs which typically occur in the historical imperfect are just those which also can occur in the historical present. Koller also maintains that both the historical present and the historical imperfect always have an inceptive meaning. This statement is seriously misleading as it stands. It makes little sense to assume an inceptive value in the historical imperfects just cited, and this interpretation is equally inappropriate in the case of the historical presents which came up earlier. But Koller's claim stays valid if restricted to verbs which are or can be stative. These do have an inceptive sense when used in the historical present and the historical imperfect. Thus *pheúgei* and *épheuge* as historical tenses are synonymous with the aorist *éphuge* and mean 'escaped' but never 'was a fugitive'. But since the aorist imparts an inceptive meaning to stative verbs, the inceptive meaning of historical presents and imperfects is automatically explained by the fact that they are syntactically derived from underlying aorists.

Returning to Homer, let us raise the old question why the historical present, in spite of its wide currency in classical Greek, is not once encountered in all of Homer. For over 150 years this curious gap has been attributed to the specific style of the epic (Wackernagel, 1950, 1963; Schwyzer, 1950, 271; Koller, 1951, 88). This proposal has rightly been criticized as incoherent since there is no conceivable reason why the historical present should be avoided in epic style.[7] It is in fact not avoided in Latin epic poetry and its occurrence in classical Greek bears no detectable relation whatsoever to any parameter of style.

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[7] Literary critics have even regarded the historical present as belonging to epic narration *par excellence* (Petsch, 1942, 365).

If we see the historical present as a replacement of injunctive forms syntactically derived from underlying past tenses in conjoined structures, the reason for the absence of the historical present in Homer is immediately clear. For in Homer's dialect, as in Rigvedic, conjunction reduction of tense still resulted in injunctives. The injunctives or 'augmentless preterites' are thus what in Homer holds the place of the later historical presents.

We saw above that the narrative injunctive was by the classical period functionally replaced by both historical presents and historical imperfects. Consider now the possibilities of adapting individual instances of present injunctive forms imbedded in the traditional poetic text of Homer to this newer system without disturbing the meter. It is clear that an injunctive form like *leîpe* is practically always protected by the meter from being replaced by a present *leípei*. The original lack of historical presents in the epic is because of this metrical fact faithfully reflected even in the text which has come down to us. On the other hand, the second alternative of replacing *leîpe* by the imperfect *éleipe* is in most cases compatible with the meter. This is the reason why historical imperfects, unlike historical presents, do occur in Homer.[8]

It is quite clear that the augments in the extant manuscripts of Homer are often the result of later attempts at normalizing the text. E.g. the syntactically satisfactory reading

Hòs ára phōnḗsās apebḗseto, tòn dè líp' autoû (*Il.*, 2.35)

with its sequence of augmented and augmentless aorist is found only in Venetus A (the best manuscript); all others replace the aorist injunctive by the augmented form and write *tòn d' élip' autoû*. To gain some idea of the original Homeric system it is necessary to look at the metrically certain verb forms. It is no accident, for example, that unaugmented forms are characteristically frequent in verse-initial position.

In summary, then, the historical present and the historical imperfect in Greek are both replacements of the inherited present injunctive. Neither was truly a part of the Greek verbal system in Homer's time; they became so only in later Greek. The fact that our Homeric text has historical imperfects but not historical presents, an otherwise puzzling asymmetry, is at bottom due to metrical factors. The 'historical imperfects' of Homer are nothing but present injunctives which the later (oral or written) tradition has normalized by prefixing augments where the meter will allow them to stand.

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[8] Hartmann (1919, 24) cites and analyzes a series of examples in which aorists are followed by semantically equivalent 'imperfects' in Homer.

5. THE INJUNCTIVE IN CELTIC

It has been suggested by Watkins (1963) and Meid (1963) that the conjunct verb inflection of Old Irish is derived from the Indo-European injunctive. To both of them the key argument was Bergin's Law, the fact that verbs can stand in final position with conjunct endings in archaic Old Irish, which they were able to explain as a direct reflex of the Indo-European injunctive. The other functions of conjunct endings in Old Irish, however, remained as serious problems. The proposals of Watkins and Meid in this respect are mutually contradictory and have in common perhaps only their complexity and unusually speculative character. The syntactic approach developed here can clarify two further facets of the problem and thus considerably strengthens the general conclusion that the conjunct endings reflect the injunctive. One is the use of conjunct endings when the verb has a preverb, and the other is the so-called responsive.

