

mag in der Formel \*χρυσέοι ἐν δέπαι die Prosodie des letzten Wortes durch eine Anlautkonsonanz des folgenden Wortes besser begründet gewesen sein.

- 7) Die Erstveröffentlichung des Textes bietet γηραῖδ διθυράσασ'; W.PEEK, ZPE 18 (1975) 292 hat mit Recht an dieser Schreibung Anstoß genommen und γήραϊ δρ. vorgeschlagen.
- 8) In nachalexandrinischen Epigrammen findet sich γήρα; vgl. W.SCHULZE, Quaest.ep. (1892) 49 (Anm.5 zu S.48). - S. weiterhin P.CHANTRAINE a.O.209.
- 9) In Auseinandersetzung mit früheren Auffassungen hat K. MEISTER a.O.130f eine plausible Lösung vorgeschlagen; weniger überzeugend E.SCHWYZER a.O. I 515.
- 10) Die genannten verschiedenen Entwicklungen hängen u.a. zusammen mit dem Bestreben, die isolierten -s-Stämme (also alle, die nicht dem häufigsten Bildungstyp auf -ος angehören) in geläufigere Klassen zu überführen; in mehreren Fällen erfolgt die Überführung in die -t-Flexion, bei Homer beginnend mit den -ως-Nomina (χρόα neben χροῖτ'), aber noch nicht bei den -ας-Nomina (κρέα Plur., nachhom. κρέατα). Bezeichnend ist in diesem Zusammenhang die hs. Situation in  $\mu$  394: Neben überwiegend überliefertem, richtigem τέραα findet sich τέρατα (U) und τέρεα (W).
- 11) Vgl. O.SZEMERÉNYI, SMEA 3 (1967) 78f; vielleicht ist sogar (wie im Att.) bei Homer ein (unregelmäßig gebildetes) ἰδρωῶ anzunehmen.
- 12) P.CHANTRAINE a.O. I 211.
- 13) Das schwierige Problem ἔρωσ, ἔρος bleibt hier außer Betracht, ebenso χρώς, dessen Dativ χρῶι stets in der Form ~ erscheint.

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### Observations on the Germanic Verschärfung

§1 The conditions under which IE \*-ǵ- and \*-ǵ- underwent Verschärfung to \*-jj- and \*-ww- in Germanic, yielding -ddj-, -ggw- in Gothic and -ggj-, -ggv- in Old Icelandic, remain obscure. Despite attempts by Neogrammarians such as KLUGE (*Beiträge zur Geschichte der germanischen Konjugation*, 127 ff.) and HIRT (*Idg. Gr.* 5, 102 ff.) to relate the appearance of \*-jj- and \*-ww- to the position of the IE accent, no purely phonological explanation for the Germanic facts appears to be possible within the framework of "classical" Indo-European. Likewise unconvincing is MEILLET's attempt (MSL 22, 61 ff. (1922)) to explain Verschärfung as the result of expressive gemination: it would clearly be inadmissible to suppose that a form like the gen. pl. of the word for 'two' (cf. Go. *twad-dje*, OI *tveggja*) was subject to such a development<sup>1)</sup>.

Modern treatments of Verschärfung have rather sought to discover a "morphological" basis for the phenomenon, or to explain it in terms of the laryngeal theory. The outstanding example of the former approach is KURYLOWICZ' view (*Lg.* 43, 445 ff. (1967)) that sequences of the type \*-CVijV- and \*-CVuwV- arose in Germanic as secondary full-grades to inherited zero-grades of the form \*-CijV- and \*-CuwV-: a verb like \**hawwan* 'chop' (= OI *haggva*, OHG *houwan*) would thus have replaced an earlier \**hawan*, the original participle of which (\**huwana-*) exhibited an apparent zero-grade allomorph \**huw-*. The basic difficulty with this interpretation lies in the fact that zero-grade forms of the required type are frequently not attested at all (the participle of \**hawwan*, for example, is reconstructable as \**hawwana-*), and in many cases Verschärfung is encountered in derivationally isolated words in which the root shows an invariant full-grade (cf., e.g., OI *kleggi*

'gadfly' < \**klajjan-*, *dqgg* 'dew' < \**dawwō*). An extended critique of KURYLOWICZ' theory is given by LINDEMAN, NTS 23, 25 ff. (1969).

§2 The initial attempt to relate the appearance of Gmc. \*-*jj-* and \*-*ww-* to the former presence of an IE laryngeal was made by H.L. SMITH, *Lg.* 17, 93 ff. (1941). SMITH supposed Verschärfung to have resulted from earlier sequences \*-*H<sub>1</sub>-* and \*-*H<sub>2</sub>-* when the accent immediately followed; modifications of this analysis were subsequently offered by STURTEVANT, *The Indo-Hittite Laryngeals*, §75, and AUSTIN, *Lg.* 22, 109 ff. (1946), *Lg.* 34, 203 ff. (1958). W.P. LEHMANN, *PIE Phonology*, 36 ff., proposed to derive Gmc. \*-*ww-* from IE \*-*H<sub>2</sub>H-*, and Gmc. \*-*jj-* from \*-*iH-* or \*-*H<sub>1</sub>i-*, depending on the quality of the preceding vowel. More recently, LINDEMAN has suggested that the gemination of \*-*i-* and \*-*u-* in the neighborhood of a laryngeal took place not in the Germanic period, but in Indo-European itself (*Les origines de la 'Verschärfung' germanique* (1964)).

