

## The Cognates of the Gothic *u*-stems

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The present article examines the cognates of the Gothic *u*-stems in a continuation of an attempt to determine the acceptability of an earlier proposal that the first arbitrary athematic feminines resulted from the conversion to zero-grade *i*- and *u*-stems of the cognates of the Hittite *ai*- and *au*-stems following their transfer to the pre-feminine gender. The evidence appears to support the development proposed. Although it differs in other respects from that found previously concerning the Gothic *i*-stems, an explanation for the differences is available.

Not long ago I examined the cognates of the Latin feminine *u*-stems (Brosman 2004a). The study was intended as one part of a larger process of verification of the proposal that inheritance of the cognates of the Hittite *ai*- and *au*-stems provides the basis for explaining the origin of the arbitrary athematic feminines as well as of the Latin *i*-stems with nom. sg. *-és*, the derived nouns of the Latin fifth declension, the Baltic *é*-stems and the Greek nouns in *-euw*, *-vw* and *-v* (Brosman 1984). A related subsequent proposal held that the *i*-, *ú*- and *i/yá*-stems were of the same origin (Brosman 1994). According to these views Anatolian and Indo-European inherited eight types of diphthongal noun consisting of *éi*-, *éu*-, *ói*- and *óu*-stems of each original gender.

The existence of forms of this sort should not be considered remarkable, for the ‘diphthongal nouns’ would merely have been *i*- and *u*-stems with lengthened grade in the nominative singular, parallel to the similar forms long familiar among the other resonant stems, the *r*- and *n*-stems. They were thus presumably what many now would call hysterokinetic *i*- and *u*-stems. Since the *r*- and *n*-stems each included forms containing both *é* and *ó*, it is plausible that the same was true of the lengthened-grade *i*- and *u*-stems. That the Hittite *ai*-stems indeed stemmed from forms in *-éi*- as well as *-ói*- is implied by *hastai* ‘bone’, one of two

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<sup>†</sup>It is with profound sadness that we must inform our readership of the passing of Paul Brosman on October 23, 2010. We extend our sympathy to his family, his colleauges, and his many friends.

Hittite diphthongal nouns with known Indo-European correspondences, since its cognate occurs thematicized in Gk. ὕσθον 'bone' (Puhvel 1984–: 3. 237), which contained a stem in original *\*-ei-*. Although one might suspect that the inherited *éi*-stems would have largely been eliminated for phonological reasons in Hittite, verification of this suspicion is prevented by a lack of additional pertinent correspondences. In any event, details concerning the further evolution of the *ai*- and *au*-stems within Hittite are irrelevant with respect to developments in Indo-European. Whatever their fate in Hittite, it will shortly be seen that Indo-European evidence indicates that the number of inherited *éi*-stems was significant.

In Hittite phonological mergers within the long diphthongs reduced the number of diphthongal types to four, the common and neuter *ai*- and *au*-stems. In Indo-European the loss of the second element of long diphthongs produced identical forms of the nominative singular which caused confusion between the *i*- and *u*-stems, while identical forms among the oblique cases led to confusion between the *é*- and *ó*- types as well as between the diphthongal nouns and the zero-grade *i*- and *u*-stems. Presumably because of the long vowel of their nominative singular the diphthongal nouns were transferred to the newly arisen third gender which later became the feminine, a development which required the inherited neuters to adopt animate forms of the accusative singular and the nominative and accusative plural. However, since the original pre-feminines, the *á*-stems, possessed an asigmatic nominative, the addition of nom. sg. *-s* was not obligatory. As a result, the number of diphthongal types in Indo-European was also reduced to four, as the inherited distinction in gender was replaced by an 'optional *s*' in the nominative of feminine *é(i)*-, *ó(i)*-, *é(u)*-, and *ó(u)*-stems.

Because of their heteroclitic appearance and the welter of confusion to which they were subject, the diphthongal nouns were eventually lost throughout most of Indo-European. As consequences of the cross-currents of conflicting analogical influences among them, four principal methods are proposed for their elimination. Three which were suggested originally are conversion to zero-grade *i*- and *u*-stems, transfer to the distinctively feminine *á*-stems and the spread of the long vowel within the paradigm. At the same time it was noted that, like any other athematic type, the diphthongal forms could be thematicized. The fourth, which is regarded as the first step in

the development of the *i*-, *i/yá*- and *ú*-stems, is the replacement of the nominatives in *-é(s)* and *-ó(s)*, each of which occurred among both the *i*- and *u*-stems, by distinctive forms in *-í(s)* among the *i*-stems and *-ú(s)* among the *u*-stems.

In addition to extending to the zero-grade forms the confusion which had arisen between the diphthongal *i*- and *u*-stems, the conversions to zero grade were held to have produced the first arbitrary athematic feminines. It was recognized that prior to the existence of athematic feminines referring to females the conversion of pre-feminine or feminine diphthongal nouns would have resulted in animate (pre-masculine) or masculine zero-grade forms, since at that stage gender remained linked to form as it was in Hittite and the *i*- and *u*-stems of animate form belonged to the pre-masculine or masculine gender. However, after the origin of athematic feminines with female referents had severed the link with form, the converted diphthongal nouns presumably would have remained feminine and thus, in the case of those with inanimate referents, would have become the first feminines which were formally indistinguishable from masculines but did not refer to females.