The origin of the Old Irish rule that verbs take conjunct endings when preceded by preverbs is explicable on the basis of conjunction reduction of tense if we take into account Dillon's demonstration (1947) that many of these preverbs were originally sentence connectives, and indeed in part are still used as such in archaic Old Irish (*to, no, con-*). A present tense verb joined by one of these sentence connectives to a preceding parallel verb would have been reduced to the injunctive by the Indo-European conjunction reduction rule in the manner described and illustrated in the preceding two sections. The original nucleus of conjunct forms would have included cases like *ageti to-aget*, indirectly reflected in Welsh *eyt dydaw* 'goes and comes'. So, too, in sentences of the type petrified in Welsh proverbs like *trenghid golut, ny threingk molut* 'wealth perishes, fame does not perish' the secondary ending of the repeated verb *threingk* was originally not due to the negative preverb at all but derived from an underlying primary ending by the Indo-European process of conjunction reduction.

The use of conjunct (injunctive) forms after all preverbs in Old Irish appears to be a generalization of this Indo-European nucleus, whose survival in Celtic is guaranteed by the Welsh evidence. The secondary endings in such sentences as the ones just cited were reanalyzed as being conditioned not by conjunction reduction but by the connective preverb itself, and the rule 'a verb takes conjunct endings after preverbs' was then generalized to the other instances of preverb + verb. At the same time not only conjunct, but also absolute forms came to be used as 'historical presents', depending on whether they were preceded by a preverb or not. There is no evidence, as far as I know, that the exclusive use of conjunct endings with preverbs is anything else than a special development of Irish alone. Welsh and continental Celtic have noth-

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ing at all corresponding to the Irish preverb-governed distribution of conjunct and absolute verb endings. The examples in Welsh in which preverbs apparently cause conjunct endings occur in conjoined structures and all fall under the Indo-European rule of conjunction reduction.

Rules 3.2.120–1 of Pāṇini's grammar of Sanskrit contain a strange piece of information. According to these rules, a question asked in the past tense is answered in the present tense with certain particles (*nanu* and optionally *na* and *nu*), e.g. *akārṣīḥ kaṭam? nanu karomi.* 'Did you make the mat? I make'. This can only mean that conjunction reduction of tense could apply in dialog even across a change of speakers. Since the present in its function as a zero tense in classical Sanskrit is a replacement of the Vedic injunctive (Pāṇini treats the injunctive as a variant of the present), we should expect that the injunctive plays a similar role in responses in the Rig Veda. Perhaps some confirmation for this comes from the fact that a passage like *RV* 10.95, containing the dialog of Purūravas and Urvaśī, is unusually rich in injunctive forms.

This sheds new light on the Old Irish 'responsive', the first person verb form used in replying to questions (Draak, 1952). As Watkins (1963) showed, the responsive forms are derived from the injunctive. The use of the injunctive in responses is not, therefore, a syntactic innovation of Old Irish, as Watkins thought. Instead, Old Irish has with its responsive preserved an Indo-European syntactic feature of which Sanskrit gives independent evidence. In this case it is not a matter of morphology alone, but of the same syntactic rule applying to the same morphological category with the same results in Sanskrit and Old Irish.

This completes our review of the development of the Indo-European injunctive in Indic, Greek, and Celtic. Even this brief and summary survey has revealed the most diverse kinds of reflexes in these three families which add up to a considerable body of evidence for the role of the injunctive in proto-Indo-European sentence conjunction.

6. TENSE AND MOOD AS UNDERLYING ADVERBS

Let us return now to the syntactic problem, already alluded to in Section 2, which is raised by the material so far spread out. It appears to be a fact that tense and mood were in Indo-European subject to an optional rule of conjunction reduction which deletes recurrent instances of identical constituents, generally in a direction from left to right. This conflicts, it would seem, with a putative language universal principle governing conjunction reduction, namely that conjunction reduction applies only at the word level and above it, but not below. The conflict is predicated on the assumption that the syn-

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tactic structure of tense and mood in the stage of Indo-European under discussion is essentially the same as in the later daughter languages. Here the categories in question are represented (at least at the point at which conjunction reduction applies) not as separate constituents but as syntactic features on verbs. Chomsky (1965, 170) has shown that such a feature representation is required by the phonological characteristics of inflection in modern Indo-European languages like German. But it also explains certain syntactic properties of inflectional categories. Thus, representing tense as a feature in English explains why tense is not, indeed, subject to conjunction reduction in English, as well as other syntactic properties, to which I return later.

