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The development of the voiced labiovelars in Germanic*

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In the development of the separate Indo-European branches and individual languages, the Proto-Indo-European series of labiovelar stops $*k^w$ - $*g^w$ - $*g^{wh}$ is among the most unstable, and has been liable to different phonetic and phonological changes (Szemerényi 1996:62). Given this fact, it is a popular topic in phonological treatments of Indo-European languages. Germanic is, or should be, no exception.

The first step in the development of these Indo-European labiovelars into Germanic is uncontroversial. All Germanic stops undergo the regular sound shift known as Grimm's law, by which $*g^w$ develops to Germanic $*k^w$, $*g^{wh}$ to Germanic $*g^w$, and $*k^w$ to Germanic $*h^w$. This latter $*h^w$ will also develop to $*g^w$ if properly conditioned by the accent-driven voicing rule known as Verner's law. Germanic $*k^w$ and $*h^w$ have not given rise to troublesome developments in Germanic, so the current approach will limit the scope to the development of Germanic voiced $*g^w$. The other labiovelars have undergone relatively uncontroversial changes (cf. Krahe/Meid 1969 I).

1. Was there only one Proto-Germanic voiced labiovelar?

1.1 One natural question is if there is any difference in the treatment of the $*g^w$ that originates in Indo-European $*g^{wh}$ and the $*g^w$ that originates in the Indo-European $*k^w$. This issue is usually glossed over, but with good reason. There is to my knowledge no indication that the origin of the Germanic $*g^w$ has any influence on its subsequent development. One example illustrating this fact comes from Germanic $*ag^wnōn$ - 'yea(n)' vs. $*seg^wni$ - 'vision', which both take $*g^w$ to $*w$ before $*n$ (Old English *eānian*, *sīen*), in spite of their different origin in Indo-European $*ag^{wh}$ - and

* I wish to thank Keith Plaster and Jeremy Rau for having read through the paper with corrections to the English.

**sek*^w- (Pokorny 1948-69). The further discussion will assume that the development of **g*^w does not depend on its Indo-European origin.

1.2 Another issue is if there ever was a difference between a monophonemic labiovelar **g*^w and a biphonemic sequence of velar **g* plus **w* in Germanic, another potential problem that is rarely addressed (for two opposite views, cf. Eichner 1987:103 vs. Schaffner 1996:157¹¹¹). An example for their identical treatment is given by Schaffner (loc. cit.): **sewana*- < **seg*^w*ana*- 'seen' vs. **awala*- < **agwala*- 'fork' (cf. Schaffner 2001:116). Although there are no cases that positively show that there was no difference between **g*^w and **gw*, there is no good evidence in favor of a difference. The further discussion will take the standard approach of assuming a monophonemic realization for both.

2. The further development of Germanic **g*^w

It is time to look at the actual development of **g*^w in Germanic. It is given a thorough treatment in Seebold 1967, and all subsequent discussions of this issue have, or should have, used his article as a basis. This working paper is no exception. A large part of Seebold's treatment deals with the development of **g*^w before **i* and **j*, and this is the phonological position that will be the focus for this paper as well. For the sake of completeness, however, the main results from Seebold 1967 regarding the development of **g*^w in other positions will be summarized first.

2.1 Initial position

The fate of initial **g*^w seems to be rather enigmatic. We seem to have three different reflexes:

- 1) *g*- in **gunþijō*- < **g*^w*þjō*- 'battle' < **g*^{wh}*ptjā*-
- 2) *w*- in **warma*- < **g*^w*arma*- 'warm' < **g*^{wh}*ormo*-
- 3) *b*- in **banjō*- < **g*^w*anjō*- 'wound' < **g*^{wh}*onjā*-

The reflex *g*- is said to result from labial dissimilation before **u* (Streitberg 1896:122). The apparent dual development to *w*- and *b*- remains

controversial (cf. Seebold 1980). I will not attempt to resolve this issue here.

2.2 After nasal

After the nasal *n*, **g*^w is preserved as such, usually exemplified through **seng*^w*an*- 'sing' > Gothic *siggwan* (/sijg^wan/), Old Norse *syngva*.