Thematicization following the transfer to the pre-feminine would presumably have resulted in *yá*- or *wá*-stems. In Latin confusion between inherited *é(i)*-stems and *yá*-stem variants which they had acquired in this manner in Italic was considered to have produced the fifth-declension nouns with nom. sg. *-iés*, fifty-eight of which possessed twenty-three *yá*-stem variants but no *yá*-stem cognates. The fifth-declension forms of the type of *fidés* and the Baltic *é*-stems were held to have resulted from the spread of *é* from the nominative. The occurrence in pre-Greek of spreads of a different sort in which the vowel disseminated was combined with the resonant rather than substituted for it was regarded as explaining the Greek nouns in *-euw*, *-vw* and *-v*. The Latin *i*-stems in nom. sg. *-és* were alone in preserving a diphthongal type virtually unaltered. That forty such forms (exclusive of duplication in compounds) were found to be attested indicates that, whatever one thinks of the explanations for the fifth-declension nouns, the number of inherited *éi*-stems was indeed appreciable.

When the first set of proposals summarized above was made, two procedures were suggested for their verification. One was taking each of the nominal classes held to have preserved traces of an inherited diphthongal type and examining the cognates of

every member throughout Indo-European. The other was similar studies of the *i*- and *u*-stems in the older Indo-European dialects. In the cases of the Greek and Latin types of proposed diphthongal origin the former has been completed (Brosman 2004b and references). The results appeared to confirm that each of the types examined was indeed diphthongal in origin, that the proposed change of gender took place and that confusion of every possible sort occurred among the diphthongal nouns. The evidence of the cognates also indicated that the most important means by which the diphthongal nouns had been eliminated was conversion to zero-grade forms, though support was found for the other proposed methods of elimination as well. Although it thus appeared that the circumstances under which the arbitrarily feminine *i*- and *u*-stems were held to have arisen existed, little bearing more directly upon this question was revealed.

The examination of the cognates of the Latin feminine *u*-stems was one step in an attempt to determine whether the second suggested method of verification would provide confirmation of the proposal concerning the arbitrary athematic feminines. If the proposal is correct, all inherited feminine *u*- (and *i*-) stems with inanimate referents would have been original diphthongal nouns. The inherited masculines would include all of the original animate zero-grade *u*-stems but need not have been confined to such forms. As has been noted, original diphthongal nouns would have produced masculines through the conversion of feminine diphthongal forms to zero grade prior to the origin of athematic feminines referring to females. Indeed more recent studies of the cognates of the Gothic *i*-stems, masculine as well as feminine, while consistent with the diphthongal origin of the latter, indicated that masculines were approximately as numerous as feminines among originally diphthongal forms (Brosman 2007: 229–230). The Gothic *i*-stem evidence thus implied that an interval of substantial length intervened between the loss of the second element of long diphthongs and the origin of athematic feminines referring to females, since the diphthongal forms converted to zero grade before and after the athematic feminines arose apparently were roughly equal in number.

The evidence concerning the Latin feminine *u*-stems apparently supported the proposed origin of the arbitrary athematic feminines. The number of pertinent *u*-stems was six to eight, depending on the inclusion of *vitus* ‘wheel rim’, which may well have been borrowed from Greek, and *\*noctus* ‘night’, which

could not be established as feminine, since it was confined to the adverbial expression *noctú* ‘at night’, in which it occurred unmodified. Within the maximum number of eight, six forms, *acus* ‘needle’, *quercus* ‘oak’, *manus* ‘hand’ and *domus* ‘house’, as well as the uncertain *vitus* and *\*noctus*, apparently possessed cognates of types appropriate for a former diphthongal noun. The two exceptions were *metus* ‘fear’, which had no attested cognates at all, and *tribus* ‘tribe’, which possessed a single *u*-stem cognate elsewhere in Italic (Brosman 2004a: 263). There thus appeared to be no reason to question the view that the Latin feminine *u*-stems were of diphthongal origin.

The present article extends the examination of the feminine *u*-stems to include the forms attested in Gothic. In addition it will consider the cognates of the Gothic masculine *u*-stems as well in order to compare the evidence concerning them to that seen in the case of the feminines, since it was found possible in this instance to deal with the forms of both genders within a single article of moderate length.

Exclusive of duplication in compounds the Gothic dictionaries of Feist (1939) and Lehmann (1986) each include seventy-three forms attested as animate *u*-stems, thirty-one of which contained a productive suffix. As was done in the case of the Gothic *i*-stems, the forms of the latter sort, which consisted of fourteen containing *\*-tu-*, twelve *-assu-* and five *-ópu-*, *-ódu-*, were excluded here.<sup>1</sup> In this connection it should be noted that with one exception the identification of these forms, all of which were of masculine or undetermined gender, was based on the views of Feist and Lehmann. The lone exception, *luftus* ‘air’, is described by Feist and Lehmann as of uncertain etymology. However, as was stated in greater detail when the *tu-* forms were discussed previously, the view here is that its apparent *ti-* variants and cognates in Germanic point with sufficient clarity to the inheritance of a related pair of original *tu-* and *ti-* abstracts that, even though one cannot confidently identify the Indo-European root from which it was derived, it probably should be considered to belong among the *tu-* forms (Brosman 1997: 31–32).