These theories have not been generally accepted<sup>2)</sup>. There are, to be sure, a substantial number of Germanic forms with Verschärfung in which the former presence of a laryngeal in the neighborhood of the affected glide can safely be assumed (cf. OI *byggva*, *byggja* 'dwell' beside Skt. inf. *bhavitum* 'be', aor. *ābhūt* < \**bheuh<sub>2</sub>-*; Go. *waddjus*, OI *veggr* 'wall' beside Lith. *výti* 'wind', Ved. ptcp. *vītá-* 'wound' < \**yeih<sub>1</sub>-*; OI *Frigg* (divine name) beside Ved. *prīṇāti* 'delights', superl. *prāṣṭha-* 'dearest' < \**preih<sub>x</sub>-* or \**preh<sub>x</sub>i-*, etc.). But there are difficulties as well. Consonantal reflexes of laryngeals, including gemination, are hardly attested outside Anatolian<sup>3)</sup>; even in the few extra-Anatolian examples where a laryngeal can be shown to have affected a neighboring consonant - the change of \**th<sub>2</sub>* to \**th* in Indo-Iranian, for example - the result is a single phoneme, not a geminate. LINDEMAN, who attributes

the lengthening of \*-*i-* and \*-*u-* to the Common IE period, does so at the cost of assuming a sporadic rule for the parent language.

A more fundamental problem arises from the frequent difficulty of determining whether a reconstructed laryngeal originally preceded or followed the glide which it is alleged to have geminated. The verb \**hawwan* poses a dilemma of this kind: while Toch. B *kaut-* 'split' and Lat. *caudex* suggest a root-form \**keh<sub>2</sub>u-*, the acute intonation of Lith. *kāuti* 'strike' and the vocalism of OCS *kovq*, *kovati* 'forge' point rather to \**keh<sub>2</sub>-*. Similarly, OI *skeggja* 'axe' seems to contain an *i*-extended form of the root \**skeh<sub>2</sub>-* 'cut' (cf. Skt. caus. *chāyayati* beside ptcp. *chāta-* 'cut off'), but OIr. *seīan* 'knife' presupposes a zero-grade \**skih<sub>2</sub>-* rather than \**skh<sub>2</sub>i-*. Other such cases will be discussed below; taken together, they help explain why the theories just discussed fail so conspicuously to agree on the precise environments in which Verschärfung took place<sup>4)</sup>.

§3 In what follows I should like to outline a solution to the problem of Verschärfung which appears to account satisfactorily for the attested Germanic forms, but which avoids the necessity of assuming that IE sequences of glide + laryngeal or laryngeal + glide were converted to Germanic geminate glides by a process of direct phonetic assimilation.

We may begin by observing that sequences of the type \*-*VH<sub>1</sub>i-* and \*-*VH<sub>2</sub>u-* apparently yielded \*-*v̄i-* and \*-*v̄u-* in Germanic, as elsewhere in Indo-European. Examples of this treatment are numerous: cf. \**sējan* 'sow' (= Go. *saian*, OHG *sāen*) < \**seh<sub>1</sub>-iē/o-*, \**dējan* 'suckle' (= OHG *tāen*) < \**dheh<sub>1</sub>-iē/o-* or \**dheh<sub>1</sub>i-e/o-* (cf. §7), \**stōwījan* 'judge' (= Go. *stojan*) < \**stoh<sub>2</sub>u-eiē/o-*, \**laigōn* 'lick' (= Go. *bi-laigon*) < \**loigh-eh<sub>2</sub>iē/o-*, etc. Any theory of Verschärfung which attributes the gemination of \*-*i-* and \*-*u-* to a preceding laryngeal, therefore, must

immediately encounter grave difficulties; from an aprioristic point of view, SMITH's attempt to trace Gmc. *\*-ww-* to IE *\*-H<sub>u</sub>-* is less attractive than a theory like LEHMANN's, which derives *\*-ww-* from IE antevocalic *\*-uH-*. (To be sure, LEHMANN traces Gmc. *\*-jj-* to both *\*-H<sub>i</sub>-* and *\*-iH-*; this, as we shall see below, is an error.)

