Guus Kroonen

The development of the Proto-Indo-European instrumental suffix in Germanic

Abstract: It has long been acknowledged that Proto-Germanic *-*dl*- developed into *-*ll*- by a process of regular assimilation. Since long stops are regularly simplified in heavy and unstressed syllables in Proto-Germanic, some formations that superficially look like *l*-stems in this language are in reality to be derived from Proto-Indo-European instrumental nouns in PIE *-*tl*- and *-*d^hl*-. In this paper, I adduce a number of new cases focusing on those *l*-stems that have instrumental semantics, but also including some abstract nouns.

Keywords: Proto-Germanic, Proto-Indo-European, instrumental nouns

As was shown by Sievers (1894), the Proto-Indo-European instrumental suffix *-*tl*- surfaces in two main forms in Proto-Germanic, -*þl*- and *-*ll*-. While *-*þl*- is the regular outcome of *-*tl*- under Grimm's Law, the Verner's variant *-*dl*- (and the same sequence when continuing the PIE allomorph *-*d^hlo*-) developed into *-*ll*- by regular assimilation.

1) OE *bill*, OS *bil* n. 'sword' < **billa*- < **b^hi(d)-tló-/-d^hlo*- (Lubotsky 1993: 158, cf. Go. *beitan* 'to bite' < **b^heid-e/o*-).[1]
2) OLFra. (Lex Salica) *gamallus* 'person belonging to a legal assembly' < **ga-malla*- < **mód-tlo*- (vs. Go. *maþl*, OE *mæðl* < **maþla*- < **mó(d)-tlo*-), cf. Go. *ga-motan* 'to find room'.
3) OHG (Notker) *grunt-sellon* 'to found' < **sellōjan*- < **se(d)-tl-eh$_2$-ie*- (vs. OHG *sedal* 'seat' < **seþla*- < **séd-tlo*-), cf. Go. *sitan* 'to sit'.
4) Go. *spill* n. 'tale' < **spella*- < **sk^{w}etló*-, cf. OIr. *scél* n. 'story', MW *chwedl* 'fable' < **sk^w-etlo*- (Kluge 1897: 384, 509, but the development of **sk^w*- > **sp*- is uncertain).
5) ON *stallr*, OE *steall*, OHG *stall* 'stable' < **stalla*- < **sth$_2$-tló-/-d^hlo*- (vs. OE *staðol*, OHG *stadal* 'barn' < **staþla*- < **sth$_2$-tlo*-), cf. Lat. *stabulum* 'stable' < **sth$_2$-d^hlo*-.

1 Probably unrelated to ON *bíldr* m. 'edged weapon', OHG *bīhal* m. 'axe' < **bīþla*- < **b^héiH-tlo*-, cf. Ru. *bílo* 'mallet' < **b^h(e)iH-d^hlo*-, OIr. *biáil*, gen. *béla* 'axe, hatchet; battle-axe' < **b^heiH-tli*- (Zair 2012: 236), Icel. *bjá* 'to fight, struggle' < **bī(j)ē/ōn*- (Kroonen 2013: 64), OCS *biti* (*bьjǫ*) 'to beat' < **b^h(e)iH*-, OIr. *benaid* 'to strike, hit' < **b^hi-neh$_2$*- (Hill 2003: 10).

Guus Kroonen: Insitute for Nordic Studies and Linguistics, Copenhagen University; guus@hum.ku.dk

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Like all other geminates, the assimilation product *-*ll*- was subject to regular shortening in overlong and unstressed syllables. Such shortening affected, for instance, the highly productive instrumental suffix *-*ila*-, which arose by the addition of *-*tlo*- or *-*d^{h}lo*- to the stem of *ie*-presents, cf. OHG *siula* f. 'needle' < **sewilō*- < **sieuH-i-tléh$_2$*-/-*d^{h}leh$_2$*- to Go. *siujan* 'to sew' < **sieuH-ie*- (Rasmussen 1999: 651-652).[2] In stressed syllables, shortening occurred in at least the following cases, the majority of which are given by Sievers (1894):[3]

1) G *Keil* m. 'wedge' < **kīla*- < **ǵeiH-tló*- (vs. OHG *kīdel* m. 'id.' < **kīþla*- < **ǵéiH-tlo*-), cf. Go. *us-keinan* 'to germinate', MHG *kīnan* 'to split; to germinate', to which may belong Hitt. *kīnuzi* 'to open (up), to break open' < **ǵiH-neu*-.
2) Du. *spijl* 'spoke' < **spīl(l)ō*- (vs. G dial. *Speidel* 'id.' < **spīþla*-).
3) ON *tól*, OE *tōl* n. 'tool' < **tōl(l)a*- < **deh$_2$u-tló*- (with Mahlow's Law), cf. Go. *taujan* w.v. 'to do' < **deh$_2$u-ie/o*- (with either Osthoff's or Dybo's Law).
4) OHG *zīla*, G *Zeile* 'row' < **tīl(l)a*- < **tīdla*- (vs. G dial. *Zeidel* 'id.' < **tīþlō*-).