Since the forty-two remaining forms included eight obvious foreignisms or loanwords of biblical origin and an equal number of other words, *asilus* ‘donkey’, *assarjus* ‘a coin’, *kintus* ‘penny’,

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<sup>1</sup> The originally abstract Gothic *tu-* forms have already been examined separately and found apparently to have been primarily *u*-stem variants of abstracts in *\*-ti-* (Brosman 1997).

*kubitus* ‘company of people at a meal’, *marikreitus* ‘pearl’, *nardus* ‘oil of nard’, *sakkus* ‘sack’ and *ulbandus* ‘camel’, held by both Feist and Lehmann to have been borrowed from other sources, the number of *u*-stems to be treated here is reduced further to twenty-six, twenty-two of which were masculine and four presumably feminine (Feist 1939: 59-60, 60, 312, 315, 348, 370, 407, 515; Lehmann 1986: 45, 219, 221, 245, 263, 293, 375). However, five of the masculines, *airus* ‘messenger’, *aúhsus* ‘ox’, *magus* ‘boy’, *sunus* ‘son’ and *wiprus* ‘calf’, possessed referents of male or, perhaps in one case, unspecified sex (Feist 1939: 26, 66, 339, 460, 571; Lehmann 1986: 19, 164, 240, 330, 408). For this reason they were also set aside, leaving seventeen masculine and four feminine potentially inherited distinct *u*-stems with inanimate referents.

The evidence of the cognates of the feminines was similar to that seen in the case of the Latin *u*-stems. The four forms were *-qairnus* ‘mill’ in *asilu-qairnus* ‘donkey-mill’, *-waddjus* ‘wall’, which is found in three compounds, *baúrgs-waddjus* ‘city-wall’, *grundu-waddjus* ‘foundation’ and *mid-gardi-waddjus* ‘dividing wall’, *kinnus* ‘cheek’ and *handus* ‘hand’. It should be noted in the case of *-waddjus* that although *baúrgs-waddjus* is attested as feminine, *grundu-waddjus* was masculine and *mid-gardi-waddjus* of unidentifiable gender. However, it was included here among the feminines, since it is improbable that an inherited masculine would have been transferred to the extremely rare Gothic feminines.

Two of the feminines, *-qairnus* and *-waddjus*, possessed cognates indicative of diphthongal origin, while it is possible but uncertain that a third, *kinnus*, had a single such correspondence. In the case of *-qairnus*, the feminine *u*-stem OE *esol-cweorn* ‘donkey-mill’ corresponded precisely to *asilu-qairnus*. Otherwise, however, *ó*-stem cognates occurred throughout Germanic in OE *cweorn* and in ON *kvern*, OS *quern* and OHG *chwirna*, *churn* ‘mill’. Although the frequent transfer of feminine *u*-stems to the *ó*-stems in Old English could account for the occurrence of an *ó*-stem there, a similar explanation would not apply elsewhere in Germanic. Moreover, the existence of an inherited *á*-stem is apparently confirmed by Lith. *girnà* ‘millstone’. It thus appears appropriate that Feist and Lehmann give the etymon as *gw@nu-*, *gwerná-*. In addition, a *ú*-stem cognate is attested in OCS *zriny* ‘mill’ (Feist 1939: 59; Lehmann 1986: 44; Pokorny 1959: 477).

The only Germanic cognate of *-waddjus* was the *i*-stem ON *veggr* ‘wall’. That *veggr* was masculine does not prevent it from

serving as an example of an *i*-stem variant of a *u*-stem. The variation between *i*- and *u*-stems arose among the diphthongal nouns. Later both of the diphthongal variants were often converted to zero grade, but not necessarily at the same time. It thus is possible that in this case the *i*-stem was converted before the origin of athematic feminines with female referents and the *u*-stem after that development had occurred. Outside Germanic *á*-stems are found in Skt. *vayá*, OCS *v±ja* ‘branch, bough’ and OIr. *fé* ‘twig’, which were at one time near synonyms of *-waddjus*, the original meaning of which was ‘wattle, woven wall’ (Feist 1939: 538; Lehmann 1986: 386; Pokorny 1959: 1120-1121).