Let us now consider in detail the assumptions needed to explain a form like OI *byggva*, *-ja* in terms of the laryngeal theory. The formal structure of this verb is clear: it is a weak present in *\*-i-/\*-ija-*, possibly of denominative origin, containing the root of Ved. *bhavati* 'is' < *\*bheuh<sub>2</sub>eti*. To derive Gmc. *\*bewi-* from *\*bheuh<sub>2</sub>eie*<sup>5</sup>, laryngealists have typically posited a direct phonetic gemination of *\*-uh<sub>2</sub>-* to *\*-u<sub>u</sub>-*, but this assumption is gratuitous. Before the loss of intervocalic *\*-h<sub>2</sub>-*, Pre-Gmc. *\*bheuh<sub>2</sub>eie* would have had the syllabic structure *\*bheu-h<sub>2</sub>e-ie-*, with the diphthong *\*-eu-* contained entirely within the first syllable. The loss of intervocalic *\*-h<sub>2</sub>-* would initially have produced a hiatus; the resulting form, after the usual Germanic sound changes, would have had the syllabic structure *\*beu-i-*, which we may represent by writing *\*beu'i-*. Note now that there is no need to suppose that such a sequence would automatically have developed further to *\*bewi-*, with a transfer of the second element of the diphthong to the following syllable. Rather, it may be suggested that the hiatus between *\*-eu-* and *\*-a-* was eventually filled by a euphonic glide *\*-w-*: there would thus have arisen a stem-form *\*bewi-*, in which the sequence *\*-ewi-* contrasted with phonologically possible *\*-ewi-* < IE *\*-eu<sub>i</sub>-*. Subsequently, intervocalic *\*-uw-* could have been reinterpreted as a phonological geminate, and *\*bewi-* would have assumed the shape *\*bewwi-* (> *\*biwwi-* > OI *byggvi-*)<sup>6</sup>.

The same explanation may in principle be applied to other instances of *Verschärfung* in which an antevocalic laryngeal

historically followed an *i-* or *u-* diphthong. We shall consider the clearest such examples in §5; for ease of exposition, however, it will be useful to discuss first the extension of the above hypothesis to the more difficult case of forms like *\*hawwan*.

§4 We have seen above that the extra-Germanic cognates of *\*hawwan* point partly to a root *\*keh<sub>2</sub>u-* and partly to a root *\*keuh<sub>2</sub>-*. In my view the most satisfactory explanation for root-variants of this kind was proposed by WINTER, *Evidence for Laryngeals*, 192 ff. Noting the frequency with which reflexes of *\*-i-* and *\*-ū-* appear in the daughter languages as zero-grades to full-grade sequences of the type *\*-eHi-* and *\*-eHu-*, WINTER conjectured that an IE metathesis rule converted inherited *\*-Hi-* and *\*-Hu-* to *\*-iH-* and *\*-uH-* before a following consonant<sup>7</sup>. Indo-European would thus have had roots, or root-like complexes, of the form *\*TeHi-*, *\*TeHu-*, with zero-grades *\*TiH-* and *\*TuH-*. This situation, naturally unstable, could easily have led to the analogical replacement of *\*TeHi-*, *\*TeHu-* by new full grades of the type *\*TeiH-*, *\*TeuH-*.

Gmc. *\*hawwan*, I would suggest, was originally a present in *\*-u-* to a root which may be reconstructed as *\*keh<sub>2</sub>-*. There is considerable reason to believe that *u-* presents in Indo-European were historically characterized by an alternation between full-grade and zero-grade root-forms (cf. Ved. *tarute* 'conquers' (< *\*terh<sub>2</sub>-u-*) beside thematized *tūrvati* 'id.', Hitt. *tarhuzzi* 'is able' (< *\*tr<sub>h</sub>h<sub>2</sub>-u-*), or Gk. ζῶω, Toch. B 3 sg. *šaim* 'lives' (< *\*g<sup>h</sup>ih<sub>3</sub>-u-*) beside Ved. *jīvati*, Lat. *uīvit*, etc. (< *\*g<sup>h</sup>ih<sub>3</sub>-u-*)). The present stem of *\*keh<sub>2</sub>-* was thus perhaps originally *\*keh<sub>2</sub>u-/\*kh<sub>2</sub>u-*; with coloration and metathesis this yielded *\*kah<sub>2</sub>u-/\*kuh<sub>2</sub>-*, the first term of which was replaced by analogical *\*kauh<sub>2</sub>-* in the dialectal period. The attested forms of *\*hawwan* ultimately point to a full-grade

thematic present *\*kauh<sub>2</sub>-e/o-*, which gave *\*hawwa-* via the intermediate stages *\*hau'a-* and *\*hauwa-*<sup>8)</sup>.

§5 In the following lexical items, the geminates *\*-jj-* and *\*-ww-* can plausibly be attributed to the former presence of a sequence of the type *\*-AUHA-* (*A* = any vowel, *U* = *i* or *u*, *H* = any laryngeal), where *\*-UH-* may be original, as in *\*bewwi-jan*, or the replacement of earlier *\*-HJ-*, as in *\*hauwan*.

OI *bygg*, OE *bēow*, etc. 'barley' (< *\*bewwa-*): the late IE preform was probably a thematic adjective *\*bheuh<sub>2</sub>o-*, with the same root as OI *byggva*; for the semantics compare Gk. *φυτόν* 'plant' and perhaps also Arm. *bois* 'sprout'. Note also OI *bjó*, 1 pl. *bjuggum*, the preterite of *búa* 'dwell' (< *\*bhuh<sub>2</sub>-ie/o-*), which indirectly presupposes a perfect 3 sg. *\*bebawwe* < *\*bhebhuh<sub>2</sub>e*.

