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# The Development of Voiced Labiovelars in Germanic

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## 1. Introduction

The Indo-European proto-language had as a part of its segmental inventory a stop series of “labiovelars”:

$*k^w$        $*g^w$        $*g^{wh}$

In the Germanic branch, the labiovelars underwent a shift of articulation known as Grimm’s law:

	$*k^w$	$*g^w$	$*g^{wh}$
	↓	↓	↓
Grimm’s law	$*h^w$	$*k^w$	$*g^w$

The product  $*h^w$  of Grimm’s law would undergo voicing to  $*g^w$ , unless it were initial or immediately preceded by the lexical accent. This voicing rule is known as Verner’s law:

	$*k^w$	$*g^w$	$*g^{wh}$
	↓	↓	↓
Grimm’s law	$*h^w$	$*k^w$	$*g^w$
	↓		
Verner’s law	$*g^w$		

The Proto-Germanic segment  $*g^w$  has thus developed from Proto-Indo-European  $*g^{wh}$  and  $*k^w$ . The further fate of this  $*g^w$  “presents one of the thorniest problems” (Markey 1980:289) in early Germanic phonology. The subsequent development of the other Germanic labiovelars,  $*h^w$  and  $*k^w$ , is relatively straightforward, and the details can be found in the handbooks. The remainder of this paper will focus on the development of early Proto-Germanic  $*g^w$ .

## 2. There is only one Proto-Germanic $*g^w$

As already mentioned in section 1, Proto-Germanic  $*g^w$  has a dual origin due to Verner’s law. It can either stem from Proto-Indo-European  $*g^{wh}$  or  $*k^w$ . This dual origin has no bearing on its further development (Seebold 1967:132, Johnsen

2005:116, Ringe 2006:105). The outcome  $*g^w$  of Verner's law thus merged with the outcome  $*g^w$  of Grimm's law.

Proto-Indo-European also had series of velars,  $*k$   $*g$   $*g^h$ , that could be followed by a labiovelar glide  $*w$ .<sup>1</sup> The sequence of a velar stop and a labiovelar glide was distinct from a labiovelar stop:  $*k_w \neq *k^w$ . As a result, Proto-Germanic  $*g^w$  can stem from either plain labiovelars  $*g^{wh}/k^w$ , or from sequences of velars and a labiovelar glide  $*g^h_w/k_w$ . Again, this plays no role in the further development of Proto-Germanic  $*g^w$  (Streitberg 1896:123, Hirt 1931:107, Beck 1976:19, Markey 1980:288, Schaffner 1996:157f., Ringe 2006:90f.). To sum up this section, there is no cogent reason to believe that there was more than one single voiced labiovelar  $*g^w$  in Proto-Germanic. The following sections will take this assumption as a given.

### 3. The development of $*g^w$

The most thorough treatment of the development of  $*g^w$  in Proto-Germanic is Seebold 1967. The majority of the conclusions in Seebold 1967 have been accepted since, but two aspects of this question remain controversial. One is the treatment of  $*g^w$  in initial position (Seebold 1980). The other is the treatment before  $*i$  and  $*j$  when there is no front vowel preceding the  $*g^w$ . The focus of this paper will be on the latter issue.

### 4. The proposed sound laws in a nutshell

Seebold (1967:127, 131) proposes that  $*g^w$  developed to  $*g$  before  $*i$  and to  $*w$  before  $*j$ :

$$\begin{array}{l} *g^w > *g \quad / \_ \_ *i \\ *g^w > *w \quad / \_ \_ *j \end{array}$$

My proposal is that the exact opposite holds:

$$\begin{array}{l} *g^w > *w \quad / \_ \_ *i \\ *g^w > *g \quad / \_ \_ *j \end{array}$$

---

1 In the position before  $*w$ , the Proto-Indo-European velar was in all clear cases a palatalized velar  $*k̑$ . It is uncertain whether Proto-Indo-European allowed a non-palatalized velar  $*k$  before  $*w$  at all (Szemerényi 1996:67, Maggi 2002:67f.). Since Germanic makes no distinction between original palatalized and non-palatalized velars anyway (Krahe & Meid 1969:81f.), these details are irrelevant for my purposes. I will simply refer to these segments as "velars," regardless of whether they were palatalized or not in Proto-Indo-European.

My suggestion is a return to the similar views expressed in Streitberg 1896:122f., 125, 146.

### 5. \*g<sup>w</sup> and Sievers' Law

The conditioning environment for the sound laws discussed above in §4 is Proto-Germanic \*i and \*j. These two very segments are also the focus of another important sound law in Germanic, so it will be necessary to discuss this matter before I present the evidence in favor of the sound laws I propose in §4. In Proto-Germanic, \*i and \*j were distributional variants in postconsonantal position, with \*i following a heavy syllable and \*j following a light syllable. This distribution is traditionally called "Sievers' law" (Rasmussen 1983:211; Syrett 1998:77, 91).

Early Proto-Germanic possessed a noun \*wulg<sup>w</sup>jō- 'she-wolf' (Bammesberger 1990:102, Johnsen 2005:122f.). The stem consists of a heavy syllable, so according to Sievers' law, this should yield \*wulg<sup>w</sup>iō-. The sound laws I proposed in §4 above dictate that \*g<sup>w</sup> become \*w before \*i and \*g before \*j. I have yet to provide the evidence that this is the case, but let us assume for the moment that this is correct. Now, the late Proto-Germanic form for 'she-wolf' is \*wulgiō-, as seen in Old Norse nom.pl. *ylgjar*. It is clear that \*wulgiō- cannot have come from \*wulg<sup>w</sup>iō- if my sound laws are correct, since \*g<sup>w</sup> here should have developed to \*w. Still assuming that my sound laws are correct, Sievers' law cannot have changed the early Proto-Germanic form \*wulg<sup>w</sup>jō- to \*wulg<sup>w</sup>iō-. The early form \*wulg<sup>w</sup>jō- seems to have developed straight to \*wulgjō- in accordance with my sound laws. Only then did it change to \*wulgiō- by Sievers' law. As a result, my sound laws suggest that the development of \*g<sup>w</sup> is older than Sievers' law. This is, in fact, a conclusion that is in line with what we know of Sievers' law already.