Among the apparent Germanic cognates of *kinnus* there occurred a variety of forms: OS *kinni* (f.), OHG *chinni* (n.), the *ó*-stem OE *cinn* ‘jaw, chin’ and a feminine consonant stem in ON *kinn* ‘cheek’. However, the variation is of little import from the present point of view. The *-nn-* of *kinnus* is explained as resulting from the cluster *-nw-* which occurred among its oblique cases. Since each of the other Germanic forms also contained *-nn-*, it seems safe to say that in every case the *u*-stem corresponding to *kinnus* had been inherited and that the different forms occurring in the different dialects were not the reflexes of variants occurring in the parent speech but stemmed from it through developments which took place separately among the separate Germanic dialects. Elsewhere the feminine *u*-stem was inherited also in Greek, Indo-Iranian, Celtic and Tocharian. That Latin should also be included is indicated by the derivative *genuinus* ‘related to the cheek or jaw’. However, the *á*-stem *gena* ‘cheek’ also occurred in Latin. It has been explained through analogy with *mála* ‘cheek-bone, jawbone’ (Brugmann 1906–11: 1.179). Although this proposal is described as disputed by Feist (1939: 312), it is accepted by Lehmann (1986: 218), Walde-Hofmann (1938–54: 1.590) and Pokorny (1959: 381). The analogy would indeed appear plausible even if *genuinus* were not attested. Therefore, although the inheritance of *gena* cannot be wholly ruled out, particularly in view of what was seen concerning *-qairnus* and *-waddjus*, it seems too uncertain to be cited as evidence of the diphthongal origin of *kinnus*.

Concerning the fourth feminine, *handus* ‘hand’, there is little that can be said. Of uncertain etymology, it possessed cognates confined to Germanic (Feist 1939: 244; Lehmann 1986: 176). Since these forms included *u*-stems in OE *hond*, OS *hand* and OHG *hant* ‘hand’, it seems safe to say that, as held by Kluge-

Seebold (2002: 388), it stemmed immediately from a Germanic *u*-stem. Although ON *hœnd* was a consonant stem, it presumably resulted from a development occurring in Germanic, for it has been seen that ON *kinn*, which seemed clearly to have been an earlier *u*-stem, was a consonant stem also. It thus appears that in Old Norse, where feminine *u*-stems no longer existed, there had been to at least some extent a tendency to transfer the few of them that had been inherited to the consonant stems.

It should also be noted that Lehmann holds *\*handu-* to have been a Germanic innovation. If this were true, it would be of some consequence, for it would reduce the number of inherited feminine *u*-stems to three. In that case, the occurrence among them of at least two forms of apparent diphthongal origin would be precisely proportional to the evidence found in Latin, where four of six forms of seemingly certain inheritance possessed cognates indicative of such origin. However, the view here is that this proposal is incorrect, since not only were the *u*-stems as a whole unproductive in Germanic or anywhere else (Brugmann 1906–11: 1.180), but it is especially improbable that a form derived in Germanic would have been assigned to the rare feminine *u*-stems. It thus appears that Gmc. *\*handu-*, like Lat. *metus* (Brosman 2004a: 257), should be regarded as an inherited feminine *u*-stem of unknown etymology. The Gothic evidence nevertheless seems sufficiently consistent with that of Latin to be held to provide further support for the diphthongal origin of the arbitrarily feminine *u*-stems.

As has already been noted, the evidence of the Gothic *i*-stems indicated that masculines of diphthongal origin were approximately as numerous as feminines. It will be seen here later that in some respects the history of the diphthongal *i*-stems deviated greatly from that of the *u*-stems. However, since in each case the relative frequency of the genders among the former diphthongal nouns, regardless of their absolute numbers, was presumably determined by whether the diphthongal *i*- or *u*-stems had been converted to zero grade before or after the origin of athematic feminines referring to females, there is apparently no reason not to expect it to have been more or less the same for both types. It thus is appropriate that among the seventeen masculines the number of forms for which there was evidence of diphthongal origin was again two.

One of the two masculines, *hallus* ‘cliff, rock’ (< *\*kolnus*), apparently had at least one *i*-stem variant in Lat. *collis* ‘hill’ (<



*\*kolnis* or *\*kōnis*). Although Feist (1939: 241) and Lehmann (1986: 174) for some reason are somewhat uncertain about connecting the two forms, Walde-Hofmann (1938–54: 1.245) and Pokorny (1959: 544) do not hesitate to do so and would add the Germanic form OE *hyll* ‘hill’, attributed by them to *\*kōnis*, as a second such variant. In the latter case the Germanic etymon is given by Feist and Lehmann as *\*hulnja-*, which could have resulted from thematization of the cognate of *collis*. The *a*-stem ON *hallr* ‘stone’ also occurred in Germanic. Although it could have been a transfer from the *u*-stems, it seems more likely to have been inherited, for Lith. *kálnus* ‘mountain’ and Mir. *coll* ‘chief, leader’ indicate that an *o*-stem existed in the parent speech, where it probably was produced by independent derivation as part of the general proliferation of the *o*-stems.