Two solutions are conceivable: either the form of conjunction reduction itself differs in some way in the two systems, or else the syntactic representations to which it applies differ in such a way as to make it affect tense and mood in early Indo-European but not in modern languages.

It is the second of these alternatives that appears to be correct. I shall here propose that a feature analysis of tense and mood cannot be justified for early Indo-European, and that on the contrary there are good reasons to regard tense and mood as constituents rather than features on other constituents. Specifically (although the precise nature of these constituents is not itself going to be at issue here) I suggest that tense and mood were adverbials.

Note first that this analysis is a priori a perfectly possible one. The main reason advanced by Chomsky for analyzing inflectional categories as features in a language like German is the fact that the alternative analysis as separate constituents arbitrarily imposes on the language a pseudo-agglutinative character which cannot be justified on phonological grounds. In German we cannot regard in a natural way each inflectional category as being represented by separate chunks of segmental material, and this not merely on the phonetic level, but, crucially, on the underlying phonological level. The gen.pl. *Brüder* has no separate marks of gender, number and case, and if gender, number, and case were represented as constituents they should in the first place have to be assigned an arbitrary order and in the second place it would be necessary to include in the grammar a set of altogether superfluous rules which delete them since they have no segmental reflex.

It was not so in Indo-European. Here the inflectional categories (at least those of tense and mood with which we are concerned here) by and large were associated with specific affixes appended to the stem in a specific order. Naturally the structure of Indo-European words is by no means totally agglutinative even when the for our purposes significant level of underlying phonological representations is considered, and there are abundant instances of suppletive endings in verbal inflection. But this is not the issue. The im-

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portant point is that Indo-European had a predominantly agglutinative character and that phonological considerations, which were Chomsky's main argument for characterizing inflectional systems in terms of syntactic features, cannot be made to yield compelling evidence for a feature analysis of tense and mood in Indo-European.[9]

The structure which I am here assuming is commonly encountered. Corresponding to the Indo-European tenses many languages have a set of adverbs denoting time relations, one of which must appear in every sentence. Tongan, a Polynesian language (Churchward, 1953) has four of these, *'oku, kuo, na'a (na'e), te ('e)*, roughly corresponding to present, perfect, past, and future. We often find modal ideas expressed by adverbs or particles, in a way that Greek itself illustrates with the particle *an*. A language with a fully developed system of moods of this kind is Hidatsa (Matthews, 1964). On the other hand, person, number, and voice, the verbal categories which we found did not undergo conjunction reduction, cannot be expressed by adverbs in this manner.

As far as the tenses are concerned, the suggestion that they were adverbs in Indo-European is for the most part hardly a novel or even very controversial one. The augment *e-*, which denotes past tense in some of the languages, quite transparently originates as an adverb or particle, the exact nature of which is for present purposes immaterial. And the suffix *-i* which characterizes the primary, non-past tenses was analyzed already by Müller (1860; 1870) as an original adverbial element, and this interpretation has found wide acceptance.[10]

The present argument differs from these in one important respect. In claiming that tense and mood were adverbs in Indo-European I do not have the surface structure of sentences in mind. The point is that in the deep structure of sentences they were separate major constituents (perhaps even with much internal structure), rather than features on other constituents. It does not necessarily follow from this that they were represented in Indo-European, or even at some 'pre-Indo-European' stage, by separate words in the overt form of sentences. This would follow only from the absurd position that underlying syntactic representations must be surface structures of an earlier

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[9] But the phonological facts give no contrary evidence either to the effect that these formatives were indeed constituents; they are quite neutral as to the two alternatives. A feature representation is a weaker theory in that it makes no claims about the phonological characteristics of inflection in a language; it can yield an agglutinative string of formatives e.g. by the order in which the individual syntactic features are spelled out into their corresponding segmental realizations. The decision between these two alternatives must therefore in this case be made entirely on syntactic grounds.

[10] Modern Indo-Europeanists, systematically ignoring everything prior to the neogrammarians, have tended to credit Thurneysen (1883) with the idea.