There are several good reasons to conclude that Sievers' law was not a property of early Proto-Germanic, independent of what happened to Germanic \*g<sup>w</sup>. For one, some early sound laws of Germanic predate the workings of Sievers' law, such as the loss of \*d in the environment \*n \_\_ j (Streitberg 1896:145, Brugmann 1897:707f., Kluge 1913:73). In addition, early Finnish borrowings from Germanic also indicate that Sievers' law was not yet operative in early Proto-Germanic (Ritter 1979:297; Koivulehto 1986:257, 284ff.). In conclusion, it is reasonable to assume that Sievers' law is a late Proto-Germanic innovation (Rasmussen 1983:214, Syrett 1998:93).

The relative chronology of the development of \*g<sup>w</sup> and Sievers' law will become relevant later, so let us simply keep in mind for the moment that Sievers' law is a relatively late innovation, with no bearing on the development of \*g<sup>w</sup>.

## 6. Lizards

Seebold's conclusion that Proto-Germanic  $*g^w$  developed to  $*g$  before  $*i$  is in reality based on a single example, Old High German *egithehsa* 'lizard', which is originally compounded from the Proto-Indo-European  $i$ -stem  $*og^{wh}i$ - 'snake' and Proto-Germanic  $*pehsōn$ - 'hatchet; distaff' (Seebold 1967:125; Lloyd, Lühr, and Springer 1998:564ff., 959ff.).

*Egithehsa* comes, however, in another variant in Old High German: *ewithehsa*. Seebold analyzes *ewi*- as coming from an "irregular extension of the  $i$ -stem to a  $ja$ -stem," such that *ewi*- comes from Proto-Germanic  $*ag^wja$ - with  $*g^w > *w / \_ *j$ . This suggestion is coherent with his own postulated sound laws, but it is required only if his own sound laws are correct in the first place—and the sound law for  $*g^w$  before  $*i$  is based on this word itself. In effect, the reasoning is circular. Given a different set of sound laws, such as the ones I postulate in §4, it is equally coherent and logical to suggest the opposite of Seebold, namely that it is the variant *egi*- that is based on the 'irregular extension' to  $*ag^wja$ -. Which of these two options is the correct one can therefore not be determined from this word alone, but only from the evidence of what happens with  $*g^w$  before  $*i$  and  $*j$  elsewhere. As already pointed out, *egithehsa* is the sole evidence provided by Seebold for  $*g^w > *g / \_ *i$ .

Seebold finds supporting evidence for the extension  $*ag^wja$ -  $>$   $*awja$ -  $>$  *ewi*- rather than  $*ag^wja$ -  $>$   $*agja$ -  $>$  *egi*- from the West-Germanic consonant gemination before  $*j$  (1967:121). If  $*ag^wja$ - developed to  $*agja$ -, then  $*g$  should geminate and give Old High German  $**eggi$ -, a form that is never found. Hence the development  $*ag^wja$ -  $>$   $*awja$ - must be the correct one.

Seebold's argumentation is correct given two crucial implicit assumptions. First, the consonant gemination occurred before the syncope of  $*a$ :  $*agja$ -  $>$   $*aggja$ -  $>$   $*aggi$ -. Second,  $*g$  geminated before  $*j$  into Old High German, but  $*w$  did not:  $*awja$ -  $>$   $**awwja$ -  $>$   $**awwi$ -. The evidence from Old High German suggests that both of these assumptions are wrong (Dal 1934:246; Krogh 1996:289f.; Braune 2004a:99, 111, 192).

The easier assumption for the variants *egi*- and *ewi*- starts with the null hypothesis that *egithehsa* is compounded from a Proto-Germanic  $i$ -stem  $*ag^wi$ - 'snake' as its first element and  $*pehsōn$ - 'hatchet' as its second. As a Proto-Germanic  $i$ -stem, the stem suffix would in some cases begin with  $*i$ , and in other cases with  $*j$  (Bammesberger 1990:125ff.). The Old High German variants *egi*- and *ewi*- do therefore originate from the variance between  $*ag^wi$ - and  $*ag^wj$ - within its own paradigm (Cubbin 1979:229ff.), obliterating the need for postulat-

ing “irregular extensions.” Which Old High German variant, *egi-* or *ewi-*, comes from which original paradigmatic variant, *\*ag<sup>w</sup>i-* or *\*ag<sup>w</sup>j-*, is a whole other question, which I will turn to next.

## 7. Methodology

Regardless of whether the Old High German variance between *egi-* and *ewi-* is the result of an “irregular extension” or of a regular intraparadigmatic alternation, it remains the case in both scenarios that the variants *\*ag<sup>w</sup>i-* and *\*ag<sup>w</sup>j-* have been generalized beyond their original distribution. An immediate methodological problem at hand now is that we have no predictive theory of which variant within a paradigm will be generalized in a reconstructed and unattested language. The same problem naturally applies to the scenario of “irregular extensions.”