As was already noticed by Detter (1898), however, the above corpus is far from exhaustive. Many words that are traditionally analyzed as *lo*-formations may actually be instrumental nouns, especially when they exhibit instrumental semantics. And even when they do not, they can still continue *tlo*-formations, since this suffix may have been used in Germanic to form both *nomina instrumenti* and *nomina abstracta*, much as in Greek and Sanskrit, cf. Skt. *dā́tra*- 'sickle' < **deh$_2$-tro*- : *dātrá*- 'gift' < **deh$_3$-tro*- (Lubotsky 1993: 82; Olsen 1988: 3). The following lexical items come into consideration:

1) OE *āl* n. 'flame' < **ail(l)a*- < **h$_2$ei(d^{h})-tló-/-d^{h}lo*-, cf. Skt. *edh*- 'to set alight, kindle', Gr. αἴθω 'to kindle' < **h$_2$eid^{h}-e/o*- (< **h$_2$ei-d^{h}h$_1$-e/o*- 'to set on fire'?).
2) ON *bál* n. 'campfire' < **bēl(l)a*- < **b^{h}eh$_1$-tló-/-d^{h}lo*-, cf. OHG *bāen* 'to heat, make warm' < **b^{h}eh$_1$*-.[4] The deeper origin of the verbal root has not yet been established. It is theoretically possible to derive Lat. *facula* f. 'torch' from a parallel formation **b^{h}h$_1$-tleh$_2$*-, but this word is usually taken to be a diminutive to *fax, -cis* f. 'id.' < **ǵ^{h}uok^{w}*-, cf. Lith. *žvãkė* f. 'candle' (IEW: 495).
3) ON *full* n. 'goblet', OE *full* n. 'cup' < **full(l)a*- < **plh$_1$-tló-/-d^{h}lo*-, cf. Gr. πλῆτρον 'steering-paddle, rudder' (< 'scoop') < **pl(e)h$_1$-tlo*- (with dissimilation of *-*tlo*-

2 Derivation from PIE *-*etlo*-, *-*ed^{h}lo*- (Kluge 1897: 471) would have resulted in PGm. **-*ela*-. Non-initial **e* is not regularly raised in Proto-Germanic, as is demonstrated by the difference in umlaut between G *er fährt* and *ihr fahrt* < PGm. **fareþi* : **fareþe* < PIE *-*eti*, *-*eth$_1$e*.

3 MHG *bīl* m. 'moment when an animal stands still and awaits the attack of a predator', allegedly from **bīl(l)a*- < **b^{h}(e)iH-tló*-, cf. Go. *beidan* 'to wait' (thus Sievers 1894), is rather derived from *bīlen* 'to bark', cf. E *at bay*, Fr. *abois*.

4 To be preferred over **bēla*- < **blēlla*- < **b^{h}lēd-lo*- (Schröder 1898: 64).

to *-*tro*-). The first element of Ru. *polo-vódьje* 'ladle', which theoretically could continue **pъl-dlo-* < **plh$_1$-tlo-/-d^{h}lo-*, may also belong here. To Skt. *par-*, Gr. πίμπλημι, Lat. *pleō* 'to fill' < **pleh$_1$-*.