OE *brēowan* 'brew', OI ptcp. *brugginn* (< *\*brewan*): the closest extra-Germanic cognates are Lat. *feruō*, *-ere* and Mīr. *berbaid* 'boil' (: MW *berwi* 'id.'). which appear to contain a *u*-extended form of the root found in Lat. *fermentum*. A root-final laryngeal is suggested by Lat. *dēfrūtum* (Plt., Ps. 741) and Thracian *βροῦτον*, *βροῦτος*, *βροῦτος* 'kind of fermented drink', which show a metathesized zero-grade *\*bhruh<sub>x</sub>-*; seemingly anit forms like OIr. *bruth* 'fury' and OE *broþ* 'broth' can be compared typologically with the second member of pairs such as Ved. *bhūtá-*: Gk. *φυτόν* (see above) or Ved. *pūtá-* 'purified': Lat. *pūtus* 'pure'<sup>9)</sup>. The Germanic verb is probably ultimately referable to an athematic present *\*bherh<sub>x</sub>u-/\*bhruh<sub>x</sub>-* (< *\*bhrh<sub>x</sub>-u-*): from the zero-grade was created an analogical full-grade *\*bhreuh<sub>x</sub>-*, which became the basis for a thematic present *\*bhreuh<sub>x</sub>-e/o-*.

OE *cēowan*, OHG *kiwan* 'chew' (< *\*kewwan*): a set root is apparently indicated by OCS 3 pl. *žijqtz* 'chew' < *\*žūje-* < *\*gīuh<sub>x</sub>-ie/o-*; the corresponding full-grade *\*gīeuh<sub>x</sub>-* appears

in Lith. *žiāunos* 'jaws'. The West Germanic forms continue a thematic present *\*gīeuh<sub>x</sub>-e/o-*. Here too belongs OI *tyggva* 'chew', which owes its initial consonant to the influence of the synonymous verb *tqgla*.

OE *clæg* 'clay' (< *\*klajja-*): a nasal-infix present *\*gli-n-eh<sub>x</sub>-ti*, presupposing a root *\*gleih<sub>x</sub>-*, is reconstructable for dialectal Indo-European on the basis of OIr. *glenim*, MW *glynaf* 'I stick (to)' and OHG *klenan* 'stick, smear'. Gmc. *\*klajja-* continues a deverbative thematic noun *\*gloih<sub>x</sub>o-*.

OI *skeggja* 'axe' (< *\*skajjōn-*): a zero-grade *\*skih<sub>2</sub>-* is attested in Ved. *chyāt(i)* 'cuts off' and, as noted above, in OIr. *scīan* 'knife'; *\*skajjōn-* contains the corresponding *o*-grade *\*skoih<sub>2</sub>-*. The underlying root is probably best reconstructed as *\*skeh<sub>2</sub>-* (cf. Skt. ptcp. *chāta-*), to which an *i*-element parallel to the *-u-* of *\*g<sup>k</sup>īeh<sub>3</sub>-u-*, *\*terh<sub>2</sub>-u-*, *\*keh<sub>2</sub>-u-*, etc. was added in the present (see note 14 below). The full-grades *\*skeih<sub>2</sub>-* and *\*skoih<sub>2</sub>-* would then have been created in the usual way to the zero-grade *\*skih<sub>2</sub>-*, itself the product of metathesis from earlier *\*skh<sub>2</sub>-i-*.

OE *scēawian*, OHG *scouwōn* 'gaze' (< *\*skawōn*): a set root *\*(s)keuh<sub>x</sub>-* is indicated by Ved. *ākūti-* 'intention', *ākūta-* 'id.' (VS), *ākuvate* 'intends' (ŠB); other cognates, such as OCS *čujq*, *čuti* 'feel, notice', are ambiguous<sup>10)</sup>. The Germanic verb, an *o*-grade iterative of the type seen in Gk. *ποτόμαι*, continues a preform *\*skouh<sub>x</sub>-eh<sub>2</sub>ie/o-*; the parallel formation in *\*-eje/o-* is represented by Gk. *κοέω* and Lat. *caueō* < *\*kouh<sub>x</sub>-eje/o-*.

Go. gen. pl. *twaddje*, OI *tveggja*, OHG *zweiio* 'duðrum' (< *\*twajjōn (-ēn)*): the correct explanation for this much-discussed form has been seen by LÖHR, MSS 35, 73 (1976), who, following HOFFMANN, *Aufsätze zur Indoiranistik* II, 561, Anm. 2, refers it to an IE gen. du. *\*duoi-h<sub>x</sub>ou* (cf. Ved. *āvāyoḥ*).

The regular reflex of  $*d_{yoi}-h_xou$  in Germanic would have been  $*twajjau$ , from which the attested forms differ only in having substituted the regular ending of the gen. pl. for the obsolete  $*-au$  of the dual (cf. nom.  $*twai$  (Go. *twai*) for expected  $*twau$ ). OI *beggja* 'ambōrum' is to be explained in the same way; *þrígga* 'trium' is an analogical formation (cf. Go. *þrije*).

Go.  $-waddjus$ , OI *veggr* 'wall' (<  $*wajju-$ ): a root  $*ueih_x-$ / $*yih_x-$  underlies Ved. *váyati*, ptcp. *vítá-* 'weave', Lith. *vejù*, *výti* 'wind', and OIr. *fenaid* 'finish, "wind up"'. Gmc.  $*wajju-$  is doubtless the replacement of an earlier root noun  $*yoih_x-s$ , gen.  $*ueih_x-s$ , the acc. sg. of which ( $*yoih_x-m$ ) was probably the point of departure for the creation of the Germanic  $u$ -stem.

