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Subordination and Relativization in Early Indo-European  
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Subordinating conjunctions derived from the neuter nom.-acc. of the relative marker are widely attested in the early Indo-European languages, cf. Greek hó, Sanskrit yád, Avestan yat, Hittite kuit, Latin quod, etc. The first three forms descend from IE \*yod; the latter two from IE \*k<sup>w</sup>id and \*k<sup>w</sup>od respectively. There is good independent evidence to reconstruct both \*k<sup>w</sup>i/o- and \*yo- as relative stems in Indo-European.<sup>1</sup> The meanings assigned to these conjunctions vary widely: 'as, when, while, if, because, since, in that, seeing that, so that, in order that, that' is a representative selection of the glosses supplied in the standard handbooks and dictionaries. The order of the so-called subordinate and main clauses varies too: in Hittite the clauses containing kuit are typically preposed to their 'main' clauses; in Vedic Sanskrit the majority of yád clauses precedes; in Latin there is a substantial minority of preposed quod clauses, especially in the older language; while in Homeric Greek all the unambiguous hó clauses are postposed. Greek hó exhibits a far more limited range of meaning than do its congeners in Sanskrit and Avestan, primarily because of competition by other conjunctions.<sup>2</sup>

The relative stem has also served as the basis for forming literally dozens of conjunctions with various suffixes in the individual IE languages. Thus, in Sanskrit we find yádi 'if', yadā 'when', yātra 'where, when', yéna 'whereby', yásmāt 'wherefore', yāvat 'as (great)'; in Greek hóti 'that, because', hóte 'when', hóste 'so that', hós 'as', ópbra 'while, in order that', hópós 'in order that', héōs 'when, while'; in Latin cum/quom 'when, although, because', quia 'because', quō 'whereby', quīn 'without, that not', quam 'than', quandō 'when', ubi 'where', ut 'that, as, because'; in Umbrian pane 'when', pone/pune 'when, after', pue 'where', pufe 'where, in which', pufe/porse 'which, that', puze/puse 'that, as', pefe/pirsi/persi 'if, when, while', etc.<sup>3</sup> For the sake of simplicity, I will omit further discussion of these conjunctions, and limit myself to dealing with the morphologically simple, but semantically apparently complex plain forms. I will argue that the meaning assigned to the neuter nom.-acc. sg. relative conjunctions is an artifact; it is always contextually derived, and the conjunction itself is (or was originally) semantically empty.

Since verbal mood does not by itself determine the status of a clause or the meaning of a conjunction, its use in subordinate clauses will not be discussed here. In all cases it can be shown that modal verb forms come to be associated with certain clause types only secondarily. Thus, for

example, in the history of Latin one may observe the development of cum clauses with subjunctive.<sup>4</sup> Moreover, Hittite has no optative or subjunctive mood. In the following examples I have attempted to avoid all grammaticalized subjunctives and optatives.

Some typical examples of Vedic Sanskrit yád are provided by the following (the conjunction and any resumptive elements are underlined):

- 1) yáj jáyathās tád áhar asya kāme /  
when you were born that day of it in desire  
'mśóḥ pīyúṣam apibo giriṣṭhām (RV 3.48.2)  
of stalk biestings you drank mountainous  
'when you were born, on that day in desire for it /  
you drank the mountain biestings of the stalk'
- 2) yád agne divijá ásy /  
if, whether Agni heaven-born you are  
apsujá vā sahaskrta /  
water-born or strength-produced  
tám tvā gīrbhīr havāmahe (RV 8.43.28)  
that you with songs we invoke  
'whether you are heaven-born, o Agni / or water-born, o  
strength-produced one / we invoke you as that with songs'
- 3) tváṣṭā yád vájraṃ súkṛtaṃ hiraṇyāyaṃ /  
Tvaṣṭr after weapon well-made golden  
sahasrabhrṣṭim svápā ávartayat /  
thousand-pointed artificer turned  
dhattá índro nāry ápāmsi kártave (RV 1.85.9)  
takes Indra manly deeds to perform  
'after Tvaṣṭr the artificer turned the well-made, golden,  
thousand-pointed weapon / Indra takes (it) to perform  
manly deeds'
- 4) sá yád vārtamānaḥ samābhavat, tásmād vṛtráḥ  
he since twisting he was born from that Vṛtra  
(SB 1.6.3.9)  
'since he was born twisting, from that (= therefore)  
(he is named) Vṛtra'