The second form was *walus* ‘staff’. In addition to a precise cognate in ON *voolr* ‘round staff’, it had beside it in Germanic an *ó*-stem in OE *walu* ‘wale, ridge or stripe from a blow’. Also occurring were *n*-stems of differing genders in the compounds OE *wyrt-wala* and OHG *wurzala* (< *\*wurt-waló*) ‘root’. That the Old High German form was feminine is perhaps explained through confusion between the *ó*- and feminine *n*-stems. Elsewhere there occurred an *i*-stem in Opr. *walis* ‘shaft of a wagon’ and the Baltic *é*-stems Lith. *vol̃* ‘wooden mallet, beater, drum-stick’ and Latv. *vāle* ‘washing beater’ (Feist 1939: 549; Lehmann 1986: 393; Pokorny 1959: 1142–1143). Pokorny also cites a second *á*-stem in Lat. *vola* ‘cavity of the hand, arch of the foot’, which he considers to correspond to OE *walu*. Walde-Hofmann (1938–54: 2.825) agrees that *vola* contains the root held by the other scholars to be found in the forms above but does not mention *walu* or any of the other forms cited here. Although Pokorny’s comparison is possible, for semantic reasons it seems somewhat too uncertain for unreserved acceptance. Although it would raise the question, rejection of the comparison would not require rejection of the diphthongal origin of either of the *á*-stems. Since the evidence above indicates that an original diphthongal noun developed *u*- and *i*-stem variants, another possibility is that both *á*-stems were of diphthongal origin but instead of being immediate cognates stemmed from different diphthongal variants in the parent speech and began evolving along different semantic paths at that stage.

None of the remaining fifteen masculines possessed a cognate which could be taken to suggest diphthongal origin,

though it is not unlikely, since the total number of feminines was four, that one or two of them were former diphthongal nouns for which no evidence of their origin happened to survive. One form, *drunjus* ‘sound’, had no cognate anywhere, while the apparent cognates of eight others, like those of the feminine *handus*, were confined to Germanic. The latter forms were *grédus* ‘hunger’, *hairus* ‘sword’, *húhrus* ‘hunger’, *sidus* ‘custom’, *wandus* ‘rod’, *fair^us* ‘world’, *stobjus* ‘dust’ and *wintrus* ‘winter’ (Feist 1939: 127, 220, 235, 273, 418, 550, 139, 457, 566; Lehmann 1986: 96, 160, 171, 193, 301, 393, 105, 328, 404; Pokorny 1959: 255, 441, 940, 565, 883, 1148, 822, 79). In the cases of the first five, the forms occurring beside them were consistent with the inheritance of masculine *u*-stems, for when not themselves *u*-stems, they were masculine *a*- or *wa*-stems. The cognates of one of the remaining forms, *wintrus*, deviated from this pattern by including a masculine consonant stem in ON *vetr*, while those of another, *fair^us*, consisted of the *a*-stems ON *ffœr* ‘life’, OE *fearh* ‘life’ and OHG, OS *ferah* ‘soul, life’, which were neuter more often than masculine. In the case of the third, *stobjus*, the only potential cognate was the neuter *ja*-stem OHG *stuppi* ‘dust’. Although the precise histories of these forms are somewhat less certain, there is no reason to think that a diphthongal noun was involved.

Concerning four of the six remaining forms extra-Germanic evidence was hardly more abundant than before but not entirely without significance. The Germanic forms corresponding to *paurnus* ‘thorn’, ON, OE *þorn*, OS *thorn*, OHG *dorn*, presumably were secondary *a*-stems, since the transfer of masculine *u*-stems to the *a*-stems, not unknown in Old High German and Old Saxon, was frequent in Old English and Old Norse and a *u*-stem is attested elsewhere in OCS *trûnû* ‘thorn’ (as is Skt. *trnam* ‘grass, straw’) (Feist 1939: 492; Lehmann 1986: 357; Pokorny 1959: 1031; Kluge-Seebold 2002: 211). Among the Germanic forms beside *lipus* ‘limb, member’, were a *u*-stem in ON *lidr* and an *a*-stem in OE *lip*, the secondary nature of which is in this instance indicated by its occurrence as a *u*-stem as the first element in compounds. Although *i*-stems occurred in OHG *lid* and OS *lid*, it seems safe to say that they resulted from the usual transfer of masculine *u*-stems to *i*-stems in Old High German and Old Saxon, rather than a development involving diphthongal *i*- and *u*-stems, for in Old Saxon *u*-stem forms are again found as the first element in compounds. That OHG *lid* was feminine in a few instances

presumably is an example of the occasional variation in gender among the Old High German masculine and feminine *i*-stems. Neuter *a*-stems also occurred in OHG *lid* and OE *lip*, which, like all of the other forms mentioned here, meant ‘limb, member’. The only related form found outside Germanic was Lat. *lituus* ‘curved staff borne by an augur’. Since the words for ‘limb’ are attributed to the root *\*ley-* ‘move, bend’, it presumably resulted from thematization of the *u*-stem inherited by Germanic (Feist 1939: 332; Lehmann 1986: 234; Pokorny 1959: 309; Kluge-Seebold 2002: 361; Walde-Hofmann 1938–54: 1.815).