4) ON *hól* n. 'praise', OE *hōl* n. 'vain speech, slander' < **hōl(l)a-* < **ḱeh$_2$z-d^{h}lo-*, to the verb Go. *hazjan* 'to praise' < **ḱh$_2$s-ie/o-*, cf. Skt. *śās-* 'to teach, instruct, punish, chasten, command, order', ToA *kāṣ-* 'to scold', Alb. *thom* 'to say' < **ḱeh$_2$s-*. Both **-dl-* and **-zl-* developed into Pre-PGm. **-ll-* (cf. MHG *krol* 'curl' < **krulla-* < **kruzla-*, to MHG *krūs* adj. 'curly' < **krūsa-*), so the same can be true for **-zdl-*. In the absence of evident instrumental semantics, the formation may have originally been a *nomen abstractum*.
5) Go. *ƕeila* f. 'rest' < **hwīl(l)ō-* < **k^w(e)ih$_1$-tléh$_2$-/-d^{h}leh$_2$-*, Lat. *quiēs*, *-ētis* f. 'sleep, rest' < **k^{w}ieh$_1$-t-*. Like the former example, no clear instrumental meaning is at hand, which may indicate that the formation started out as a *nomen abstractum*.
6) Go. *mel* n. 'season, (point in) time', OE *mǣl* n. 'measure, point in time, meal', OHG *māl* n. 'point in time, meal' < **mēl(l)a-* < **meh$_1$-tló-/-d^{h}lo-*, cf. Skt. *mā́trā-* f. 'measure, degree', Gr. μήτρα f. 'areal measure' < **meh$_1$-treh$_2$-* and – with zero grade – Gr. μέτρον n. 'measure, goal, length, size; meter' < **mh$_1$-tro-*.[5]
7) Go. *mel* n. 'sign, spot', OE *mǣl* n. 'mark', OHG *māl* n. 'spot' < **mēl(l)a-* < **meh$_1$-tló-/-d^{h}lo-*, cf. Lat. *macula* f. 'stain, spot' < **mh$_1$-tleh$_2$-*[6]. Assuming a semantic shift "measure" > "mark" > "spot", it is possible to unify the formation etymologically with **meh$_1$-tlo-* (cf. Detter 1898: 57). Given the attestation of the eventual meaning in both Latin and Germanic, this shift may have taken place as early as Proto-Indo-European.
8) ON *múli* m. 'muzzle, snout', OFri. *mūla* m. 'mouth', OHG *mūla* f. 'id.' < **mūl(l)a/ōn-* < **muh$_3$-tló-* 'tool for binding'[7], cf. Go. *faur-muljan* w.v. 'to muzzle'. To Skt. *mavate* 'to bind, tie, fix', Lith. *máuti* 'to put on', Latv. *maût* 'to pull off, bridle' < **meuh$_3$-*. Less straightforward is derivation from **mluH-tló-/-d^{h}lo-* (with dissimilation of the first *l*), cf. Skt. *brav-* 'to say, speak, talk', ToB *pləwa-* 'to complain', OCS *mlъviti* 'to make noise'.
9) OE *sāl* m. 'rope', OS *sēl* n. 'id.', OHG *seil* n. 'id.' < **sail(l)a-* 'rope' < **sh$_2$ei-tló-/-d^{h}lo-*, cf. Latv. *saiklis* m. 'string, band' < **sh$_2$ei-tlio-*, OCS *silo* 'snare, trap' < **sh$_2$i-d^{h}lo-*. Related to e.g. Hitt. *išḫai*, 3pl. *išḫi(i̯)anzi* 'to bind, to impose upon' < **sh$_2$-ói-ei*, **sh$_2$-i-énti*. The instrumental noun is also matched by Lat. *saeculum*

5 Less attractive: **mēla-* < **mēlla-* < **mēd-lo-* (Schröder 1898: 63).

6 The proto-form **smh$_1$-tleh$_2$-* (cf. de Vaan 2008: 357) cannot be maintained, as it would have resulted in Lat. ***mācula* according to the regular development PIE *CRHC* > Lat. *CRāC*, cf. *mālum* 'apple' < **smh$_2$l-* (cf. Hitt. *šamlu-* 'id.' < **smh$_2$l-*, Kroonen 2016).

7 MoGr. μούτρο n. 'face, mug', apparently < **μοῦτρον* < **meuh$_3$-tro-*, is probably unrelated.

'generation, breed, lifetime', W *hoedl* 'lifespan, age', but the semantic shift from 'thread' to 'lifetime' requires special pleading.