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stage of the language. What is at issue is the syntactic nature of certain inflectional categories of Indo-European, not the etymological origin of the morphological elements associated with them.

It is equally important to realize that this does not at all remove the issue to a point where rational arguments for and against it cannot be found. On the contrary, the validity of the proposal can be tested by examining the syntactic behavior of tense and mood in Indo-European.

One piece of support for the claim that tense and mood were constituents in Indo-European is the fact that they behaved like constituents with respect to conjunction reduction. Thus, if we understand the *e-* in **ebheret* to be a major constituent in the deep structure then the reduction of underlying **ebheret...ebheret* to **ebheret...bheret* becomes understandable. It is then entirely parallel to the reduction of the repeated past tense adverb *na'e* after the conjunction *pea* 'and' in Tongan *na'e kāi pea na'e mākona* →*na'e kāi pea mākona* 'he ate and was satisfied'. Or, for that matter, it is like early Greek *empieîn kaì phageîn* for *empieîn kaì emphageîn* 'drink up and eat up', with deletion of a recurrent preverb (Wackernagel, 1957, 176; Schwyzer, 1940; Watkins, forthcoming), reflecting a time at which univerbation had not taken place and constructions like tmesis were also still possible. The fact that tense and mood need appear only once in co-ordinate structures, and then ordinarily only in their first member, now follows from the normal rules of conjunction reduction.[11]

Let me here insert another, perhaps superfluous remark. The fact that **bheret* physically lacks the *e-* of **ebheret* does not of course mean that **bheret* has arisen by deletion of this physical segment *e*. Conjunction reduction is a syntactic rule, and therefore it deletes recurrent syntactic formatives (specifically, constituents above or on the word level) rather than recurrent phonological units. Thus it is not strictly speaking the second occurrence of *e* that has dropped out here, but the second occurrence of the same adverb. Obviously it can only be a syntactic difference between the augment and the theme and root vowels that accounts for the fact that we get **ebheret... bheret* and not **ebheret...bhrt* or some other such monstrosity.

7. COMPLEMENTARITY OF TENSE AND MOOD WITH SURFACE

The adverbial nature of tense in early Indo-European explains another unexpected appearance of present tense for expected non-present. In Greek

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[11] The analogy between conjunction reduction of tense and conjunction reduction of preverbs in the older Indo-European languages can be drawn in some detail. E.g. the fact observed by Schwyzer that recurrent preverbs are subject to deletion in dialog is a counterpart to the Sanskrit and Irish responsives.

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and Sanskrit verbs are commonly put into the present tense when modified by adverbs denoting past time. Thus, *aieì gàr tò páros ge theoì phaínontai* (pres.) *enargeîs* 'previously the gods have always shown themselves clearly' (*Od.*, 7.201); *kvà tyáni nau sakhyá babhūvuḥ sácāvahe* (Pres.) *yád avṛkám purá cit* 'what has happened to our old friendship, in that we formerly associated with each other in peace' (*RV*, 7.88.5). Compare Pāṇini's rules 3.2.118–9 and 3.2.122. For more examples from Sanskrit and Greek of this quite common construction, see Delbrück (1888, 278, 502), (1897, 265–7), Kühner-Gerth (1963, 134), and Schwyzer (1950, 273–4). Brugmann (1883), who first noticed this syntactic correspondence between Greek and Sanskrit, concluded that it represented a Proto-Indo-European feature, and this conclusion has been generally accepted, e.g. by Schwyzer (1950, 273–4), Delbrück (1897, 265–7), and Wackernagel (1950, 47, 158).

It is only necessary to make two modifications here. First, there is good reason to believe that the tense originally used with past adverbs was not the present but the injunctive, as in *prá yád eté pratarám pūryáṃ gúḥ* 'when they earlier proceeded' (*AV.*, 5.1.4). The present is here again a replacement of the moribund injunctive.

Secondly, the future tense again behaves in a quite parallel manner to the past, failing to appear when the time is specified by an adverb, though not with the same consistency, e.g. *hōs tês epioúsēs hēmérēs ho agôn hēmîn esti* 'for our trial is tomorrow' (Herodotus, 3.85). This is attested in Mycenean *ka-ke-we a_2-te-ro we-to di-do-si* 'the bronze-smiths will give next year' (PY Ma 365) with present *di-do-si* instead of future *do-so-si* which is used when no time adverb accompanies the verb. For Sanskrit cases of this type see Speyer (1896, 51) and Pāṇini's rule 3.3.4.