§6 The forms just cited represent only a small fraction of the total number of Germanic words which show Verschärfung, but they constitute a clear majority of the cases for which an IE root can accurately be reconstructed<sup>11</sup>). It is significant that no certain counterexamples to the proposed development  $*-AUHA- > *-AUWA- > *-AWWA-$  are known. The difficulties posed by Gmc.  $*hrawa-$  'raw' (cf. OHG (*h*)*rao*, (*h*)*rō*, MD *rō*) <  $*krouh_2-o-$  are comparatively slight, since the  $*-w-$  of this word can readily be attributed to the influence of the parallel stem  $*hrēwa-$  (cf. Dutch *rau*, MHG *rā*, Finn. (loanword) *rieva* (with  $-ie-$  <  $*-ē-$ ) <  $*krēuh_2-o-$ <sup>12</sup>). It is likely that sequences of the type  $*-AUHA-$  developed directly to  $*-AWA-$ , rather than  $*-AU'A-$  in Germanic; in descriptive terms, Verschärfung after long vowels is simply not encountered.

A more puzzling case is that of Go. *sniwan* 'hurry' beside OE *snēowan* 'id.' (<  $*snewan$ ) and OI *snqgr* 'quick' (<  $*snawu-$ ). The extra-Germanic connections of this verb, however, are unclear in any event, and it is at least possible that the absence of Verschärfung in Gothic is due to the analogical influence of forms such as the pret. 1 pl.  $*snēwum$ , the

historically original participle  $*snuwana-$  (<  $*snuh_1-ono-$ ?), and the related lexical item seen in OE *snōwan* 'hurry' and OI *snúa* 'wind, turn'<sup>13</sup>).

§7 Not all instances of Verschärfung reflect earlier sequences of the type  $*-AUHA-$ . In two well-known forms Gmc.  $*-jj-$  appears to have developed from an original sequence  $*-ij-$ , in which the first element became non-syllabic following the loss of a preceding laryngeal. In schematic terms we may represent this development as  $*-A(U)HUWA- > *-AUWA- > *-AWWA-$ ; the words in question are the following:

Crim. Go. *ada*, OI *egg*, OHG *ei* (gen. pl. *eitero*) 'egg' (<  $*ajja-$ ): Although the Indo-European shape of this word remains problematic, the Germanic forms are probably best referred to a stem  $*(h_x)ōh_xi_1o-$  (perhaps, as SCHINDLER points out to me, the replacement of an earlier  $*(h_x)ōh_xu_1o-$ ; cf. also Serbo-Croatian *jaje*, OCS (*j*)*aj\_1ce*). Pre-Gmc.  $*(h_x)ōh_xi_1o-$  would initially have yielded  $*ōi_1o-$ , whence, with Osthoff's Law,  $*ai_1a- > *ajja-$ .

Go. *daddjan*, OSw. *dæggia* 'suckle' (<  $*dajjan$ ): the unextended root  $*dheh_1-$  is found in Ved. *adhāt* (AV) 'sucked'. The corresponding present *dhayati*,  $-te$  is probably best taken as reflecting a metathesized full-grade  $*dheih_1-$ , itself built to a zero-grade  $*dhih_1-$  <  $*dhh_1-i-$  with an enlargement  $*-i-$  (cf. ptcp. *dhīta-*, OIr. *denaid* 'suckles' <  $*dhi-n-h_1-$ , perhaps also OSw. *dīa* 'suck')<sup>14</sup>). Germanic and Slavic have taken the metathesized full-grade as the point of departure for the creation of an iterative-causative  $*dhoih_1-ēie/o-$ . In Slavic this regularly yielded *dojq*, *dojīši* 'suckle'; in Germanic the phonetic development was presumably  $*dhoih_1-ēie/o- > *dai'i_1ja- > *daij_1jan$  whence, with regular loss of  $*-j-$  before  $*-i-$ ,  $*daijan > *dajjan$ <sup>15</sup>).

§8 The Germanic groups *\*-ijj-* and *\*-uww-* call for special discussion. The sequence *\*-uww-*, in the clearest cases, is attributable to the analogical influence of related full-grade forms in which Verschärfung can in principle be explained as in §5: representative examples are OI ptcp. *brugginn* 'brewed', wk. vb. *brugga* 'brew' (cf. OE *brēowan*); OI ptcp. *hnugginn* 'humbled' (cf. pres. *hnøggva*); Norw. dial. *snugga* 'snort' (cf. MHG *snouwen*); Sw. *rugg* 'shaggy hair' (cf. OI *rogg(r)* 'long course wool'); OI *glugga* 'choose carefully' (cf. *glqggr* 'sharp-minded', Go. *glaggwuba* 'carefully'). The *\*-ww-* of Go. *skuggwa* 'mirror', OI *skuggi* 'shadow' (cf. *skugg-sjá* 'mirror'), OHG *seū*, *scuwo* 'shadow' (cf. *seū-c(h)ar* 'mirror') is probably due to the influence of *\*skawōn* 'look' (= OHG *scouwōn*), whether or not the latter word and *\*skuwwan-* are etymologically connected (see FEIST, *Vergl. Wb. d. got. Spr.* 3, 435)<sup>16</sup>.