In the case of *skadus* ‘shadow’, one finds masculine *wa*-stems in OHG *skato* and OS *skado*. Contrary to Feist (1939: 427) and Lehmann (1986: 308), who identify it as masculine, OE *sceadu* was a *wó*-stem (Pokorny 1959: 957; Kluge-Seebold 2002: 795). Why *sceadu* was feminine is not clear. However, there is little reason to believe that it stemmed from an inherited feminine *u*-stem which had been partially transferred to masculine, since the tendency in Old High German and Old Saxon was to eliminate the masculine *u*-stems as well as the feminine. The neuter *a*-stem OE *scead* ‘shadow’ and masculine Gk. *skōtow* ‘darkness’ also occurred. Although their precise relationship to the other forms is also uncertain, it is of little import, since neither raises a question of diphthongal origin. The fourth form, *wripus* or *\*wrépus* ‘herd’, occurred beside the masculine *a*-stem OE *wráep*, *wráed* ‘herd’ and Skt. *vrātas* ‘troop, crowd’ (Feist 1939: 574; Lehmann 1986: 411; Pokorny 1959: 1151). Whether *wráep* corresponded precisely to *vrātas* or resulted from the Old English transfer of a masculine *u*-stem to the *a*-stems is again of little moment.

The final two masculines, *fótus* ‘foot’ and *tunpus* ‘tooth’ are of disputed inheritance. The extra-Germanic evidence, which is ample for each, points almost exclusively to a pair of inherited root nouns. In the case of *fótus* such forms occur in Skt., Av. *pad-*, Gk. *p̄w* and Lat. *pés*. In that of *tunpus* original root nouns are found in Skt. *dán*, Gk. *Û-d̄n*, Lat. *déns* and OIr. *dét*. Although Lith. *dantis* was an *i*-stem, gen. pl. *dantÛ* indicates an earlier Baltic consonant stem. Outside Gothic the evidence in Germanic is consistent with the inheritance of root nouns corresponding to those above, for ON *fótr*, *tōnn* and OE *fót*, *tóp* were consonant stems. Since *man* ‘human’ was the only monosyllabic masculine consonant stem to survive in Old High German and Old Saxon, OHG *fuoz*, *zan(t)* and OS *fót*, *tand* are

presumed to have been inherited consonant stems, though transfer instead from the *u*-stems cannot unequivocally be ruled out. It should be noted that ON *tǫnn* was feminine. Its gender has been explained by A. Sturtevant (1932: 248) through analogy with the feminine consonant stems *hǫnd*, *mǫrk*, *rǫng*, *tǫng*, *rǫnd*, and *strǫnd*, which contained the same radical vowel. Although the view here is that a semantic association with *kinn* seems somewhat more likely to have been responsible, the two proposed analogies are not mutually exclusive.

In view of the evidence above it has been proposed (Brugmann 1906–11: 2.276) that *fōtus* and *tunpus* were formed in pre-Gothic on the basis of inherited consonant-stem accusatives containing Gmc. *u*. However, the *u*-stem *pādús* ‘foot, stride’, which would correspond precisely to *fōtus*, is attested once in Vedic. Citing it, Feist (1939: 159, 483) holds both *fōtus* and *tunpus* to have been inherited from Proto-Indo-European. Lehmann (1986: 121, 349) appears more favorably inclined toward Brugmann’s view but does not explicitly endorse it. Pokorny (1959: 790, 289) accepts the analogical explanation of *tunpus* but does not mention it in connection with *fōtus*. Walde-Hofmann (1938–54: 1.340; 2.294) also agrees with Brugmann concerning *tunpus* but, while mentioning his proposal, takes no position concerning it in the case of *fōtus*. On the other hand, Kluge-Seebold (2002: 324, 1003) agrees with Feist that both consonant and *u*-stems meaning ‘foot’ were inherited by Germanic but does not mention the question when discussing the words for ‘tooth’. The view here is that, though the position of Feist seems most likely to be correct, the inheritance of *fōtus* and *tunpus* should be considered too uncertain for acceptance. However, from the present point of view their elimination is of little consequence, for its only effect is to reduce the number of inherited masculines with inanimate referents from seventeen to fifteen. It thus remains true that among the pertinent forms masculines were approximately four times as numerous as feminines.

In addition to the cognates of the individual forms, the relative rarity of the feminines supports the view that the feminine *u*-stems were of diphthongal origin. Since the proposal concerning the origin of the arbitrary athematic feminines holds the masculines to have included all of the original zero-grade forms plus a portion of the former diphthongal nouns and the feminines to have been confined to the remaining portion of the

original diphthongal forms, the masculine *u*-stems should be expected to have been distinctly more numerous than the feminines if the proposal is correct. Since it has been found more recently in the course of the proposal's verification that the evidence concerning the Gothic *i*- and *u*-stems apparently agrees in indicating separately that the number of masculines of diphthongal origin was approximately equal to that of feminines, it appears that the disparity in the frequency of the genders should be especially pronounced. For example, even if the original zero-grade and diphthongal *u*-stems had been equal in number, the masculines should apparently be expected to have been roughly three times as numerous as the feminines. That the figures for the Gothic *u*-stems exceed that ratio thus indicates that the zero-grade forms had originally been appreciably more common than the diphthongal nouns. In this respect the Gothic evidence was again similar to that of Latin as far as can be told, for the number of feminine *u*-stems found in the more abundantly attested Latin was only slightly larger than that of those occurring in Gothic and, although the Latin masculine *u*-stems have not yet been examined, it is well known that they far outnumbered the feminines.