The logical consequence of these facts is that it is futile to look for the regular development of *\*g<sup>w</sup>* in words where we know there was an alternation between *\*-g<sup>w</sup>i-* and *\*-g<sup>w</sup>j-* in the proto-language. To illustrate with a concrete example, let us take *\*mag<sup>w</sup>jō-* ‘girl’, a word that is always brought up in treatments of Proto-Germanic *\*g<sup>w</sup>*. We know that this word had a nom.sg. *\*mag<sup>w</sup>ī* and a gen.sg. *\*mag<sup>w</sup>jōz* (Bammesberger 1990:103, 115; Johnsen 2005:37ff., 113). The attested forms in the Germanic languages point only to a Proto-Germanic stem *\*mawjō-* (Noreen 1923:264; Braune 2004b:95; Johnsen 2005:59, 66). Someone like Seebold would then say that the *\*w* has been generalized from forms such as the gen.sg. *\*mag<sup>w</sup>jōz* (1967:131), whereas someone like me would say that the *\*w* has been generalized from forms such as the nom.sg. *\*mag<sup>w</sup>ī*. Needless to say, these debates are a dead-end. Anyone is free to “pick” the form of the Proto-Germanic paradigm where the actually attested word form would be generalized from, and no one is able to prove them wrong.

In order to avoid these unfruitful investigations, it is necessary to disregard any Proto-Germanic word where we know there was an alternation between *\*-g<sup>w</sup>i-* and *\*-g<sup>w</sup>j-* in the paradigm. Limiting the discussion to words with sure etymologies, this leaves us with only two words: *\*sag<sup>w</sup>ja-* ‘man’ and *\*ag<sup>w</sup>jō-* ‘island’. The following sections will therefore treat these two words in some detail.

## 8. *\*sag<sup>w</sup>ja-* ‘man’

Proto-Germanic *\*sag<sup>w</sup>ja-* ‘man’ developed from a Proto-Indo-European form *\*sok<sup>w</sup>ǵós* ‘companion’. This Proto-Indo-European form regularly gave Latin *socius* ‘companion’ (de Vaan 2008:569f.) and formed the basis for Greek ἄσσοῦ ‘help’ (Peters 1980:81). As a thematic noun, the suffix in Proto-Indo-European would alternate between *\*-ǵo-* and *\*-ǵe-*, but it would never appear in the zero



grade as *\*-i-* (Meier-Brügger 2002:200). The early Proto-Germanic paradigm would therefore alternate between *\*sag<sup>w</sup>ja-* and *\*sag<sup>w</sup>je-*, but it would not include a form *\*sag<sup>w</sup>i-* (Bammesberger 1990:39). Proto-Germanic had *\*-g<sup>w</sup>j-* in all forms, so this word serves as the perfect test case for the regular development of *\*g<sup>w</sup>* before *\*j*. In short, the attested forms in the Germanic languages all point unambiguously to a Proto-Germanic *\*sagja-* (Schaffner 2001:170). As a result, this word proves that *\*g<sup>w</sup>* became *\*g* before *\*j*.<sup>2</sup>

For the proponents of Seebold's theory of *\*g<sup>w</sup>*, the standard reconstruction *\*sag<sup>w</sup>ja-* is necessarily questioned. Seebold himself suggests that *\*sag<sup>w</sup>ja-* could have had "vocalic endings," given the "unclear" and "complicated" suffix, without going into further details (1967:128, 131).

Rasmussen (1983:212f.) reconstructs a trisyllabic Proto-Indo-European form *\*sok<sup>w</sup>h<sub>2</sub>iós*, which he suggests may have given a trisyllabic *\*sag<sup>w</sup>ia-* in Germanic. Rasmussen makes the presence of the laryngeal *\*h<sub>2</sub>* responsible for the trisyllabic realization *\*sok<sup>w</sup>h<sub>2</sub>iós*, by resorting to the Proto-Indo-European version of Sievers' law. In plain words, *\*sok<sup>w</sup>h<sub>2</sub>iós* would change to *\*sok<sup>w</sup>h<sub>2</sub>iós* because *\*i* follows a heavy syllable *\*sok<sup>w</sup>h<sub>2</sub>-*. This reconstruction is problematic in many respects. First, there is no evidence that there ever existed such a trisyllabic form in Proto-Indo-European. Second, the consonant cluster *\*k<sup>w</sup>h<sub>2</sub>* would not trigger Sievers' law in Proto-Indo-European (Schindler 1977:60). Third, no language that continues this proto-form shows any trace of the laryngeal *\*h<sub>2</sub>* (Peters 1980:81, de Vaan 2008:569). Finally, even if this word originally had a laryngeal, it would have been lost already in early Proto-Indo-European by the well established Pinault's law, which deletes laryngeals in this position (Peters 1980:81, Pinault 1982:271).

In conclusion, the evidence requires the Proto-Indo-European form to be reconstructed as *\*sok<sup>w</sup>iós*. Its regular continuation *\*sag<sup>w</sup>ja-* in early Proto-Germanic developed to *\*sagja-* and consequently proves that *\*g<sup>w</sup>* developed to *\*g* before *\*j*.

### 9. *\*ag<sup>w</sup>jō-* 'island'

A Germanic word for 'island', commonly reconstructed as *\*ag<sup>w</sup>jō-* (e.g., Lloyd & Springer 1988:101) serves as the second testing ground for the sound laws postu-

2 Klingenschmitt (1992:133) proposes that the delabialization before *\*j* took place already before Grimm's Law, i.e., *\*sok<sup>w</sup>iós* > *\*sokiós* > *\*sagja-*. I am unaware of any Germanic data that can differentiate between his proposal and the traditional assumption that both the delabialization (*\*g<sup>w</sup>* > *\*g*) and the "deobstruentization" (*\*g<sup>w</sup>* > *\*w*) took place after Verner's law. Since the exact chronology of the delabialization has no bearing on the main proposals in this paper, I follow the traditional approach.

lated in §4. It is derived from Proto-Germanic *\*ah<sup>w</sup>ō-* ‘water, stream’ (loc. cit.), so we know that the early proto-form of this Germanic word for ‘island’ had a labiovelar *\*g<sup>w</sup>*, and the attested Germanic forms clearly point to an original *jō-* stem (Johnsen 2005:115).