In one instance *\*-uww-* appears to be the phonologically regular development of earlier *\*-ūw-*. This is the Germanic word for 'owl', reconstructable as *\*uwwalōn-* or *\*uwwilōn-* on the evidence of OI *ugla*, OE *ūle* and OHG *ūwila*. The *\*ū-* of pre-Gmc. *\*ūwalōn-* (*\*ūwilōn-*) is almost certainly of onomatopoeic, rather than laryngeal origin; it is not improbable that at the same time that sequences of the type *\*-auw-* were phonologically reinterpreted as containing a geminate *\*-ww-*, the group *\*-ūw-* was phonologically reinterpreted as *\*-uww-*. A similar explanation will account for Gmc. *\*-ijj-* in the divine name *\*Frijjō-* (cf. OI *Frigg*, OE *Frīȝ*) and the irregular preterite 3 pl. *\*ijjun* 'went' which underlies Go. *iddja*, *iddjedun*. *\*Frijjō-* is probably best taken with KURYLOWICZ, *op. cit.* 449, from a *\*ie/o-*-adjective *\*prih<sub>x</sub>-ie/o-*, the feminine of which would initially have yielded *\*frījō-* in Germanic; alternatively, it is possible to envisage a substantivized "gerundive" *\*preh<sub>1</sub>iēh<sub>2</sub>-* 'die zu liebende'

(cf. Ved. *dēya-* 'to be given', *jāyya-* 'to be conquered', etc.)<sup>17</sup>) or a feminine thematic adjective *\*preih<sub>x</sub>eh<sub>2</sub>-*, both of which would regularly have given *\*freiō-* > *\*frījō-* > *\*frijjō-*. (Gmc. *\*frija-* 'free' (= Go. *freis*) and *\*frijōn* 'love' (= Go. *frijon*), of course, show the normal antevocalic treatment of the zero-grade *\*prih<sub>x</sub>-*.) According to COWGILL, *Lg.* 36. 483 ff. (1960), Go. *iddja* owes its Verschärfung to an original 3 pl. *\*ijjun* < *\*ījun* < *\*ēiŋt*, which replaced earlier *\*ēiŋt* under the influence of paradigmatically related forms.

§9 No theory of Verschärfung can account directly for the large number of Germanic words with *\*-ww-* or *\*-jj-* which either lack convincing etymologies or continue IE roots whose set or aniŋ character is not known<sup>18</sup>). On the basis of the forms discussed in §§3-8, however, the following conclusions can safely be ventured. Gmc. *\*-ww-*, where not analogical, is in every clear case attributable to an earlier non-geminate *\*-w-* preceded by *\*-ū-* or a *u*-diphthong; *\*-jj-* can similarly be traced to earlier *\*-j-* preceded by *\*-ī-* or an *i*-diphthong. Typically, the diphthong in sequences of the latter type is original and the following glide is the replacement of a lost laryngeal (cf. *\*hawwan* < *\*hawwan* < *\*kauh<sub>2</sub>-e/o-*, *\*wajju-* < *\*waiju-* < *\*woih<sub>x</sub>-*); occasionally, the glide is original and the preceding diphthong has arisen by contraction across a laryngeal hiatus (cf. *\*dajjan* < *\*daijan* < *\*dhoih<sub>1</sub>-eie/o-*).

Very little in this formulation is entirely new. We have followed LEHMANN in deriving *\*-ww-* and *\*-jj-* in the majority of instances from sequences of the form *\*-AUHA-*. Our treatment differs from his in two main respects: by assuming that laryngeals were lost without *directly* causing gemination in Germanic we have been able to account for cases like *\*dajjan*, *\*Frijjō-* and *\*uwwalōn-* with no loss of generality; and by assuming that interconsonantal *\*-Hu-* and *\*-Hi-* were metathesized to *\*-uH-* and

\*-iH- in late Indo-European we have been able to expand significantly the list of forms for which pre-Gmc. \*-auH-, \*-aiH- and \*-euH- can plausibly be reconstructed. The resulting theory is attractively simple, and, if correct, would provide an elegant solution to a hitherto recalcitrant problem.