However, it should be noted that among the Gothic forms the evidence seen here concerning the *u*-stems differs greatly from that found in the case of the *i*-stems. Although it appeared from the Gothic evidence that among both *i*- and *u*-stems of diphthongal origin masculines and feminines were approximately equal in number, the parallelism extended no further. Whereas among the *u*-stems regardless of origin masculines were four times as frequent as feminines, among the more numerous *i*-stems masculines outnumbered feminines by only twenty-one to thirteen. Since the thirteen feminines were matched by an equal number of masculines identifiable as diphthongal in origin, there were left only eight potentially original zero-grade *i*-stems. Thus in contrast to the indication of the *u*-stem evidence that at the time of the loss of the second element of long diphthongs zero-grade forms were more numerous than diphthongal nouns, that of the *i*-stems indicated that quite the reverse was true (Brosman 2007: 226, 229).

The disparity in the evidence concerning the *i*- and *u*-stems may be explained by productivity on the part of the diphthongal *i*-stems held to have occurred in Proto-Indo-European prior to the loss of the second element of long diphthongs. In addition to

the proposals summarized here at the outset, which dealt with developments among the diphthongal nouns as a whole following the loss of the second element of long diphthongs, others have been made more recently concerning the history of the diphthongal *i*-stems prior to the phonological change (Brosman 2005). It was noted that since the Hittite common *ai*-stems, the Latin *i*-stems with nom. sg. *-és* and the Greek nouns in *-v* were all closely associated with verbal abstracts (E. Sturtevant 1937: 61–62; 1951: 69; Friedrich 1960: 39; Kronasser 1966: 204–205; Ernout 1965: 23–24; Kurylowicz 1966: 19–20; Schwyzer 1939: 478; Brosman 2005: 191–194), it seems clear that the animate *éi*- and *ói*-stems were productive in the derivation of such forms prior to the separation of Anatolian. Evidence that the productivity continued beyond the separation was found in Hittite, where the occurrence beside the secondary verbs *maniyahh-* ‘govern’ and *istarnink-* ‘sicken’ of the further derivatives *maniyahhai-* ‘government’ and *istarningai-* ‘sickness’ indicated that the *ai*-stems were still productive in the derivation of action nouns in pre-Hittite (Friedrich 1952: 135, 92; Puhvel 1984–: 6.49–51; 2.476). It thus is plausible that in Proto-Indo-European the animate diphthongal *i*-stem abstracts remained productive until their paradigms were disrupted by the loss of the second element of long diphthongs. That such was in fact the case is indicated by the semantics of the zero-grade *i*-stems. In Hittite the *ai*-stems were associated with action nouns but the *i*-stems were not. However, in Indo-European *i*-stem forms of both types displayed a close connection with verbal abstracts. Because conversion to zero grade was the most important means employed in the virtual elimination of the diphthongal nouns as a whole, an obvious explanation for the zero-grade abstracts of Indo-European is the conversion of diphthongal abstracts to zero-grade forms. Since Brugmann (1906–11: 1.167–170) has indicated that a large majority of the Indo-European *i*-stems consisted of action nouns, it was concluded that the diphthongal abstracts had indeed remained productive until the loss of the second element of long diphthongs and that as a result by the time of the phonological change the diphthongal *i*-stems had become perhaps more numerous than the corresponding zero-grade forms. The reason given for describing the relative frequency of the two types of *i*-stem in such vague terms was the possibility that the zero-grade abstracts became productive to some extent in their own right after they had arisen. Otherwise

the diphthongal forms would have been held to have been considerably more numerous. The same evidence also implies that the diphthongal *i*-stems of other meanings were not appreciably productive during that time, though they presumably were not yet subject to elimination to a significant degree (Brosman 2005: 196, 200–201).

The examination of the Gothic *i*-stems was intended to assist in the verification of the proposals concerning the earlier history of the diphthongal *i*-stems as well as of those regarding the origin of the arbitrary athematic feminines. As can be seen from the evidence cited here, which indicated that among the *i*-stems those of diphthongal origin were considerably more numerous than original zero-grade forms, it appeared to confirm the previous proposals concerning the productivity of the diphthongal *i*-stem abstracts and to render more precise that which described the relative frequency of the originally different *i*-stem types. Moreover, the implication of the numerical superiority of the former diphthongal nouns that the zero-grade *i*-stem abstracts did not become significantly productive after their origin could apparently be corroborated by other evidence. Since no Gothic form identified as an abstract which had an extra-Germanic *i*-stem cognate did not also possess other correspondences indicative of diphthongal origin, there was no evidence of a Proto-Indo-European *i*-stem abstract which could have resulted from such productivity (Brosman 2007: 228).

Since there was no reason to think that the diphthongal *u*-stems had been appreciably productive, the differing evidence concerning the Gothic *u*- and *i*-stems was not unexpected. That the contrast was so striking apparently confirms that the diphthongal *u*-stems were not productive and provides further support for the proposed productivity of the diphthongal *i*-stems. It also supports the explanation proposed for the arbitrary athematic feminines, for the Gothic *i*-stems, which contained a much greater proportion of apparent former diphthongal nouns, also included a much larger number, in both absolute and relative terms, of feminine forms. That the *i*-stems were more numerous than the *u*-stems overall was apparently also due to the productivity of the diphthongal *i*-stems. It may be added that evidence of this sort appears not to be confined to Gothic. Although the incomplete Latin evidence provides only partial corroboration, Whitney (1889: 116) has reported that in Sanskrit *i*-stems were more numerous than *u*-stems and that the difference

was especially great among feminines.