In ex. (1) yád seems to show clear temporal meaning; in the following clause the resumptive element is tád áhar 'on that day'. A conditional use of yád appears in ex. (2); the 'then' clause has no resumptive element other than the acc. sg. anaphoric tám, which refers to the predicate adjectives modifying Agni.<sup>5</sup> (The usual word for 'if' is yádi, although yád is frequently found in this meaning, especially in the older language.) In ex. (3) yád is best translated as 'after'; there is no resumptive in the following clause. The clause containing yád in ex. (4) is clearly causal, and yád is to be translated as 'since, because'. In the following clause the ablative resumptive tásmād 'from that, therefore' serves to

reinforce the analysis of the preceding clause as causal. Exx. (1)-(4) all exhibit preposed yád clauses. In contrast, the following examples show postposed yád clauses:

- 5) indraṃ náro nemádhitā havante /  
 Indra men in contest invoke  
yát páryā yunájate dhíyas táḥ (RV 7.27.1)  
 that decisive he may yoke prayers these  
 'men invoke Indra in the contest / so that he may yoke  
 these decisive prayers (to his chariot)'
- 6) grṇé tád indra te śáva upamám devátātaye /  
 I praise this Indra your prowess highest for gods  
yád dhámsi vṛtrám ójasā (RV 8.62.8)  
 that you strike Vṛtra with might  
 'I praise this, o Indra, as your highest prowess for the  
 gods / that you strike Vṛtra with might'

In ex. (5) yád is to be interpreted as a final or purpose conjunction 'so that, in order that'; there is no overt link between the two clauses other than the conjunction. The subjunctive verb form yunájate is the guarantee of the purpose meaning.<sup>6</sup> The postposed yád clause in ex. (6) is appositional to the tád (... śavas) of the preceding clause. Sentences of this type are clearly transitional between correlative structures and those which contain complementizers. I will return to this point below.

Avestan usage of hiiaṭ/yaṭ is in many respects parallel to that of Vedic yád. I cite two typical examples:

- 7) hiiaṭcā mōi mraoś aṣəm jasō frāxšnəne /  
 when-and me you say Aša you come in circumspection  
aṭ tū mōi noiṭ asruštā pairiiaoyžā  
 then you me not without having heard you say  
 (Y. 43.12)  
 'and when you say to me "you come to Aša (= Truth) in  
 circumspection", then you say (that) to me not without  
 having heard (me)'<sup>7</sup> (cf. Humbach 1959:114)
- 8) taṭ ahmāi jasaṭ āiiaptəm /  
 that to him came boon  
yaṭ hē puθrō us.zaiiata (Y. 9.4)  
 that to him son was born  
 'that favor came to him / that to him a son was born'

Ex. (7) shows hiiaṭ (the Gathic Avestan equivalent to Young Avestan yaṭ) in temporal or possibly conditional meaning. The structure of ex. (8) is parallel to that of (6), except that the yaṭ clause is appositional to the subject, rather than to the object of the preceding clause.

The next group of examples comes from early Latin:

- 9) Mars pater, quod tibi illoc porco neque satisfactum  
 Mars father since to you that pig not satisfied  
 est, te hoc porco piaculo (Cato Agr. 141.6)  
 is you this pig I make atonement  
 'father Mars, since it did not satisfy you with that pig  
 (= you were not satisfied with that pig), I make atone-  
 ment to you with this pig'
- 10) quod quispiam ignem quaerat, extingui volo  
 if anyone fire should ask to be extinguished I want  
 (Plautus Aul. 91)  
 'if anyone should ask for fire, I want (it) to be extin-  
 guished'
- 11) iste metus me macerat, quod ille fastidiosus est  
 this fear me worries that that one exacting is  
 (Plautus Mil. 1233)  
 'this fear worries me, that he is exacting'