#### Notes:

- 1) A useful survey of the earlier literature on Verschärfung is given by F. van COETSEM, *Leuvense Bijdragen* 39, 41 ff. (1949).
- 2) Representative are the doubts expressed by BEEKES, *Orbis* 21, 327 ff. (1972). Regrettably, BEEKES does not reveal which, if any, non-laryngeal solution he prefers.
- 3) In Anatolian there is fairly good evidence that sequences of the type \*-VRHV- yielded -VRRV-; note, e.g., Hitt. *šunna-* 'fill' < \*su-n-h<sub>x</sub>- and *tarra-* 'be capable' beside *tarḫ-* 'conquer'. For discussion see C. WATKINS, *Flexion und Wortbildung*, 376 ff.  
 Attempts to find consonantal reflexes of laryngeals outside Anatolian, of course, have been very numerous. A conspicuous instance is AUSTIN's doubtful view, set forth in the articles cited above, that IE \*-H<sub>x</sub>- yielded WGmc. \*k in OE *naca* 'ship' and similar forms. More recently, R. LÜHR has argued (MSS 35, 73 ff. (1976)) that \*-VRHV- regularly gave Gmc. \*-VRRV-. Although several of Miss LÜHR's analyses are attractive, her overall theory is badly compromised by counterexamples such as \*malan 'grind' < \*melh<sub>x</sub>-, \*anan 'breathe' < \*h<sub>2</sub>genh<sub>x</sub>- and \*tamōn 'subdue' < \*demh<sub>2</sub>-, for which she can offer only *ad hoc* explanations.
- 4) The difficulty of determining the relative position of laryngeal and glide in individual lexical items has been stressed in several papers by E. POLOMÉ, e.g., *Mélanges ... Mossé*, 387 ff. and the privately circulated "Remarks on the Problem of the Germanic Verschärfung".
- 5) Or, of course, \*bheuh<sub>2</sub>-i<sub>2</sub>e-; the original form of the suffix cannot be determined.
- 6) It is true, of course, that this is not the way laryngeal hiatuses were resolved elsewhere: the present of bhū- in Sanskrit is not \*bhōvati but bhāvati. Since such hiatuses were created in post-IE times, however, there is no reason

why we should expect them to have been treated with complete uniformity in the daughter languages. As a somewhat parallel case, compare the ulterior history of sequences of the form \*-VHV-, which coalesced with the inherited long vowels in Italic, Celtic and Armenian, but which remained disyllabic in Indo-Iranian and yielded "trimoric" long vowels in Germanic.

- 7) According to J. SCHINDLER (personal communication), metathesis only took place when a consonant preceded as well. But BEEKES' assertion, *op. cit.* 330, that metathesis was restricted to cases where the preceding consonant was a stop is directly refuted by Hitt. *šuhḫ(a)-* 'pour' < \*sh<sub>2</sub>u- (cf. note 11).
- 8) The full-grade of the Germanic verb, which matches that of OCS *kovq* 'I forge' < \*kauh<sub>x</sub>-, is thus comparable to the full-grade of ζάω, although the latter form has not undergone metathesis. Elsewhere I shall attempt to show that the u-presents of Indo-European were characterized by an athematic 3 sg. in \*-e rather than \*-ti, and that their tendency to appear as thematic presents in the daughter languages simply reflects the fact that \*-e was the 3 sg. thematic ending as well.
- 9) In principle, such doublets can be explained in a number of ways. The -ū- of *putus* may have been extracted from the nasal present \*pu-ne-h<sub>2</sub>-ti (= Ved. *puṇāti* 'purifies'); the short vowel of *φουόν* was perhaps extended from the antevocalic allomorph \*bhuy<sub>x</sub>- < \*bhuh<sub>2</sub>- or adopted by analogy to the zero-grade in \*-u- of anit roots. In yet other cases, uncertainty between \*-ū- and \*-u- (or \*-ī- and \*-i-) is best accounted for by supposing an originally anit root to which a laryngeal enlargement was optionally added.
- 10) The intonation of Serbo-Croatian *čūjēm*, *čūti* could as easily reflect a pre-Slavic present \*kēumi as an earlier \*kēuh<sub>x</sub>mi or \*kēuh<sub>x</sub>-i<sub>2</sub>e/o-.
- 11) More extended treatments of Verschärfung, of course, allege many further instances of the development \*-AUHA- > \*-ANWA-, but few of these will bear close scrutiny. Three additional examples are perhaps worthy of mention:
  - a) OI *lqqa* 'notch' (< \*lawwō-): a connection is possible with Ved. *luṇāti* 'cuts off', presumably reflecting an IE root \*leuh<sub>x</sub>-.
  - b) OI *rqgg*, *rqggr* 'dense wool' (< \*rawwō-, \*rawwa-): the corresponding OI verb *ryja* 'tear out wool', along with Lit. *rājuju*, *rauti* 'tear out' and OCS *ravq*, *ryti* 'id.' (cf. *ryjq*, *rvati* 'dig'), can most easily be derived from a set root \*reuh<sub>x</sub>-; here may also belong Lat. *rūta* in *rūta caesa* 'things remaining on a plot of land after it has

been cleared'. The  $\bar{u}$ - of Lat.  $\bar{e}$ -,  $d\bar{u}$ - *obrūtus* 'dug up' would then have to be explained separately (cf. note 9).

c) Icel. *sögr* 'damp'; cf. OHG *sou*, OE *sēaw* 'sap, juice, moisture' (< \**sawwa*-): a connection is possible with Hitt. *šuhḫa*- 'pour' and Gk.  $\theta\epsilon\lambda$  'it rains' (cf. Toch. AB *sū*- 'id.'). The latter forms point to a root \**seuh<sub>2</sub>*- (\**sauh<sub>2</sub>*-)/\**suḥ<sub>2</sub>*-, itself metathesized from earlier \**seh<sub>2</sub>*-*u*-/\**sh<sub>2</sub>*-*ū*- (cf. the Hittite doublet *išḫuwa*- 'pour', pointed out to me by SCHINDLER, and probably also *šehur* 'urine' < \**seh<sub>2</sub>*-*ur*). From a semantic point of view, however, a derivation of the Germanic words from the anit root of Ved. *sunōti*, GAv. *hunaoiti* 'presses (soma)' would be equally acceptable.