The principal conclusion drawn from the evidence concerning the Gothic *u*-stems was that it appeared to provide additional support for the proposed origin of the arbitrary athematic feminines. One source of this support was the cognates of the feminine forms, which closely resembled those of the Latin feminine *u*-stems in their apparent consistency with the diphthongal origin of such forms. In the case of Gothic this evidence was reinforced by its contrast with that concerning the masculines, at least a solid majority of which were presumably original zero-grade forms. It also seemed significant that, as far as could be told, the *u*-stem evidence agreed with that of the Gothic *i*-stems in indicating that among original diphthongal nouns masculines and feminines were approximately equal in number, though the small number of relevant *u*-stems made this evidence possibly less reliable concerning this question. That the *u*-stems contained a much smaller number of forms apparently of diphthongal origin than did the *i*-stems was consistent with another previous proposal, which held that prior to the loss of the second element of long diphthongs the diphthongal *i*-stems had been productive in the derivation of verbal abstracts. Presumably it was for this reason that the evidence of the two Gothic types differed concerning the relative frequency of zero-grade and diphthongal forms at the time of the phonological change. Whereas in the case of the *i*-stems the diphthongal forms had been found to have been more numerous, the evidence seen here that the masculine *u*-stems were four times as common as feminines indicated that among the *u*-stems the zero-grade forms had been more frequent.

## References

- Brosman, Paul
- 1984 The IE cognates of the Hittite *ai*- and *au*-stems. *Journal of Indo-European Studies* 12: 345–365.
  - 1994 The PIE *i/iy*-, *ú/uw*- and *i/yá*-stems. *Folia Linguistica Historica* 15: 3–19.
  - 1997 The Gothic *tu*- abstracts. *Folia Linguistica Historica* 18: 25–37.
  - 2004a The Latin feminine *u*-stems. *Journal of Indo-European Studies* 32: 249–265.
  - 2004b The Greek nouns in *-vw* and *-euw*. *Folia Linguistica Historica* 25: 1–19.
  - 2005 The Hittite *ai*-stems. *Indogermanische Forschungen* 110: 186–204.
  - 2007 The cognates of the Gothic masculine *i*-stems. *Indogermanische Forschungen* 112: 215–235.



- Brugmann, Karl  
1906–11 *Grundriss der vergleichenden Grammatik der indogermanischen Sprachen*. 2nd ed. vol. 2. Strassburg: Trübner.
- Ernout, Alfred  
1965 *Philologica III*. Paris: Klincksieck.
- Feist, Sigmund  
1939 *Vergleichendes Wörterbuch der gotischen Sprache*. 3rd ed. Leiden: Brill.
- Friedrich, Johannes  
1952 *Hethitisches Wörterbuch*. Heidelberg: Winter.  
1960 *Hethitisches Elementarbuch*. 2nd ed. vol. 1. Heidelberg: Winter.
- Kluge, Friedrich and Elmar Seebold  
2002 *Etymologisches Wörterbuch der deutschen Sprache*. 24th ed. Berlin and New York: de Gruyter.
- Kronasser, Heinz  
1966 *Etymologie der hethitischen Sprache*. vol. 1. Wiesbaden: Harrassowitz.
- Kurylowicz, Jerzy  
1966 Les thèmes en -é- du baltique. *Bulletin de la Société de linguistique de Paris* 61: 13–20.
- Lehmann, Winfred  
1986 *A Gothic Etymological Dictionary*. Leiden: Brill.
- Pokorny, Julius  
1959 *Indogermanisches etymologisches Wörterbuch*. vol. 1. Bern: Francke.
- Puhvel, Jaan  
1984– *Hittite Etymological Dictionary*. Berlin and New York: Mouton de Gruyter.
- Schwyzler, Eduard  
1939 *Griechische Grammatik*. vol. 1. Munich: Beck.
- Sturtevant, Albert  
1932 Notes on the consonantal stems in Old Norse. *Journal of English and Germanic Philology* 31: 247–250.
- Sturtevant, Edgar  
1937 Latin and Hittite substantive *i*-stems with lengthened grade in the nominative. In: Hjelmslev, Louis (ed.) *Mélanges linguistiques offerts à M. Holger Pedersen à l'occasion de son soixante-dixième anniversaire*, 57–62. Aarhus: Universitetsforlaget.

1951 *A Comparative Grammar of the Hittite Language*. 2nd ed. vol. 1.  
New Haven: Yale University.

Walde, Alois and J. B. Hofman  
1938-54 *Lateinisches etymologisches Wörterbuch*. 3rd ed. 2 vol.  
Heidelberg: Winter.

Whitney, William  
1889 *Sanskrit Grammar*. 2nd ed. [1950] [Reprinted Cambridge, MA:  
Harvard University.]