In ex. (9) quod expresses causal meaning; the structure of this example is directly comparable to that of ex. (4), except for the absence of a resumptive element. quod in ex. (10) seems to have a meaning very close to that of 'if'. This apparent meaning of quod is very rare; the usual word for 'if' is si. The collocation quod si is, however, very frequent, and points to an earlier congruence of meaning between these two elements. In any event, this example is comparable to ex. (2). Note too that the subjunctive verb quaerat is not conditioned by the conjunction; rather, it has the same meaning that it would have in an independent clause. Ernout-Thomas (1953:295) cite this example as containing a quod which 'conserve la valeur d'un accusatif de relation, la proposition qu'il introduit restant comme en suspens', and offer the following literal translation: 'quant au fait que quelqu'un pourrait venir demander du feu, je veux qu'on l'éteigne'. The structure of ex. (11) is parallel to that of ex. (8), and to that of ex. (6), ceteris paribus. Yet another use of quod is found in the following example:

- 12) non satis habes, quod tibi dieculam addo ...?  
 not enough you have that for you day I add  
 (Terence An. 710)  
 'don't you have enough, seeing that I add a day of  
 respite'

quod in postposed clauses is well on its way to becoming the 'conjunction universelle' which is the source of Modern French que, cf. Ernout-Thomas 1953:311-312.

Some typical Hittite examples of kuit used as a conjunction are provided by exx. (13)-(17):

- 13) ABU-KA=mu kuit tuēl ŠUM-an memiškít nu=tta  
 father-your=me because your name he mentioned conn=you  
apaddan EGIR-an šanaḥḥun (Dup. §7, 12-13, Friedrich  
 for that prev I worried 1926)  
 'because your father mentioned your name to me, for that  
 (reason) I worried about you'
- 14) n=aš katta ašanna kuit ŠIxSÁ-at n=an  
 conn=he prev to outlaw since was established conn=him  
 katta ašašḥun (KBo IV 8 II 6-7)  
 prev I outlawed  
 'since he was established (by oracle) to be outlawed, I  
 outlawed him'
- 15) n=aš ištantait kuit nu <sup>d</sup>UTU-ŠI <sup>Ú</sup>UL kui[tki x]  
 conn=she lingered because conn Sun King not at all  
 ḥuškit (Muršilis Sprachlähmung Obv. 26-27, Götze-  
 he waited Pedersen 1934)  
 'since she (had) lingered (there), the Sun King did not  
 wait at all (longer)'
- 16) nu maḥḥan aušta [anda]=kán kuit ḥatkešnuwanteš  
 conn when he saw prev =ptc that sore pressed  
 (KBo IV 4 II 4-5, Götze 1933)  
 'and when he saw that (they were) sore pressed'
- 17) ammel kāš=pát I-aš dammešḥaš kiy=an I-an  
 my this=ptc one punishment this=her one  
 dammešḥanunun IŠTU É.GAL-LIM=pát=kán kuit katta úiyanun  
 I punished from palace =ptc=ptc that prev I sent  
 (KBo IV 8 II 12ff.)  
 'this (is) my sole punishment, I inflicted it alone on  
 her, that I sent her away from the palace'

Exx. (13)-(15) appear to be causal, and illustrate the various positions kuit may occupy in its clause. It may not be clause initial, but may be clause second (the unmarked position), or may be placed after the element in the clause it is most closely associated with, including the (clause final) finite verb, as in ex. (15).<sup>7</sup> An overt resumptive apaddan 'for that (reason)' occurs in ex. (13). Exx. (16) and (17) both contain postposed kuit clauses; in each the clause boundary is signaled by the postpositive particle -kán, which obligatorily occurs after the first tonic element in the clause. The structure of ex. (17) is comparable to that of exx. (6), (8), and (11). The postposed kuit clauses are all of the types represented by exx. (16) and (17) in that they either provide abstract complements to verbs such as 'see' or 'know',<sup>8</sup> or are correlated or appositional to subjects or objects of the preceding clause. The great majority of kuit clauses are preposed. It should be noted that Hittite has no final or purpose conjunctions. Where other Indo-European languages would use such conjunctions, Hittite merely juxtaposes clauses with no special marking, as in the

following example (cf. further Friedrich 1960:163):

- 18) takku LÚ-an našma SAL-an ELLAM walahzi kuiški n=aš  
 if man or woman free strikes anyone conn=s/he  
 aki (Laws I §3, Friedrich 1959)  
 dies  
 'if anyone strikes a free man or woman and (= so that)  
 s/he dies'