All of these attested forms, however, unambiguously point to a Proto-Germanic form *\*awjō-* with *\*w* (loc. cit.). Following the sound laws proposed in §4 and in parallel with *\*sag<sup>w</sup>ja-*, we would expect *\*agjō-*. It is evident that *\*sag<sup>w</sup>ja-* > *\*sagja-* and *\*ag<sup>w</sup>jō-* > *\*awjō-* cannot both be regular, so for one of them the reconstructed Proto-Germanic form must be different. It was shown in the previous section that changing the proto-form of *\*sag<sup>w</sup>ja-* seems futile. In the following, I will discuss two proposed modifications to the phonological history of *\*awjō-* before I present my own proposal to why *\*awjō-* has an “unexpected” *\*w*.

#### 10. *\*agjō-* ⇒ *\*awjō-* by analogy

Ringe suggests that the regularly developed *\*agjō-* was replaced by *\*awjō-* in order to better retain its relationship with *\*ah<sup>w</sup>ō-* ‘water, stream’. This follows from the fact that *\*w* and *\*h<sup>w</sup>* alternated between forms elsewhere, such as *\*seh<sup>w</sup>an-* ‘to see’ vs. *\*sewana-* ‘seen’ (2006:111).

An alternation between *\*g* and *\*h<sup>w</sup>* is, however, well established and does not seem to be any less common than that of *\*w* and *\*h<sup>w</sup>*. An example can be found in the same paradigm as noted above: *\*seh<sup>w</sup>an* ‘to see’ vs. *\*sēgun* ‘they saw’ (Noreen 1904:269, Brunner 1965:192, Brøndum-Nielsen 1971:153f.). For more examples, cf. Seebold 1967:123f.; Eichner 1985:139ff.; Lühr 2000:257; Schaffner 2001:191, 220. As a result, an analogical change of *\*agjō-* to *\*awjō-* for phonological reasons lacks a good motivation.

#### 11. *\*awī* ⇒ *\*awjō* by analogy

The Proto-Germanic *(i)jō-* stem had a nom.sg. in *\*-ī* or *\*(i)jō*. It is commonly assumed that words with a heavy stem syllable had *\*-ī*, whereas the words with a light stem syllable had *\*-jō* (Prokosch 1939:244, Bammesberger 1990:100). Bammesberger (1990:113) follows a long tradition in reasoning that Proto-Germanic *\*mawī* ‘girl’ and *\*bewī* ‘maid’ must go back to early Proto-Germanic forms *\*magwī* and *\*begwī* with a heavy first syllable, caused by a sequence *\*-gw-* rather than a labiovelar *\*-g<sup>w</sup>-* (Hirt 1932:62, Prokosch 1939:245). This follows from the assumption that if the first syllable were light, the nom.sg. ending could not have been *\*-ī*.

Bammesberger reconstructs a Proto-Germanic stem *\*ag<sup>w</sup>jō-* with a labiovelar *\*g<sup>w</sup>*, i.e., with a light first syllable, and with a nom.sg. in *\*-ī*, *\*ag<sup>w</sup>ī*. In this position, *\*g<sup>w</sup>* regularly develops to *\*w*, which is then generalized throughout the paradigm, giving a nom.sg. *\*awī* and a gen.sg. *\*awjōz*. The final step of the process is when the nom.sg. *\*awī* is replaced by *\*awjō*, which is the only nom.sg. form that can be reconstructed on the basis of the attested forms in the Germanic languages (cf. Johnsen 2005:115).

Bammesberger's account rests on a few problematic assumptions. The first is that Proto-Germanic distinguished between *\*g<sup>w</sup>* and *\*g<sup>w</sup>*. I have already concluded in §2 above that Proto-Germanic did not. The second assumption regards the Proto-Indo-European reconstruction of the root element in German *\*ah<sup>w</sup>-ō-* 'water, stream' and *\*aw-jō-* 'island'. Bammesberger reconstructs it with a Proto-Indo-European labiovelar *\*k<sup>w</sup>*, *\*ak<sup>w</sup>-*, which is the reason why it shows up as *\*g<sup>w</sup>* in a light syllable in Germanic. The only occurrence of this root outside of Germanic is in Latin *aqua* 'water' (Lloyd & Springer 1988:102). Since Latin does not distinguish between Proto-Indo-European *\*k<sup>w</sup>* and *\*k<sup>w</sup>* either (Leumann 1977:148ff.), there is no independent evidence that the Proto-Indo-European root was *\*ak<sup>w</sup>-* rather than *\*ak<sup>w</sup>-*. These two assumptions are important because Bammesberger makes crucial use of the weight of the syllable of this root, as will be shown in the following.

Bammesberger's third assumption, which is more or less explicit (1990:113), is that the Proto-Germanic nom.sg. *\*ag<sup>w</sup>ī* is eventually replaced by *\*awjō* because it has a light syllable, whereas the nom.sg. *\*magwī* 'girl' and *\*pegwī* 'maid' are not replaced, because they have a heavy first syllable (1990:113n185). A logical consequence of Bammesberger's proposal, though, is that the Germanic reshuffling of the *(i)jō-* stem according to syllable weight postdates the development of *\*g<sup>w</sup>*. This follows since he needs *\*ag<sup>w</sup>ī* to develop to *\*awī* before it is replaced by *\*awjō*. A corollary, though, is that the nom.sg. *\*magwī* and *\*pegwī* will also have developed to *\*mawī* and *\*bewī*. At this stage, all three words in question have a light syllable: *\*awī*, *\*mawī*, and *\*bewī*. What the original syllable weight was in early Proto-Germanic is now irrelevant, as this information is no longer available to the speakers. As a result, Bammesberger's account loses the only motivation it provided for why only *\*awī* would change its nom.sg. form.