- 12) I can see no reason to suppose that OS *hreuuan* and OI *hryggva* 'rue, be sorrowful' are derived from this root.
- 13) BEEKES too has seen that \**hrawa*- and (pre-Gothic) \**snewan* are embarrassing forms for a laryngeal theory of Verschärfung, but his assessment of their importance is in my view greatly exaggerated.
- 14) It will be argued elsewhere that parallel to the *u*-presents discussed above, Indo-European had a series of presents marked by an enlargement \*-*i*-. These too, I shall claim, were characterized by an alternating full- and zero-grade root and by 3 sg. in \*-*e*; the type is well-preserved in Hitt. 3 sg. *dāi* 'puts' < \**dhēh<sub>1</sub>*-*ī*-*e*ī, 3 pl. *tiyanzi* < \**dhh<sub>1</sub>*-*ī*-*ēnti*.
- 15) Strictly speaking, we must assume that the rule  $j \rightarrow \emptyset / -i$  applied twice, once to produce \**daiijan*, which would have been realized phonetically as [dajijan], and a second time to produce \**daijan*. But it is at least as likely that \**daiijan* would have been simplified directly to \**daijan*.
- 16) So KURYLOWICZ, *op. cit.* 448. Both KURYLOWICZ and LINDEMAN have recognized the secondary character of Gmc. \*-*uw*-.
- 17) This analysis would require us to discard the standard, though hardly compelling, comparison of the Germanic forms with Gk.  $\mu\alpha\upsilon\varsigma$  'gentle'; cf. BEEKES, *op. cit.*, 330.
- 18) Representative of this group are Go. *bliggwan* 'strike' and its relatives, OS *hreuuan*, OI *hryggva* 'rue' (cf. note 12), and OE *hwæz* 'whey'. The family of Go. *triggus*, OI *tryggr* and OHG *gītriwi* 'true' is doubtless connected with Lith. *drūtas* 'strong' and OPr. *druwīt* 'believe', but the relationship between these forms and the Indo-European word for 'tree', which lacked a laryngeal, is very uncertain. If our findings are correct, the traditional equation of OI *dagg* and OE *dēaw* 'dew' with the laryngealless root of Ved. *dhāvate* 'runs' must be abandoned.

#### A Note on Hittite *tāia*- 'steal'

The etymology of the Hittite *mī*-verb *tāia*-, 3 sg. *tāiezzi* 'steal' is well-known: related lexical items outside Anatolian are Ved. *tāyú*-, *stāyú*-, Av. *tāiu*- 'thief', OCS *tajq* 'I conceal', *tatb* 'thief' and Gk.  $\tau\eta\tau\acute{o}\mu\alpha\iota$  'be in want (of)'. POKORNY refers these forms to a root \*(*s*)*tāi*- 'heimlich um etwas bringen, hehlen, stehlen'; most modern scholars would dispense with the long diphthong and write simply \*(*s*)*teh<sub>2</sub>*(*i*)-

It has long been suspected that the final glide of roots in \**eh<sub>x</sub>*(*i*)- originated in the present, whence it was subsequently extended to other forms. Favoring such an interpretation is the fact that roots of this structure often have full- or zero-grade presents in \*-*īe/o*- (cf. OSw. *dā*, Latv. *dēju* < \**dheh<sub>1</sub>*(*i*)- 'suck', Ved. *syāt(i)* < \**seh<sub>2</sub>*(*i*)- or \**sh<sub>2</sub>eh<sub>1</sub>*(*i*)- 'bind') beside unextended aorists (cf. Ved. *ādhāt*, *āsāt*): the present suffix here is presumably to be analyzed as \*-*i*- followed by the thematic vowel. From a phonological point of view *tāia*- could easily be explained as a formation of the same type, since \**h<sub>2</sub>* was regularly lost before \*-*ī*- in Hittite. A reconstruction \*(*s*)*teh<sub>2</sub>**īe/o*-, however, would be morphologically unsatisfactory. Hittite is unique in typically showing athematic presents to "long-diphthongal" roots: the cognate of Ved. *syāt(i)* is 3 sg. *išḫāi*, 3 pl. *išḫīanzi*, while OCS *spějq* 'I succeed' (< \**speh<sub>1</sub>*(*i*)-) is matched by 3 sg. *išpāi*, 3 pl. *išpīanzi* 'become sated'. I shall show elsewhere that this inflectional pattern is an archaism, and ultimately points to an IE type 3 sg. \**TĒH*-*ī*-*e*, 3 pl. \**TH*-*ī*-*ēnti* (or \**TH*-*ī*-*ēr*). For the moment it is sufficient to note that the expected present of \*(*s*)*teh<sub>2</sub>*(*i*)- in Hittite would have been not 3 sg. *tāiezzi*, pl. *tāianzi*, but 3 sg. \**tāi*, pl. \**tīanzi*.