2.3 Before liquids and nasals

Before *r*, *l* and *n*, **g*^w has become **w*, as seen in **neg*^w*ran*- > **neuran*- 'kidney' and **seg*^w*ni*- > **seuni*- 'vision'.

2.4 Before back round vowels

Before the back round vowels **u* and **ō*, dissimilation occurs, and the labiovelar **g*^w becomes a plain velar **g*, as in **laig*^w*ōn*- > **laigōn*- 'hire, rent'.

2.5 After front vowels

When **g*^w followed the front vowels **i* and **e* or a diphthong ending in **i*, it developed to **w*, as long as no back round vowel **u* or **ō* immediately followed. The prime examples here are the forms of the root **snig*^w- 'snow', e.g. **snaig*^w*a*- > **snaiwa*- 'snow', **snig*^w*ana*- > **sniwana*- 'snowed', but also **seg*^w*ana*- > **sewana*- 'seen', **peg*^w*a*- > **pewa*- 'servant'.

2.5.1 The discrepancy between Gothic *hneiwān* and North-West Germanic *hnīgan* 'bend' is then due to different generalizations. Gothic *hneiwān* is based on the present formations where no back round vowel followed, whereas *hnīgan* is based on the perfect formations, where *g* might have been the regular development in all cases (Ringe 2006:108).

3. The development of **g*^w before **i* and **j*

3.1 Most of the discussion in Seebold 1967 revolves around the development of **g*^w before **i* and **j*. Seebold concludes based on the evidence that **g*^w develops to **g* before **i* and to **w* before **j*. He tries to draw conclusions from more or less certain etymologies only, and that approach will be followed here. The conclusion proposed here will nevertheless be the opposite of Seebold's, namely that **g*^w develops to **w* before **i*, and to **g* before **j*. My approach is thus a return to the classic theory as expressed in Streitberg 1896:§122.4, §123.4, §129.6.

3.2 Seebold bases the theory that *g^w becomes *g before *i on one example only, namely Old High German *egithehsa* 'lizard' (1967:125f.). One problem is, though, that the word has a by-form *ewithehsa*, and neither seems to correspond to the Old English form *āðexe*. The first element is said to be from *ag^wi- 'snake' < Indo-European *og^{wh}i-. This tempting link is nevertheless considered uncertain by Lloyd/Lühr/Springer II:960. At any rate, the variants *egi-* and *ewi-* suggest that both stem from the paradigm of the original simplex *ag^wi- (Cubbin 1979:229ff.). This itself makes *egi-/ewi-* useless as evidence, since it would be the postulated sound laws themselves which would decide which forms in the paradigm regularly gave -g-, and which ones regularly gave -w-. Seebold 1967:126 reconstructs *eg^wi- for the variant *egi-*, and *eg^wja-, an "irregular extension to a ja-stem", for *ewi-*. Such a reconstruction finds support only by his own postulated rules, and there is no logical reason why it could not just as easily be the other way around. Seebold 1967:121 tries to rule out the possibility of *eg^wja- > *egi-* by claiming that, in that case, it should have given a form with consonant gemination (*eggi-). If *eg^wja- is in fact extended to a ja-stem in the first member of this compound, the claim of j-gemination would only be true if j-gemination precedes syncope of *a (i.e. *eg^wja- > *egja- > *eggja- > *eggi-). With good reasons, however, the general view is that syncope precedes the j-gemination process (i.e. *eg^wja- > *egja- > *egi-*, see Krogh 1996:289f. and Grønvik 1998:99 with references).

3.3 That *g^w before *j gives *w is strongly contradicted by numerous forms (cf. Cubbin 1979:234). The most persuasive one is *sag^wja- > *sagja- 'follower'. Neither the connection with the Indo-European root *sek^w- 'follow' nor the perfect match with Latin *socius* 'id.' need be questioned. *-g^w- would in this word invariably be followed by *j, and Seebold's hesitant attempt to induce the amphikinetic ablauting *i*-suffix in Indo-Iranian *sákhā*, *haxa* is forced (1967:131), since both the Germanic and the Latin word is clearly a ja/jō-stem, not an *i*-stem.