In effect, Bammesberger's account is circular in nature, since each of the three assumptions rests on the premise that the other two assumptions are correct. No independent evidence exists for any one of them alone. In the next section, I will show that a proper understanding of the derivational history of *\*awjō-* will give a clear answer to why *\*g<sup>w</sup>* developed to *\*w* in this word. My account does

not require any analogies or generalizations, or any assumptions that cannot be independently motivated.

## 12. The origin of *\*awjō-*

In the older Germanic languages, *\*awjō-* is best attested in Old Norse, Middle Low German, and Middle High German. In addition to the meaning 'island', the attestations also carry the meanings 'peninsula; floodplain; land by the water; watery land' (Fritzner 1886:354f.; Lasch, Borchling, and Cordes 2004:1213; Benecke, Müller, and Zarncke 1863:454f.). The many place names in *\*-awjō-* without any reference to an island in England, Scandinavia, and on the continent testify to an early and widespread use of the meaning 'watery land; land by the water' in Germanic (Förstemann & Jellinghaus 1913:294ff., von Polenz 1961:95f., Gelling 1984:34ff., Sandnes & Stemshaug 1997:507f., Aasen 2003:878, Löfdahl 2006:29). The meaning 'island' is clearly a secondary and more specified use of the original meaning 'land with/by water'. *\*Awjō-* is therefore a genitival derivative of *\*ah<sup>w</sup>ō-* 'water, stream' (Krahe & Meid 1967:72, Kluge 2002:69). Its literal derivative meaning is 'pertaining to water'.

On the other hand, the *jō-* suffix as such is not used to form genitival formations but rather abstracts. This situation holds for both Germanic and for the corresponding suffix in the other Indo-European branches (Wackernagel & Debrunner 1954:831ff., 840; Schwyzer 1939:468f.; Krahe & Meid 1967:71f.; Risch 1974:116; Leumann 1977:291f.; Casaretto 2004:146ff.). The meaning of *\*awjō-*, however, is clearly not an abstract 'wateriness', but a regular genitival 'pertaining to water'. As a result, it is unlikely that *\*awjō-* is originally formed with the *jō-* suffix.

Genitival formations are well attested with the similar suffix *\*-ja-* on the other hand, as in *\*herdija-* 'shepherd' to *\*herdō-* 'herd' and *\*ferh<sup>w</sup>ija-* 'people' to *\*ferh<sup>w</sup>a-* 'life' (Casaretto 2004:112ff.). These nouns in *\*-ja-* are originally adjectives that have been substantivized (Krahe & Meid 1967:72, Torp 1909 [1974]:9f.) by ellipsis of the noun, e.g., *\*guman- herdija-* 'man of the herd' > *\*herdija-* 'man of the herd' > 'shepherd' (Paul 1920:322).

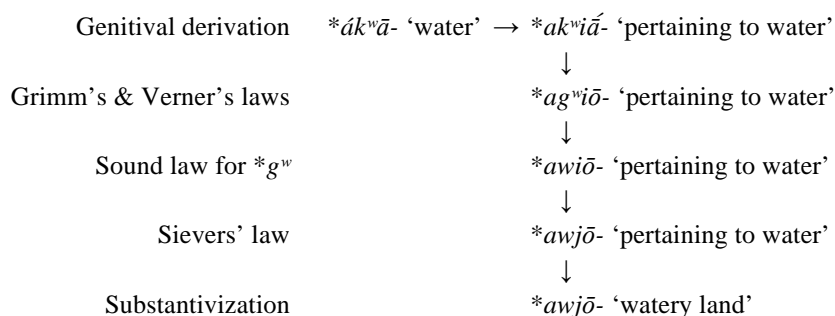
In Proto-Germanic, an adjective in *\*-ja-* would in the feminine gender have the suffix *\*-jō-*. Genitival *\*awjō-* 'land with water' is therefore the substantivization of the adjective *\*awja-* 'pertaining to water' in its feminine form *\*awjō-*. This has an exact parallel in *\*muldō-* 'mold', which is a substantivization of the adjective *\*mulda-* 'pulverized, ground' in its feminine form *\*muldō-* (Kluge 1926:39). The feminine form of the adjective has been substantivized in both of

these cases because the eclipsed noun was a feminine *\*erþō-* ‘earth’, i.e., *\*erþō-muldō-* ‘pulverized earth’ > *\*muldō-* ‘pulverized earth’ > ‘mold’ (loc. cit.).

Having shown that Proto-Germanic *\*awjō-* is the substantivization of the genitival adjective *\*awja-* ‘pertaining to water’, the next step is to clarify the origin of *\*awja-*. Proto-Indo-European possessed a disyllabic suffix *\*-io-*, whose primary function was to derive genitival formations (Rubio Orecilla 1995, Balles 1997:161). This suffix is distinct from the Proto-Indo-European monosyllabic suffix *\*-iō-*. A regular genitival derivative of Proto-Indo-European *\*ák<sup>w</sup>ā-* ‘water’ would thus be *\*ak<sup>w</sup>ió-* ‘pertaining to water’ or in its feminine form *\*ak<sup>w</sup>iǎ-* (Lühr 2000:44).