10) ON **síl*, Nw. *sil* n. 'sieve' < **sīl(l)a-* < **s(e)h_1i-tló-/-d^hlo-*, cf. OIr. *síthal* f. '*situla*', MW *hidl* f. 'filter, sieve' < **seh$_1$i-tleh$_2$-*. To OCS *sěti*, *sějati* (*sějǫ*) 'to sift', Lith. *sijóti* (*sijóju*) 'id.' < **sh$_1$i-eh$_2$-ie/o-*.[8]
11) ON *spóla* f. 'spool', OHG *spuolo* m., *spuola* f. 'id.' < **spōl(l)a/ōn-* < **speh$_2$-tleh$_2$-/-d^hleh$_2$-* (cf. Detter 1898: 58: **spādhlā-*), cf. the derivationally comparable Hitt. *išpātar / išpann-* n. 'spit, skewer, dagger' < **speh$_2$-tr/n-*; to Gr. σπάω 'to draw' < **sph$_2$-ie/o-*.
12) Go. *stols*, ON *stóll*, OE *stōl*, OHG *stuol* m. 'seat' < **stōl(l)a-* < **steh$_2$-tló-/-d^hlo-*, Skt. *sthātrá-* 'station, place', Lat. *ob-stāculum* 'obstacle' < **steh$_2$-tlo-*, Slov. *stálo* 'footstool, base, situation' < **steh$_2$-d^hlo-* (Detter 1898: 57). Though derivation from the verb **sed-* 'to sit' would be semantically more appropriate, the same is true for the traditional etymology, according to which the word is reconstructed as **steh$_2$-lo-*; presumably, the Germanic meaning 'seat' developed from a more primary meaning 'place'.
13) ON *tál* f. 'deceit', OHG *zāla* f. 'ambush, danger' < **tēl(l)ō-* < **deh$_1$-tléh$_2$-/-d^hleh$_2$-* 'trap', cf. Gr. δέω 'to bind' < **dh$_1$-ie/o-*, Skt. *dā-* 'to be hostile, inimical', OAv. *aibī daiṇtī* 3pl.pres. 'to ensnare'.
14) ON *þollr*, OE *þol* m. 'thole' < **þull(l)a-* < **tlh$_2$-tló-/-d^hlo-*, cf. Lat. *tabula* f. 'board, plank' < **tlh$_2$-d^hleh$_2$-* (with dissimilatory loss of the first *l*) and probably also Lith. *tìltas* 'bridge' < **tlh$_2$-tló-* and Skt. *tīrthá-* 'passage, ford, stairs for landing or for descent into a river' (both with dissimilatory loss of the second *l*);[9] to Go. *þulan* 'to endure' < **tlh$_2$-eh$_1$-*, Lat. *tollō* 'to lift', OIr. *tlenaid* 'to steal' < **tlh$_2$-nh$_2$-* 'to bear, carry'.

Not all of the examples offered here are equally evident as original instrumental nouns, yet the corpus presented here substantially increases the evidence in favor of the Proto-Germanic change **-dl-* > **-ll-*. Inversely, this change opens the road for a number of new etymologies for previously obscure Germanic words.

The material further invites reflection on the nature of Pre-Proto-Germanic phonology. It is known for a fact that, for example, before the shortening of geminates after long vowels and resonants, overlong syllables were common in this stage of the language, cf. PGm. **deupa-* 'deep' < **deuppa-* < **d^heub^h-nó-* (with

8 The Celtic cognates can alternatively be paired with ON *sáld* n. 'sieve' < **sēþla-* < **séh$_1$-tlo-*, an instrumental noun to the unextended root **seh$_1$-*.

9 Note that the Latin form *tabula* proves that the vocalizations **CRHC* > *CRāC* and **CHC* > *CaC* post-date the loss of **l* in Italic; the alternative scenario, in which **tlh$_2$-d^hleh$_2$-* > **tlā-d^hlā-* > **tād^{h}lā-*, would have resulted in Lat. ***tābula*.

Kluge's Law) and **wīsa-* 'wise' < **wīssa-* < **ueid-to-* (with dental assibilation). As is implied by **fullla-* 'cup' < **plh$_1$-tló-* and **þullla-* 'thole'< **tlh$_2$-tló-*, these overlong syllables may in fact have contained resonants of *triple* length. Though languages with a phonologically distinctive triple-length distinction are typologically rare, they are not non-existent, cf. Estonian or Saami. In the latter, for instance, a distinction between short, long and overlong *l* is made in near *minimal triplets* such as *palū* (gen.) 'fear' : *pollū* (gen.) 'bowl' : *polllū* (nom.) 'bowl' (Aikio 2008). In Pre-Proto-Germanic, the evidence for trigeminates so far has remained limited to the two aforementioned examples, but there are no theoretical objections to allowing a Pre-Germanic stage in which triple length was allowed. The fact is that trigeminates differed only from other overlong clusters in that the consonants on either side of the syllable boundary were homophonous. Their existence, in other words, should fall within the established parameters of Pre-Proto-Germanic (morpho)phonology. Similar to Saami, Pre-Proto-Germanic may accordingly have possessed minimal triplets such as the one relevant to this paper, i.e., **þula-* (ON *þol* n. 'endurance') : **þulla-* (ON *þollr* 'fir-tree') : **þullla-* (ON *þollr* 'thole').

Abbreviations

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