3.4 Germanic *wlg^wjō- 'she-wolf' shows up in Old Norse with a stem form *ylgj-*. The West Germanic form *wulbjō- allows different interpretations (cf. Bammesberger 1990:102, Schaffner 2003), neither of which concerns us here, as it has no relevance for the development of *g^w to either *g or *w before *j. The Old Norse form is another indication of *g^w > *g before *j. Seebold 1967:130 disregards it as evidence, because the development to *g is straight forward after the liquid *l. This example would be the only one showing that, so there is no further support for such

a claim. Notice that this form indicates that the development of *g^w to *g took place before the onset of Sievers' law (*wlg^wjō- > *wulg^wjō- > *wulgjō- > *wulgijō-), possibly even before the epenthesis of a full vowel *u in the root, an epenthesis that would create a heavy syllable (*wlg^wjō- > *wlgjō- > *wulgijō-).

3.5 Germanic *mag^wjō- > *mawjō- 'girl' seems to indicate Seebold's expected development to *w before *j. As is acknowledged by Seebold and everybody else, though, *mag^wjō- had a nominative singular *mag^wi, which, according to the view taken here, would develop to *mawī, from which the *w would be generalized. A word where the sequences *-g^wi- and *-g^wj- would shift is in any case rather useless for proving the regular development of *g^w, since proponents of either theory can claim generalization from their preferred endings.

3.6 An interesting point is that *wlg^wjō- and *mag^wjō- shared declension in Germanic, i.e. they both had a nominative singular in *-g^wi and oblique cases in *-g^wjō-. It seems arbitrary, then, that *wlg^wjō- would generalize *g from *-g^wjō-, and *mag^wjō- the *w from *-g^wi. Although there is disagreement about the actual process, scholars who believe there is a phonological reason for the *b in the West Germanic form *wulbjō- generally believe that the locus for it was the nominative singular *wlg^wi (cf. Bammesberger 1990:102, Schaffner 2003). If this is correct, there would not be any forms in the paradigm with *w that could be generalized.

3.7 Primarily based on *sagja- 'follower' and the lack of good examples for *g^w > *g before *i, the evidence so far speaks strongly in favor of a development of *g^w to *g before *j, and to *w before *i. This stands at odds, however, with the apparent development of *ag^wjō- to *awjō- 'island'. As acknowledged by Ringe, "it follows that we must reevaluate 'island'" (2006:111).

4. Germanic *awjō- 'island' and its nominative form

4.1 It is uncontested that *awjō- is derived from *ah^wō- 'water, stream', and that it belongs with the jō-stems, so the general reconstruction is certain. Ringe tries to explain it analogically, by suggesting that a regular form *agjō- was replaced by *awjō- in order to maintain the link with *ah^wō-, since an alternation *h^w-w was known from other cases, such

as **seh^wan-* 'to see' vs. **sewana-* 'seen'. The problem is, of course, that an alternation **h^w-g* is regular and attested in other cases, as in pret.pl. **sēgun-* 'they saw' and **līh^wan-* 'to hire, loan' vs. **laigōn-* 'hire, rent'.

4.2 Another approach has been to reconstruct a nominative singular **ag^wī* of the same kind as seen in **w^lg^wī* and **mag^wī*, from where the **w* would be regularly developed and could be generalized (cf. Cubbin 1979:232, Bammesberger 1990:113). This, however, is a mere construct, as there is nothing attested in the Germanic languages that allows any other reconstruction for the nominative singular than **awjō*. This is also acknowledged by Bammesberger, who therefore posits a replacement of an original nom.sg. form **awī* with **awjō* already in Proto-Germanic. The justification for this replacement brings with it so many unfounded assumptions that it cannot be maintained. It will be necessary at this point to go through Bammesberger's approach and why it does not work in some detail.