There is a simple explanation for this apparently so odd fact. I have suggested that a past tense verb in Indo-European at a deeper level was represented as

$$[\text{Verb}] \begin{bmatrix} \text{Adverbial} \\ \text{Past} \end{bmatrix}$$

Then the ungrammatical modification of a past tense verb by a past adverb would have been represented as

$$[\text{Verb}] \begin{bmatrix} \text{Adverbial} \\ \text{Past} \end{bmatrix} \begin{bmatrix} \text{Adverbial} \\ \text{Past} \end{bmatrix}$$

But such a deep structure is ruled out by the same restrictions on the co-occurrence of more than one general adverb of past time that rules out English sentences like

> *He came formerly earlier.*
> *He came some time ago previously.*

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In sum, past time adverbs and past tense inflections in the verb are in complementary distribution because they reflect the same constituent in the deep structure, which by general and perhaps cross-linguistic conditions can occur only once per sentence. The same can be said about the relation of the future tense and future time adverbials.

In Hebrew, where there is conjunction reduction of the category of aspect, exactly such a complementarity also holds. The imperfective is not only used in conjoined structures after an initial perfective verb, but also "after various expressions of time, whenever such expressions are equivalent in meaning to a perfect" (Gesenius-Kautzsch, 1963, 326).

The modal counterpart to this tense phenomenon is the fact that in prohibitions the modal adverb *mā* in Vedic is not, as might be expected, followed by any of the moods ordinarily used to express a command, such as the imperative or subjunctive, but instead by the zero mood, the injunctive. I.e.

> Commands: Verb + Imperative
> Prohibitions: *mā* + Verb.

I suggest that the verb contains no mood in prohibitions because *mā* itself is the realization of the mood constituent. The modal adverb *mā* and the imperative mood are in complementary distribution because they are ultimately alternative expansions of a single underlying constituent.

8. PREDICATIVE FUNCTION OF TENSE

An elusive, yet real enough syntactic property possessed by constituents but not features is what I shall term *predicative function*. It is not possible in English to predicate, and hence also not to negate, question, or contrast with each other the true tenses (past and present) independently of their host verbs to which they are attached as syntactic features. It is, however, possible to do so with the auxiliaries (*will, have -en* etc.), which are clearly separate constituents. A few examples will make this difference clear. Compare the sentence

> *I don't think he's seen the point, but hopefully he will.*

with the awkward

> **I don't think he saw the point, but hopefully he sees it.*

The latter sentence becomes acceptable if rephrased with explicit adverbs to support the predication of time, e.g.

> *I don't think he saw the point before, but hopefully he sees it now.*

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Consider another, very similar triplet. The sentence

> *As for Dr. No, he has refused and will refuse.*

is acceptable, but

> **As for Dr. No, he refused and refuses.*

is uncomfortable and must be rephrased with adverbs, e.g.,

> *As for Dr. No, he refused before and refuses now.*

One might suppose that the reason why the middle sentence are excluded is that the past endings are phonologically too weak to carry contrastive stress. Actually lack of predicative function is an inherent syntactic property of tense in English and not a phonological one, as can be shown by the fact that it cannot be remedied by providing do-support for it:

> **He did refuse and does refuse.*
> **He refused and does so.*

A subtler effect of this same basic difference between tenses and auxiliaries in English is the following. The question

> *Did John drink or does he drink?*

is interpreted as meaning 'is it true that John either drank before or drinks now' and answered by yes or no. In asking

> *Has John drunk or will he drink?*

the analogous interpretation as a yes-no question about John's drinking is also possible. But this question is ambiguous and has another interpretation not available in the first question, namely as an either-or question meaning 'which is true: that John has drunk or that he will drink?'. Only in this second example, which expresses the time by means of auxiliaries can the time as well as the fact of John's drinking be questioned.

The facts in German and other modern languages are analogous. Whether or not tense has predicative function, then, appears to be a good test for whether it is syntactically an independent constituent or a feature on the verb. If the tenses in early Indo-European can be known to be similar to the English tenses in lacking predicative function, then my hypothesis that they were constituents is seriously vitiated; on the other hand, the reverse finding that the Indo-European tenses did possess predicative function would strongly support it.