Examples (19)-(21) are Homeric Greek:

- 19) Tēlémakhon thaúmazon, hò tharsaléōs  
 Telemakhos they were amazed because boldly  
 agóreuen (Od. 1.382 = 18.411 = 20.269)  
 he spoke  
 'they were amazed at Telemakhos, because he spoke boldly'
- 20) leússete gár tò pántes, hò moí géras érkhetai  
 you see for this all that my prize goes  
 állēi (Il. 1.120)  
 elsewhere  
 'for you all see this, that my prize goes elsewhere'
- 21) oudé ti oíden hò hoi phónos huíi tétuktai  
 not at all she knows that her murder son is plotted  
 (Od. 4.771)  
 'not at all does she know that murder is plotted for her  
 son'

The structure of ex. (19) is comparable to that of ex. (12); 'seeing that' would be an equally apt translation. Ex. (20) is parallel to exx. (6), (8), (11), and (17); ex. (21) to ex. (16). Greek hò is much more restricted in its range of use than any of the other conjunctions discussed here. In the Homeric corpus there are only twenty-four unambiguous examples (Monteil 1963:239-240). It was replaced by hóte and hóti, with many Homeric attestations.

Although it is clear that purpose or final meanings for the conjunctions treated in this paper are by and large restricted to postposed clauses and that conditional meanings are typically restricted to preposed clauses, a large measure of semantic fuzziness persists in these conjunctions. This fact, together with the lexical identity of the items, suggests that what we actually are doing is translating the contexts and not the conjunctions, and that the meanings assigned to these conjunctions, or the analysis of these items as conjunctions at all reflects more the structure of the translating language than that of the translated language.<sup>9</sup>

The apparently transparent process of deriving conjunctions from relative forms, in this instance from an invariant neuter singular, has not to my knowledge received the attention it requires. The standard handbooks merely note the

use of the relative stem in conjunctions, pointing out that the relative 'pronoun' serves to link clauses and that the extension of this stem to conjunctions is thus quite natural. Opinions vary about when this development took place. Karl Brugmann (1904:664) states that '\*iōd, das N. zu \*ios, ist als Adv. in uridg. Zeit zur Nebensatzkonjunktion geworden'. Berthold Delbrück (1888:572, 1900:332) also believes in an early date for this change. Pierre Monteil on the other hand maintains that the differences in the conjunctive systems of Greek and Sanskrit are too great for the reanalysis of the relative as a conjunction to have taken place in the parent language (1963:76-79). The extension of the range of usage of quod to include conjunction is traditionally supposed to have taken place just before the earliest texts (Hofmann-Szantyr 1965:572). French authorities usually maintain that syntactically the conjunction was an accusative of respect. The original meaning of the relative element in such constructions was 'le fait que' and other significations were secondary (thus Meillet-Vendryes 1948:661-662 on both quod and hō; Ernout-Thomas 1953:294ff. on quod; Monteil 1963: 239-240 on hō).

In contradistinction to Brugmann (1904:665), Delbrück believed 'dass das Arische im Wesentlichen den indogermanischen Zustand darstellt' (1900:319), and that the wide range of meanings found in Old Indic was original. Delbrück seeks to explain the various meanings starting from an original meaning of 'when, as', which 'dürfte sich in Verbindung mit den Hauptsätzen entwickelt haben, welche einen Zeitbegriff enthielten' (1900:332) and using as evidence the sentence adduced above as ex. (1). As Delbrück notes, 'In einem solchen Satze -- den man sich natürlich in das Proethnische übersetzt denken muss -- konnte yād noch als Akkusativ auf āhar bezogen werden; indem aber in tād āhar der Begriff des Tages zu dem des Zeitpunktes verblasste, wurde āhar entbehrlich, und dem blossen tād 'damals' entsprach dann ein yād 'als', welches in Verbindung mit Indikativen sich als Konjunktion im Sprachbewusstsein befestigte' (1900:332). Other meanings will have developed secondarily, e.g. through use in contexts containing modal verb forms, or through overlap of temporal precedence and causality. However, Delbrück is unable to explain the development of final clauses (1900:333), although he believes that they existed already in the parent language. In favor of Delbrück's analysis, one can point out that relative sentences of the requisite form indeed exist. Against this view one may note that this is a very restricted locus for the development of an entire system of conjunctions. A variant of Delbrück's position is supported by W. P. Lehmann (1974:168-172), who derives causal uses from the case of the resumptive: 'We assume that the use of yād, kuit, and other relative

particles to express a causal relationship arose from subordination of clauses introduced by them to an ablative, as in the following passage:

ácittī yát táva dhármā yuyopimā  
 unknowing that, because your law, order we-have-disturbed  
 mā nas tásnād énaśo deva rīriṣaḥ (RV 7.  
 not us because-of-that because-of-sin O-god you-harm 89.5)  
 'Do not harm us, god, because of that sin that because unknowingly we have disturbed your law'.

As such relationships with ablatives expressing cause were not specific, more precise particles or conjunctions came to be used. In Sanskrit the ablatival yasmāt specifies the meaning 'because' (1974:170-171). However, Lehmann's analysis of this example is open to doubt. It seems just as possible that the first clause is to be taken as a conditional: 'if unknowingly we have infringed your law, do not harm us because of that sin' (the 'because' in the resumptive clause is a possible meaning of the ablative; 'on account of' is equally acceptable). Lehmann further states that 'Just as the causal relationship developed from an ablative modified by a relative construction, so the temporal and conditional relationship developed from a clause modifying an underlying time node' (171). This explanation is invalid on the strength of the preceding example. Furthermore, the use of yasmāt, yena, etc. as conjunctions is restricted to postposed clauses (see Minard 1936).

In spite of these and similar efforts, a number of questions have not received satisfactory answers. First, apart from the putative subordination, what do relatives and conjunctions have in common? Second, why is the neuter sg. used as the basis for these forms? Third, why is there a correlation between clause order and the meanings typically assigned to these forms? Fourth, where do final and purpose conjunctions come from? Answers to these questions may be found by investigating the structure and functions of relative sentences in these languages.

I cite some typical, and not so typical, relative sentences from the languages in question to illustrate the fact that Indo-European has relative sentences of the structure of the following Vedic Sanskrit examples:

- 22) sōma yās te mayobhūva ūtāyaḥ sānti dāsūṣe /  
 Soma which your delightful aids are for worshipper  
tābhir no 'vitā bhava (RV 1.91.9)  
 with these us helper be  
 'Soma, which delightful means of helping the worshipper  
 are yours / with these be our helper'
- 23) yó 'smān dvéṣṭi, yām ca váyaḥ dviṣmāḥ (ŚB 1.2.4.16)  
 who us hates whom and we hate  
 'who hates us, and whom we hate'

In ex. (22) the relative form yás is an adjective modifying mayobhúvas 'aids, means of helping'; the following clause contains an instrumental resumptive pronoun táhhis 'with these'. Note that the relative clause is 'adjoined' rather than embedded,<sup>10</sup> that the relative clause precedes the 'main' clause, that the relativizer is an adjective, not a pronoun, and that one cannot properly speak of a head noun in such constructions. In ex. (23) the relative adjective has been pronominalized, and may also be given an indefinite reading. Comparable examples from Homeric Greek, Latin, and Hittite are given in the following:

- 24) phulakàs d' hàs eíreai hērōs / óu tis kekriménē  
 guards ptc which you ask hero not one being chosen  
 rhúetai stratòn oudè phulássei (Il. 10.416-417)  
 protects camp nor guards  
 'which guards you ask about, hero / not one, having been  
 chosen, protects nor guards the camp'
- 25) Naucratem quem invenire volui, in navi non erat  
 Naucrates which to meet I wanted on ship not he was  
 (Plautus Amph. 1009)  
 'which Naucrates I wanted to meet, (he) was not on the  
 ship'
- 26) nu=mu kuiš DINGIR-YA inan paíš, nu=mu gienzu  
 conn=me which god-my sickness gave conn=me pity  
 [daú] (KUB XXX 10 rev. 3)  
 let take  
 'which(ever) god of mine gave me the sickness, let him  
 take pity on me'

In ex. (24) the relative adjective hàs modifies phulakàs 'guards'; the resumptive in the following clause is the compound óu tis. The relative adjective quem (accusative) must be taken with Naucratem (also accusative) in ex. (25); there is no overt resumptive in the following clause.<sup>11</sup> In (26) the relative adjective modifies DINGIR-YA 'my god'; again there is no overt resumptive in the following clause. The boundary between the clauses is marked by the clause introductory nu.