4.2.1 What crucially needs to be explained is that if **awī* was replaced by **awjō*, then why were **bewī* 'maid' and **mawī* 'girl' not replaced by **bewjō* and **mawjō*? Bammesberger's explanation goes as follows:

4.2.2 First, he claims (as is the general view) that the nominative **-ī* could only be used after a heavy syllable. Second, **pegwī* and **magwī* had in reality a biphonemic sequence **gw* that made the syllable heavy, whereas **ag^wī* had a light syllable with a monophonemic **g^w*. As a result, the **-ī* after a long syllable was retained, whereas **-ī* after a short syllable was exchanged with **-jō*.

4.2.3 This line of reasoning brings with it several assumptions that can be shown to be circular in nature.

- 1) Bammesberger's theory requires there to have been a difference between monophonemic **g^w* and biphonemic **gw*. This is, however, supported only by these forms themselves.
- 2) It requires **ag^wjō-* to have had an original monophonemic **g^w* < **h^w* < Indo-European **k^w*. This too is supported only by this Germanic form itself, and only if assumption 1) is correct.
- 3) The general view that **-ī* could only follow a long syllable would be true only if it can be shown that **pegwī* and **magwī* had a biphonemic **gw* that made the initial syllable heavy. The only

evidence for that would be these two nominative forms in *-ī* themselves. It was further shown in Johnsen 2005:117ff. that the idea that **-ī* could only follow a long syllable can be independently disproven.

- 4) It is a necessity for the theory that **ag^wī* became **awī* before the ending could have been replaced by **-jō*. This replacement depends on the length of the preceding syllable. But the fact that **g^w* has been taken to **w* will now have made the first syllable in **awī*, **bewī* and **mawī* all light. The only way to get **-jō* to replace **-ī* according to syllable length would be to claim that the oblique cases still retained **g^w/gw* before **j*, so that we had **awī/ag^wjō-* and **mawī/magw^wjō-*. Needless to say, this required relative chronology between **-g^wi-/*-gwi-* > **-wi-* and **-g^wj-/gwj-* > **-gj-* is only supported by these forms themselves, as long as all the other required assumptions, equally circular, are also true.

4.2.4 Although I agree with Bammesberger that **g^w* developed to **w* before **i* and to **g* before **j*, to create a form **ag^wī* only to salvage the theory brings with it so many unmotivated assumptions that it cannot be supported.

5. The historical morphology of **awjō-*

5.1 It is necessary to take a closer look at the etymology of **awjō-*. The simplex is best attested in Old Norse, Middle Low and Middle High German, and there, it means 'peninsula; floodplain; land by the water; watery land' in addition to 'island' (cf. Fritzner I:354f., Lasch/Borchling II:1213, Benecke/Müller/Zarncke II:454f.). The frequent use of this word in place-names in Germany, Scandinavia and England where it cannot refer to an island easily testifies to the meanings 'land by the water; watery land' across Germanic (cf. Gelling 1984:34ff., Sandnes/Stemshaug 1997:507f., Aasen 2003:878, Löfdahl 2006:29). There is little doubt that the meaning 'island' is a secondary specification.

5.2 *jō*-formations in both Germanic and Indo-European generally form abstracts, primarily verbal abstracts, but also nominal abstracts (cf. Wackernagel/Debrunner II,2:831ff., 840, Schwyzer 1939:468f., Krahe/Meid 1969 III:§74, Risch 1974:116, Leumann 1977:291f., Casaretto 2004:146ff.). It is clear that **awjō* 'land of the water' is no abstract in