As a matter of fact, tense can be shown to have had predicative function in Vedic and Greek, and the loss of this predicative function can even be traced

through the history of Greek and turns out to parallel the loss of the other syntactic peculiarities associated with the derived status of tense. i.e. conjunction reduction of tense and use of present tense with non-present adverbs. They are all characteristic of Homeric, classical Attic-Ionic and the older dialect inscriptions, but begin to disappear later.

In the following sentence from the Rig Veda the tenses have a predicative function just as the English auxiliaries which translate them.

> *ná tvávaṃ indra káś caná ná jātó ná janiṣyate* 'a being equal to thee, Indra, neither has been born nor will be born' (1.81.5).

The aorist is clearly predicative in Greek:

> *épeithon autoùs kaì hoùs épeisa...* 'I tried to persuade them, and those whom I did persuade...' (Xen., *Cyr.*, 5.5.22).

> *anépeithe pántas Kupríous sunapístasthai; toùs mèn dè állous anépeise...* 'he tried to persuade all the Cyprians to defect; and he did persuade all others...' (Herodotus, 5.104)

> *tēi alēthéiāi sunôikei ... allà parà zôntos Timokrátous ekéinōi sunôikouse* 'she was living with him virtuously ... but she went to live with him from Timocrates while Timocrates was still alive' (Dem., 30.33).

In this connection we can cite the subtle observation of Jacobsthal (1907, 4) that in the earliest Cretan, notably the Gortyne Laws, the present tense has a predicative function, which disappears in later inscriptions. Thus, in V.2 the Law contrasts *guna oteia krEmata mE ekei* 'a woman who has no money (i.e. now)' with *taid de proththa* 'those (who had it) earlier' and in XI.21 we have *tOn de proththa, opai tis ekei ... mE et' endikon EmEn* 'as for previous matters, in whatever way one own anything (i.e. now), there shall be no liability'. In later texts it is mandatory to insert an adverb like *nūn* in such cases.

The adverbial nature of tense in early Indo-European is epitomized in the line

> *hòs éidē tà t' eónta tá t'essómena pró t'eónta* 'who knew all things present, future, and past' (*Il.*, 1.70)

where present and future tense are contrasted in *eónta: essómena,* and *pró t'eónta* adds a present tense modified by a past adverb to denote past time.[12]

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[12] Moods, which were underlying sentence adverbs, did not have predicative function any more than sentence adverbs do in English, cf. the impossible *It was probably that he came* (vs. *It was yesterday that he came*), with stressed adverbs.

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9. SUMMARY

Beginning with an examination of the historical present in the older Indo-European languages, we found that for these the traditionally held view of the historical present, adequate as it may be for e.g. modern English and German, is both semantically and syntactically unsatisfactory. The facts could be explained better by assuming application of the syntactic rule of conjunction reduction not only to words and higher constituents, but to the inflectional categories of tense and, as it also turned out, mood. In sections 3–5 we saw that behind the system in which the present and the indicative functioned as the zero representatives of tense and mood it was possible to discern, on the basis of Vedic, Greek, and Old Irish evidence, an older stage in which Indo-European possessed a set of zero verb forms, injunctives, which neutralized both categories. These injunctives are the source not only for the historical present, but also for the Greek historical imperfect and for the Old Irish conjunct forms in their diverse functions, including the responsive.

The concept 'tense' was left somewhat vague throughout the paper. Actually it should be understood in a quite narrow sense here and restricted to present, preterite, and future. The Vedic material makes it quite clear that the aorist and the perfect, which in the earliest period were basically aspectual rather than temporal categories, were not originally subject to conjunction reduction. Thus the line between aorist and present injunctives seems to be drawn fairly clearly in the Rig Veda. It is only in Greek, where the aorist has become primarily temporal (in the indicative) and only secondarily aspectual that it becomes subject to the syntactic processes affecting the tenses.

In Sections 6–8 we then suggested a syntactic explanation why tense and mood were susceptible to conjunction reduction in early Indo-European. This explanation, namely that tense and mood were adverbial constituents in the deep structure, we saw to be compatible with, and in part even supported by, the morphological facts, and independently supported by two classes of syntactic facts for which it provides an explanation: one, that tenses and moods were originally (unlike in the modern Indo-European languages) in complementary distribution with certain related classes of adverbs; and the other, that tenses (again unlike in the modern Indo-European languages) possessed what we called predicative function, that is, they could be contrasted, negated, etc. just as time adverbs can.