Through the workings of Grimm’s and Verner’s law (see §1), the adjective *\*ak<sup>w</sup>ió-/ak<sup>w</sup>iǎ-* would develop to an early Proto-Germanic *\*ag<sup>w</sup>ia-/ag<sup>w</sup>iō-*. As shown in §5, Sievers’ law in Germanic is a late innovation, so the syllabic *\*i* in this adjective would remain unaltered in early Proto-Germanic. According to the sound laws proposed in §4, this adjective will develop to *\*awia-/awiō-* with *\*g<sup>w</sup> > \*w / \_\_ \*i*. With the onset of Sievers’ law, the adjective (if it still existed as an adjective) would change to *\*awja-/awjō-* with the regular Sievers distribution of *\*i* and *\*j*. How the adjective *\*awjō-* ‘pertaining to water’ relates to the noun *\*awjō-* ‘watery land’ was explained above. The end result of this process, *\*awjō-*, is exactly the form that the attestations in the Germanic languages can be traced back to (see §9).

Under this scenario, every step of the way in the derivational and phonological history of *\*awjō-* is entirely regular, without any need to invoke unprovable analogies and generalizations. The history of *\*awjō-* can be summarized with the following illustration:



The substantivization to ‘watery land’ could have occurred at any point in the history of *\*awjō-*. Its final placement in the illustration above is arbitrary, and its exact chronology is of no importance to the sketched scenario.

### 13. Making evidence out of counterevidence

Initially, *\*awjō-* seemed to be counterevidence to the proposed sound law *\*g<sup>w</sup> > \*g / \_\_ \*j*, a sound law that was motivated on the basis of *\*sag<sup>w</sup>ja- > \*sagja-* ‘man’. Its force as counterevidence, however, was based solely on the early Proto-Germanic reconstruction *\*ag<sup>w</sup>jō-*. As I have shown above, this form in fact never existed. The early Proto-Germanic form was a trisyllabic *\*ag<sup>w</sup>iō-*, which developed to *\*awiō-* before Sievers’ law existed.

The suffix *\*-iō-* would have no alternation in its paradigm, so the labiovelar *\*g<sup>w</sup>* would be followed by *\*i* in all forms. In fact, *\*ag<sup>w</sup>iō-* is the only word where an invariant sequence *\*g<sup>w</sup>i* occurred with no preceding front vowel. Following the methodological principle outlined in §7, *\*ag<sup>w</sup>iō-* should now serve as the evidence for what the regular development of *\*g<sup>w</sup>* before *\*i* is. Since the Proto-Germanic form clearly develops to *\*awjō-*, this word has now gone from being putative counterevidence for what happened to *\*g<sup>w</sup>* before *\*j* to being the evidence for what happened before *\*i*.

### 14. Conclusion

The regular development of the voiced labiovelar *\*g<sup>w</sup>* in Germanic has long been a matter of debate, especially in the position before *\*i* and *\*j*. The proper method in investigating this issue is to look at invariant sequences of *\*g<sup>w</sup>i* and *\*g<sup>w</sup>j*. Two words meet this requirement, Proto-Germanic *\*sagja-* ‘man’ and *\*awjō-* ‘island’.

Proto-Indo-European *\*sok<sup>w</sup>iós* ‘companion’ gave early Proto-Germanic *\*sag<sup>w</sup>ja-*. Its later outcome *\*sagja-* shows that *\*g<sup>w</sup>* developed to *\*g* before *\*j*. Proto-Indo-European *\*ak<sup>w</sup>iǎ-* ‘pertaining to water’ gave early Proto-Germanic *\*ag<sup>w</sup>iō-*. Its later outcome *\*awjō-* shows that *\*g<sup>w</sup>* developed to *\*w* before *\*i*.

A thorough investigation of Proto-Indo-European and Proto-Germanic phonology and of the etymology of *\*awjō-* gives the following results:

- *\*sagja-* goes back to a disyllabic proto-form *\*sok<sup>w</sup>iós*, not a trisyllabic *\*sokwh<sub>2</sub>iós*.
- *\*awjō-* goes back to a trisyllabic proto-form *\*ak<sup>w</sup>iǎ-*, not a disyllabic *\*ak<sup>w</sup>iǎ-*.
- Sievers’ law in Germanic is younger than the development of *\*g<sup>w</sup>*.
- No analogies, generalizations, or irregularities are needed to explain the outcome of *\*g<sup>w</sup>* in these words.

The evidence thus adds up to give the following sound laws for Proto-Germanic  $*g^w$  in the position after a non-front vowel and before  $*i$  and  $*j$ :<sup>3</sup>

$$\begin{array}{l} *g^w > *w \quad / \_ \_ *i \\ *g^w > *g \quad / \_ \_ *j \end{array}$$