The basic structure of the relative sentences which are to be reconstructed to Indo-European is bipartite, consisting of a preposed relative clause followed by a resumptive clause. The relativized noun stands in the preposed clause accompanied by a relative adjective, and it is referred to in the following clause by any anaphoric element (including zero). In such a system, the relative adjective serves to establish the noun it occurs with as a topic for the purposes of the following clause. Its function is thus basically annunciatory or cataphoric; its presence points to the presence of another clause, the resumptive clause. Thus, the basic function of the relative in these languages stands in sharp contrast to

that of the relative in a language like Modern English, where the principal function of relativization is nominal modification. These structures are basically correlative, with neither clause clearly subordinate to the other, although both clauses are linked to each other: the relative through the annunciatory relative word; the 'main' through anaphora. Hence these clauses are independent in the sense that all the grammatical slots are filled, but interdependent in that neither can stand as a complete text by itself.<sup>12</sup>

Sentences containing relative-derived 'conjunctions' have the same clearly grammatically complete bipartite structure that relative sentences do. The principal difference between them consists in the absence of the co-referential noun. The resumptives, however, typically refer to the preceding clause as a whole: compare exx. (4) and (13). Especially important is the order of the 'subordinate' and the 'main' clause. The preposing of relative clauses must be reconstructed to Indo-European, and it is in fact still preserved in indefinite constructions of the type: whoever compiled this bibliography left out five articles. As anteposed clauses, the clauses containing relative conjunctions will have provided a temporal, causal, or conditional starting point for the following clause. Haiman (1978) argues convincingly that 'conditionals are topics', maintaining that one or more of the following characteristics or both topics and conditionals will hold (565):

- a) the characteristic mark of the conditional and that of the topic will be identical
- b) both will be identical with a third category, the interrogative
- c) the characteristic marks of the conditional and the topic will be distinct, but one will be paraphrasable by the other.

It is clear that this stipulation is met by the conditionals, but it also holds for temporal and causal preposed clauses as well. The identifying marker is precisely the relative. Moreover, in those languages which use a \*kwi/o-relative, the interrogative comes from the same root.

Thus, the neuter singular relative used as a conjunction serves simply to relativize (or topicalize) the entire clause in which it appears, and to point to the existence of another clause. It follows then that the meanings assigned to the neuter nom.-acc. sg. relative used as conjunction must be artifacts: they are always contextually derived, and the relative conjunction itself will originally have contained only the essentially cataphoric topicalizing/pre-supposing value that it has when used with nouns.

When the order of clauses is reversed, then the phoricity of the annunciatory and resumptive elements is reversed as well: the old resumptive elements become annunciatory and

the old annunciatory elements resumptive. At this point old resumptive (or demonstrative) forms come to be used as relatives and as conjunctions (then, that) and relative adjectives come to be reinterpreted as relative pronouns. It is also at this point that final conjunctions develop, since they can occur only in postposed clauses. A recent attempt has been made by Jeffers and Pepicello (1979 [1980]) to reconstruct purpose conjunctions to Indo-European, but this attempt must founder on the non-existence of such conjunctions in Hittite and on the fact that the individual IE languages that do have such conjunctions have innovated special forms which are not reconstructible; i.e. the basis is the relative, but the additional suffixal material varies from language to language.

The views presented in this paper require the assumption of a well-developed, clearly marked relative sentence construction in Indo-European. This is after all what comparative evidence would lead us to reconstruct, and the only scholars who have denied the existence of marked relative clauses in Indo-European are those who felt unable to accept them without being able to posit a single relative pronoun (so principally scholars at the turn of the century: E. Hermann [1895] comes first to mind) and those typologists who for aprioristic reasons have maintained that relative clauses in OV languages should be unmarked in addition to being preposed.

The reanalysis of the topicalizers as conjunctions parallels the reinterpretation of the relative adjectives as relative pronouns. This development proceeded hand in hand with the development of regularly postposed relative clauses, and is part of the massive shift in word order undergone by most early IE languages.