10. APPENDIX I: INFINITIVES AS UNMARKED VERB FORMS

It is in some respects an oversimplification to say, as I have done, that the proto-Indo-European injunctive bequeathed its role as the unmarked tense

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and mood to the present and the indicative, respectively. The infinitive also figures in conjunction reduction of these categories, though in a more marginal way. For example, while it is true that repeated subjunctives can be reduced to indicatives in Homeric Greek, this never holds true of repeated imperatives and optatives. Here we instead encounter the infinitive fulfilling much the same zero function. So, too, the historical infinitive resembles the historical present in its syntactic behavior and may well have been an alternative replacement of the narrative injunctive. The present section is intended as a brief inventory of the cases where it is infinitives that appear to have replaced injunctives as unmarked verb forms.

The infinitive of command in Greek is frequent in Homer, less so in Attic, and virtually unknown later in the koine. It is often explained as derived by ellipsis of a verb, much as the German quasi-imperatives of the type *auf-passen!, aufgepasst!* are plausibly construed as elliptic. There are two main theories: (1) the deleted verb form is the 1st person singular indicative of some verb of commanding, (2) the deleted verb form is the 2nd person singular imperative of *ethélō* 'wish'.

The problem with treating infinitives of command as complements of some deleted verb meaning 'I order' or 'I request', as proposed by Schwyzer (1950, 380) is that they do not have the structure of the accusative and infinitive complements which such a verb must take. Thus, their predicates, like the predicates of ordinary imperatives, are in the nominative case, e.g.

> *mēdè pseudággelos eînai* 'do not be a false messenger' (*Il.*, 15.159).

In contrast, complements of a verb like *keleúō* have their predicate in the accusative:

> *keleúō se mề pseudággelon eînai* 'I order you not to be a false messenger'.

This syntactic discrepancy is *prima facie* evidence against relating the two constructions to each other by analyzing infinitives of command as complements of a deleted verb of command. Nevertheless it may not be a serious objection if the rule which assigns case to the predicate can be made to follow the delation of the verb and its object. Further work must decide whether this is a possibility.

The other theory, which treats these infinitives as complements of a deleted 2nd p. imperative of *ethélō* 'wish' is completely helpless in the face of the facts. According to this theory the underlying structure of our example is really *mề éthele pseudággelon eînai*, supposedly meaning (with *mề éthele* interpreted like Lat. *nōlī*) 'do not be a false messenger'. But the proposed source has no such meaning in Greek. The verb *ethélō* is found in the imperative only with negatives in a special idiom meaning 'do not presume to', as

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in *mēd' éthel' oîos erizémenai basileûsin* 'do not presume to fight alone with kings' (*Il.*, 2.247) and in a handful of very similar examples (*Il.*, 1.277, 5.441, 7.111). The derivation is therefore semantically quite inappropriate. Syntactically, too, it fails, for infinitives of command are certainly not all negative, as they would have to be if the derivation under consideration were correct. Thus our example is preceded by a positive infinitive of command:

> *pánta tád' aggeîlai, mēdè pseudággelos eînai* 'tell him all this, and don't be a false messenger'.

Negatives do not in any way even predominate in infinitives of command, so that the proposal to derive these as complements of *mè éthele* is divested of all plausibility.

In short, infinitives of command do not behave as if they were inside complements at all, but have all the syntactic and semantic characteristics of true imperatives. We might accordingly derive them from underlying imperatives in much the same way as injunctives are so derived in Vedic. In view of the unmarked nature of the infinitive (Jakobson, 1964, 351) and the semantic and syntactic parallelism of the imperative and the infinitive of command, this would be possible. This analysis would make the prediction that the infinitive of command typically should appear in sentence conjunction after fully specified imperative forms. But this is indeed the case, as has been frequently observed (Chantraine, 1953, 316; Kühner and Gerth, 1963, II, 21; Schwyzer, 1950, 381–2). For example, the full sentence from which our previous example came is

> *bask' íthi' Îri takheîa, Poseidáōni ánakti*
> *pánta tád' aggeîlai, mēdè pseudággelos eînai*
> 'hasten, swift Iris, to the lord Poseidon,
> tell him all this, and do not be a false messenger'.