### References

- Aasen, Ivar. 2003. *Norsk Ordbog med dansk Forklaring*. Oslo: Det norske samlaget.
- Balles, Irene. 1997. Reduktionserscheinungen in langen Wortformen als Ursprung morphologischer Doppelformen im Urindogermanischen: die Suffixformen  $*-jo-$  und  $*-ijo-$ . *Die Sprache* 39.141–67.
- Bammesberger, Alfred. 1990. *Die Morphologie des urgermanischen Nomens*. Heidelberg: Winter.
- . 2004. Zur Vorgeschichte von deutsch *Bach*. In Thomas Krisch, Thomas Lindner, and Ulrich Möller (eds.), *Analecta homini universali dicata I*, 17–24. Stuttgart: Heinz.
- Beck, Richard. 1976. Glides and vowels in Gothic. *Die Sprache* 22.11–24.
- Benecke, Georg Friedrich, Wilhelm Müller, and Friedrich Zarncke. 1863. *Mittelhochdeutsches wörterbuch II.1: M–R*. Leipzig: S. Hirzel.
- Braune, Wilhelm. 2004a. *Althochdeutsche Grammatik I: Laut- und Formenlehre*. Ed. by Ingo Reiffenstein. Tübingen: Niemeyer. Originally published 1886.
- . 2004b. *Gotische Grammatik mit Lesestücken und Wörterverzeichnis*. Ed. by Frank Heidermanns. Tübingen: Niemeyer. Originally published 1880.
- Brøndum-Nielsen, Johs. 1971. *Gammeldansk Grammatik i sproghistorisk Fremstilling VI: Verber I: De stærke Verber*. Copenhagen: Akademisk Forlag.
- Brugmann, Karl. 1897. *Vergleichende Laut-, Stammbildungs- und Flexionslehre der indogermanischen Sprachen I: Einleitung und Lautlehre*. Strassburg: Karl J. Trübner.
- Brunner, Karl. 1965. *Altenglische Grammatik*. Tübingen: Niemeyer.
- Casaretto, Antje. 2004. *Nominale Wortbildung der gotischen Sprache: Die Derivation der Substantive*. Heidelberg: Winter.
- Cubbin, G. P. 1979. A Case of Homonymic Clash in Germanic. *IF* 84.226–36.
- Dal, Ingerid. 1934. Zur Geschichte der *ja*-Stämme im Westgermanischen. *Norsk tidsskrift for Sprogvidenskap* 7.243–52.

3 Other Germanic forms can be added to support this conclusion, such as  $*wag^wja-$  >  $*wagja-$  ‘wedge’ (Seebold 1967:128f.),  $*ag^wi-turhta-$ ,  $*ag^wi-wissa-$  >  $*awi-turhta-$ ,  $*awi-wissa-$  ‘evident’ (Weyhe 1924:397; Feist 1939:64), and  $*bak^wja-$  >  $*bakja-$  ‘creek’ (cf. Bammesberger 2004:20). Unlike  $*sag^wja-$  and  $*ag^wiō-$ , these etymologies are not certain, so they have been left out of the discussion in this paper. The development of  $*bak^wja-$  further suggests that the delabialization before  $*j$  also included the voiceless  $*k^w$ . I know of no other evidence in Germanic bearing on that issue.

- Eichner, Heiner. 1985. Das Problem des Ansatzes eines urindogermanischen Numerus ‚Kollektiv‘ (‚Komprehensiv‘). In Bernfried Schlerath (ed.), *Grammatische Kategorien. Funktion und Geschichte*, 134–69. Wiesbaden: Reichert.
- Feist, Sigmund. 1939. *Vergleichendes Wörterbuch der gotischen Sprache*. Leiden: Brill.
- Förstemann, Ernst Wilhelm, and Hermann Jellinghaus. 1913. *Altdeutsches namenbuch II: Orts- und sonstige geographische namen. (Völker-, länder-, siedlungs-, gewässer-, gebirgs-, berg-, wald-, flurnamen u. dgl.) 1: A–K*. Bonn: P. Hanstein.
- Fritzner, Johan. 1886. *Ordbog over det gamle norske Sprog I: A–Hj*. Kristiania: Den norske Forlagsforening.
- Gelling, Margaret. 1984. *Place-Names in the Landscape*. London and Melbourne: Dent.
- Hirt, Hermann. 1931. *Handbuch des urgermanischen I: Laut- und Akzentlehre*. Heidelberg: Winter.
- . 1932. *Handbuch des urgermanischen II: Stammbildungs- und Flexionslehre*. Heidelberg: Winter.
- Johnsen, Sverre. 2005. *The Germanic (i)jō-stem declension. Origin and development*. M.A. thesis, University of Oslo.
- Klingenschmitt, Gert. 1992. Die lateinische Nominalflexion. In Oswald Panagl and Thomas Krisch (eds.), *Latein und Indogermanisch*, 89–135. Innsbruck: Institut für Sprachwissenschaft der Universität Innsbruck.
- Kluge, Friedrich. 1913. *Urgermanisch. Vorgeschichte der altgermanischen Dialekte*. Strassburg: K. J. Trübner.
- . 1926. *Nominale Stammbildungslehre der altgermanischen Dialekte*. Halle (Saale): M. Niemeyer.
- . 2002. *Etymologisches Wörterbuch der deutschen Sprache*. Ed. by Elmar Seebold. Berlin: de Gruyter. Originally published 1883.
- Koivulehto, Jorma. 1986. Die Sieverssche Regel im Lichte der germanisch-finnischen Lehnbeziehungen. In Bela Brogyanyi and Thomas Krömmelbein (eds.), *Germanic Dialects: Linguistic and Philological Investigations*, 249–94. Amsterdam and Philadelphia: John Benjamins.
- Krahe, Hans, and Wolfgang Meid. 1967. *Germanische Sprachwissenschaft III: Wortbildungslehre*. Berlin: Walter de Gruyter.
- . 1969. *Germanische Sprachwissenschaft I: Einleitung und Lautlehre*. Berlin: Walter de Gruyter.
- Krogh, Steffen. 1996. *Die Stellung des Altsächsischen im Rahmen der germanischen Sprachen*. Göttingen: Vandenhoeck & Ruprecht.
- Lasch, Agathe, Conrad Borchling, and Gerhard Cordes. 2004. *Mittelniederdeutsches Handwörterbuch II*. Ed. by Dieter Möhn. Neumünster: K. Wachholtz. Originally published 1928.
- Leumann, Manu. 1977. *Lateinische Laut- und Formenlehre*. Munich: Beck.
- Lloyd, Albert L., and Otto Springer. 1988. *Etymologisches Wörterbuch des Althochdeutschen I: -a-bezzisto*. Göttingen and Zürich: Vandenhoeck & Ruprecht.