either of these senses, but rather a genitival formation to **ah^wō* ‘water, stream’ (Krahe/Meid 1969:§74.4, Kluge/Seebold 2002:69). Genitival formations in **-jō* are a rarity in Germanic, and the only sure example is **awjō* (a less certain example is **fetjō*, cf. Kluge/Seebold 2002:296). Genitival formations in **-ja-*, on the other hand, are well attested, e.g. **herdija-* ‘shepherd’ to **herdō-* ‘herd’ and **jewlija-* ‘yule-month’ to **jewla-* ‘yule’ (cf. Casaretto 2004:112ff. with references), and there is no controversy about the fact that these are substantivized adjectives (cf. Krahe/Meid 1969 III:§74.4, Torp 1974:9f.). The conclusion to draw from this is that **awjō-* too is a substantivized adjective, but in the feminine form **awjō* instead of **awja-* ‘of the water’, just like Germanic **mldō* ‘mold’ has been substantivized in the feminine form of **mlda-* ‘ground, pulverized’. This was recognized by Kluge 1926:§74, who also supposed that the eclipsed noun in both of these cases was the Germanic word for ‘earth’, the feminine **erþō* (for ellipsis of this kind, cf. Paul 1975:§222). The next question is therefore what the morphological origin of the genitival **awjō-* to **ahwō* ‘water, stream’ is.

5.3 For reasons having nothing to do with Germanic, a disyllabic genitival suffix **-io-* is reconstructed for Indo-European. Opinions differ as to its ultimate origin (**-ih₂-o-* Rubio Oricella 1995, **-i-o-* Balles 1997), but it remains distinct from the monosyllabic suffix **-jo-*. A regular genitival derivative to an Indo-European form **ák^w-ā* ‘water, stream’ would then be **ak^w-iō-* ‘of the water’. In its feminine form, in a phrase like **értā ak^wiá* ‘land of the water’, it would regularly develop into an early Germanic form **ag^wiō*. This proposed development is completely independent from how this Germanic form behaves morphologically and phonologically. Each step of the process can be independently motivated.

5.4 A form **ag^wiō* would, if undisturbed, develop to **aǵ^wjō* by Sievers’ law. It was independently shown with **wǵ^wjō-* above, though, that the split of **g^w* to either **g* or **w* precedes the workings of Sievers’ law. An early Germanic form **ag^wiō* would therefore regularly develop to **awiō* with the expected development **g^w* > **w* before **i*. Only later, with the onset of Sievers’ law, would this develop to the form **awjō* that we can reconstruct by comparing the attested Germanic forms.

6. Note on **sagjan-* ‘say’

Unlike Seebold 1967, Darms 1978:451 and Cubbin 1979:235, I do not find the forms of the verb **sagjan-* ‘say’ to be revealing when it comes to the regular development of **g^w*. The Indo-European root is surely **sek^w-* ‘say’, but the verb belongs to the least well understood verb class of Germanic, the *ē*-verb, and it is further one of four *ē*-verbs that do not conjugate like the main bulk of *ē*-verbs (Jasanoff 2003). Its original conjugation is therefore riddled with uncertainties, and we have a great amount of possibilities and speculations about which segments followed the **g^w* in different forms of the paradigm (Jasanoff 2003). Until its morphological history is fully clear it cannot be used for the discussion of the development of **g^w*, since the origin of the generalization of the **g* depends on the theory of the *ē*-verb.

7. Conclusion

The regular development of **g^w* to **g* before **j* is virtually guaranteed by **sag^wja-* > **sagja-* ‘follower’, since a *ja*-stem invariably had **j* following the root **sag^w-*. The other forms, **ag^wi-* ‘snake’ and **mag^wjō-* ‘girl’ belonged to paradigms where neither **i* nor **j* invariably would follow the root. Within either theory, both words would exhibit both **w* and **g*, if they developed regularly. Generalization has thus taken place, and it is not possible to tell by the forms themselves what the regular development of **g^w* is.

The development **sag^wja-* > **sagja-* stands at odds with **awjō-* ‘land of the water’, as this seems to come from **ag^wjō-* with an invariable **j* following the root. It has been shown in this paper that its oldest form was not **ag^wjō*, but **ag^wiō*, with **i* always following the **g^w*. By the view taken here, **g^w* would regularly develop to **w* before **i*.

All taken together, there are in fact no good counter-examples to a proposed development **g^w* > **g* before **j*, and **g^w* > **w* before **i*. On the other side, there are no good examples of Seebold’s preferred development of **g^w* > **g* before **i*.

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