Aorist imperative followed by infinitive:

> *tòn thès Athēnaîēs epì goúnasin ēukómoio,*
> *kaí hoi huposkhésthai...*
> 'lay [the robe] on the knees of lovely-haired Athena
> and promise her...' (*Il.*, 6. 273–4).

Recurrent optatives can be similarly reduced:

> *paîda d' emoì lúsaite phílēn, tà d' apoina dékhesthai*
> 'may you release my own daughter and take the ransom' (*Il.*, 1.20).

The analysis of the Greek infinitive of command as an elliptic construction

is, as we have seen, fraught with difficulties which do not arise if we instead treat it as a reduced imperative, arising in conjoined structures by a syntactic process of wide scope in Greek. The latter derivation not only explains its syntactic and semantic identity of the two forms but also their alternation in sentence conjunction. These conclusions do not of course carry over to the infinitive of command in other Indo-European languages. I shall leave open here the question to what extent an analysis in terms of sentential complements might be more adequate in these.

Following up a hint of Meillet and Vendryes (1963, 627) we might further consider the possibility that the historical infinitive of Latin and Welsh is also the result of conjunction reduction. The fact that in both languages it is frequently conjoined to true past tenses gives support to this hypothesis. Nevertheless this is hardly enough on which to base any firm conclusions.[13]

11. APPENDIX II: CONJUNCTION REDUCTION OF CASE

There is some slight evidence that case was also subject to conjunction reduction in Indo-European, with the nominative serving as the unmarked case. In Old Irish poetry, the nominative appears "in coordinate clauses linked by *ocus* 'and' to a preceding accusative or dative; e.g. *rí do·rigni* (-gne MS.) *aéar n-úar/ocus tene* (nom.) *réil rorúad / ocus talam* (nom.) *bladmar brass* 'the King made the cold air, and the clear red fire, and the glorious great earth' S[altair na] R[ann] 313 ff." (Thurneysen, 1961, 156). For other languages see Humbert (1954, 252), and especially Havers (1928).

The only really normal instance of such case reduction is the appearance of the second of two conjoined vocatives in nominative form in Homeric and Vedic. In Homer there is actually only one example, *Zeû páter* (voc.) ... *Ēéliós te* (nom.) 'father Zeus and Helios' (*Il.*, 3.276). In the Rig Veda the corresponding constructions, e.g. *vāyav* (voc.) *indraś ca* (nom.) 'Vāyu and Indra' (4.47.3) are much more plentifully attested. The reverse order also occurs in the Rig Veda, e.g. in the preceding verse *índraś ca vāyav...* (4.47.2). This does not mean, however, that conjunction reduction may also operate regressively from right to left to reduce the first vocative to a nominative. All cases where the nominative precedes the vocative are also exceptional in that the connective enclitic *ca* then stands between the conjoined nouns and not as normally after them. Thus we have

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[13] Robin Lakoff, in a recent work on Latin syntax (unpublished dissertation, Harvard University, 1967) has maintained that all independent subjunctives and infinitives originate as complements of delated verbs. Her arguments in favor of this position, which are very convincing, would carry over to Greek as well.

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    Voc   Nom + *ca*   (11 examples)
    Nom + *ca*   Voc   (14 examples)

but no examples of the other two theoretical possibilities

    Voc + *ca*   Nom
    Nom   Voc + *ca*.

This shows that the basic structure

    Voc   Voc + *ca*

reduces only to

    Voc   Nom + *ca*,

and that the second, nominative noun with its enclitic *ca* may then optionally in poetry be shifted into first position, yielding the second occurring structure. This latter option is often used with striking poetic effect, as in the instance at hand where the beginnings of two successive lines form a chiasm: *índraś ca vāyav...*: *vāyav índraś ca...*

I stress this fundamentally left-to-right character of case reduction, because W. Winter has claimed in his 1966 Collitz lecture, appearing in *Language*, that the Indo-European vocative is derived from the nominative and has cited precisely these conjoined structures as evidence. Winter's proposal seems unacceptable to me for two reasons: first, because it must instead take as normal right-to-left deletion in flagrant contradiction to every piece of pertinent data we possess, and second, because it must assume that conjunction reduction here reduced an unmarked form to a marked form in what as far as I know is a totally unprecedented manner.

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