- Lloyd, Albert L., Rosemarie Lühr, and Otto Springer. 1998. *Etymologisches Wörterbuch des Althochdeutschen II: bî–ezzo*. Göttingen and Zürich: Vandenhoeck & Ruprecht.
- Löfdahl, Maria. 2006. *Naturnamn* (Ortnamnen i Göteborgs och Bohus län 19, Ortnamnen i Tanums härad 2). Göteborg: Språk- och folkminnesinstitutet, Dialekt-, ortnamns- och folkminnesarkivet i Göteborg.
- Lühr, Rosemarie. 2000. *Die Gedichte des Skalden Egill*. Dettelbach: Röhl.
- Maggi, Fernando. 2002. *La questione delle labiovelari indoeuropee*. Rome: Armando.
- Markey, Thomas L. 1980. Delabialization in Germanic. *Folia linguistica historica* 1.285–93.
- Meier-Brügger, Michael. 2002. *Indogermanische Sprachwissenschaft*. Berlin and New York: Walter de Gruyter.
- Noreen, Adolf. 1904. *Altschwedische grammatik mit einschluss des altgutnischen* (Altnordische grammatik 2). Halle: Max Niemeyer.
- . 1923. *Altisländische und altnorwegische grammatik (laut- und flexionslehre) unter berücksichtigung des urnordischen* (Altnordische grammatik 1). Halle: M. Niemeyer.
- Paul, Hermann. 1920. *Prinzipien der Sprachgeschichte*<sup>5</sup>. Halle: M. Niemeyer.
- Peters, Martin. 1980. *Untersuchungen zur Vertretung der indogermanischen Laryngale im Griechischen*. Vienna: Verlag der Österreichischen Akademie der Wissenschaften.
- Pinault, Georges-Jean. 1982. A Neglected Phonetic Law: The Reduction of the Indo-European Laryngeals in Internal Syllables before Yod. In Anders Ahlqvist (ed.), *Papers from the 5th International Conference on Historical Linguistics*, 265–72. Amsterdam: John Benjamins.
- von Polenz, Peter. 1961. *Landschafts- und Bezirksnamen im frühmittelalterlichen Deutschland*. Marburg: N. G. Elwert.
- Prokosch, Eduard. 1939. *A Comparative Germanic Grammar*. Philadelphia: Linguistic Society of America.
- Rasmussen, Jens Elmegård. 1983. Two Phonological Issues in Germanic. *Acta linguistica Hafniensia* 18.201–19.
- Ringe, Don. 2006. *From Proto-Indo-European to Proto-Germanic*. Oxford: Oxford University Press.
- Risch, Ernst. 1974. *Wortbildung der homerischen Sprache*. Berlin and New York: Walter de Gruyter.
- Ritter, Ralf-Peter. 1979. Zur urostseefinnischen sog. langen Affrikata. In Erhard F. Schiefer (ed.), *Explanations et tractationes Fenno-Ugricae in honorem Hans Fromm*, 295–300. Munich: W. Fink.
- Rubio Orecilla, Francisco Javier. 1995. *El sufijo de derivación nominal \*-ijō-/\*-jo- en los gerundios y gerundivos del Rg-Veda y el Avesta*. Zaragoza: Institución «Fernando el Católico».

- Sandnes, Jørn, and Ola Stemshaug (eds.). 1997. *Norsk stadnamleksikon*. Oslo: Det norske samlaget.
- Schaffner, Stefan. 1996. Zu Wortbildung und Etymologie von altenglisch *nihol*, *nīowol* und lateinisch *procul*. *MSS* 56.131–71.
- . 2001. *Das Vernersche Gesetz und der innerparadigmatische grammatische Wechsel des Urgermanischen im Nominalbereich*. Innsbruck: Institut für Sprachwissenschaft der Universität Innsbruck.
- Schindler, Jochem. 1977. Notizen zum Sieversschen Gesetz. *Die Sprache* 23.56–65.
- Schwyzler, Eduard. 1939. *Griechische Grammatik I: Allgemeiner Teil, Lautlehre, Wortbildung, Flexion*. Munich: Beck.
- Seebold, Elmar. 1967. Die Vertretung idg. *g<sup>h</sup>* im Germanischen. *KZ* 81.104–33.
- . 1980. Etymologie und Lautgesetz. In Manfred Mayrhofer, Martin Peters, and Oskar E. Pfeiffer (eds.), *Lautgeschichte und Etymologie*, 431–84. Wiesbaden: Reichert.
- Streitberg, Wilhelm. 1896. *Urgermanische Grammatik*. Heidelberg: Winter.
- Syrett, Martin. 1998. On Sievers' Law, and its Converse, in North Germanic. *NOWELE* 34.75–98.
- Szemerényi, Oswald. 1996. *Introduction to Indo-European Linguistics*<sup>4</sup>. Oxford: Clarendon Press.
- Torp, Alf. 1909 [1974]. *Gamalnorsk ordavleiding*. Lund: Glerup.
- de Vaan, Michiel. 2008. *Etymological Dictionary of Latin and the Other Italic Languages*. Leiden and Boston: Brill.
- Wackernagel, Jakob, and Albert Debrunner. 1954. *Altindische Grammatik II.2: Die Nominalsuffixe*. Göttingen: Vandenhoeck & Ruprecht.
- Weyhe, Hans. 1924. Ae. *ēawis* „offenbar“. In *Streitberg Festgabe*, 395–7. Leipzig: Markert & Petters.