### Notes

1. Although it is usually assumed that \*yo- is the sole IE relative marker and that \*k<sup>w</sup>i/o- was secondarily and independently reinterpreted as a relative in Hittite, Latin, Oscan and Umbrian, Lithuanian, etc., I believe that there is good evidence that the latter group of languages reflect the original situation. First, in a language like Hittite, the interrogative or the indefinite cannot have been the source of the relative. The customary interpretation of relatives based on \*k<sup>w</sup>i/o- as having developed from indirect questions depends crucially on the postposing of the clause under consideration. With preposed relatives this explanation becomes much less natural. Second, in Hittite again, relative, interrogative, and indefinite functions are complementary: no one of them seems to be derived from the other. They are kept distinct by word order within the clause, and by intra-clause order. Third, the use of reflexes of \*k<sup>w</sup>i<sub>d</sub> as an

emphatic particle in Sanskrit and Avestan, and to some extent in Greek, points to an earlier situation in which it was the relative. That is, in Sanskrit and Avestan cid/cit appears to be used above all when the element it occurs with is followed by further modification. Fourth, the languages which use reflexes of \*yo- as the primary relative also use reflexes of \*k<sup>w</sup>i/o- in close association with the \*yo- relatives without necessarily altering their meaning. Oswald Szemerényi (1970:193-194) maintains on quite different grounds that the use of \*k<sup>w</sup>i- as a relative in Hittite, Italic, etc., is not an innovation but an archaic trait.

2. The primary competitors are hóti 'that' and hóte 'when', the latter with 470 Homeric attestations (Monteil 1963:273), the former with 76 (Monteil 1963:247). These two conjunctions are morphological extensions of hó. Delbrück (1900:320ff.) treats hóte as equivalent to hó; there seem to be no temporal uses of the latter.

3. Umbrian pefe/pirsi comes from \*k<sup>w</sup>id-ī. Poultney (1959:316) glosses this conjunction as 'if' and 'when, while'. A check of the passages in which it occurs reveals a characteristic distribution of meanings: 'if' is restricted to preposed clauses and is clause initial (excepting vocatives); 'when, while' may occur in preposed clauses, but the conjunction is placed in second position in the clause.

4. See Ernout-Thomas (1953:363ff.) for a clear discussion of some of the issues involved. They call attention to the fact that Cicero 'transpose mécaniquement' exibam (impf.) into exirem (subj.) in citing the following line of Plautus:

praesagibat mi animus frustra me ire quom exhibam domo  
foretold me mind in vain me to go when I left house  
'my mind foretold that I would leave disappointed when I  
left the house' (Aul. 178).

5. yád in this example might also be translated 'since, because', since in fact Agni is regarded as 'born in heaven' or 'born in the waters'. Geldner translates 'ob...oder'.

6. Delbrück (1888:321ff.) offers different translations of yád clauses with subjunctive in accordance with the position of the clause: 'damit' in postposed clauses, 'wenn' in preposed clauses.

7. I have dealt with the varying position of kuit in conjunctive uses in a paper presented at the 1984 annual meeting of the American Oriental Society.

8. Carol Justus has discussed the complement structure of Hittite šak-/šek- 'know' from a typological point of view in a short paper (1980) and in her contribution to the Materialien zu einem hethitischen Thesaurus under the general editorship of Annelies Kammenhuber (inaccessible to me). Helmut Rix also discusses abstract complements in Indo-European (1979). All of the examples he cites involve postposed relatives of the type of ex. (6). Limitations of space preclude a fuller discussion of these papers.

9. This point seems to have been tacitly recognized by Delbrück, who observes that yád is to be translated differently in accordance with the relationship of the 'subordinate' and 'main' clauses, the use of different verb tenses and moods, etc. (1888:572ff. passim).

10. Kenneth Hale (1976) uses this term to describe the relative structures found in Walbiri, a central Australian language. From a typological point of view the relative constructions found in Hittite (and reconstructed Indo-European) and Walbiri are directly comparable.

11. Note that this sentence is not Naucrates (nom.) quem (acc.) ... Holland and Ickler (1978) discuss some of the syntactic changes that would result in the reanalysis of this adjoined relative as an embedded relative.

12. Some of the description and argumentation here is repeated from Holland and Ickler (1978). The framework developed there has been extended to include another class of constructions.

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