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Layers of root nouns in Germanic
Chronology, structure and origin

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The root-noun declension became productive in early Germanic, containing (I) inherited root nouns, (IIa) original substrate or loan words, and transitions from other declensions in (IIb) Proto-Germanic and (III) North Germanic. As ablaut was abolished, the inherited type would display ablaut grades that, in late Proto-Germanic, became predictable from the phonotactic structure of the root.

1. The communis opinio on root nouns

Proto-Indo-European root nouns are constructed by means of a root and an inflectional morpheme: no derivational suffixes are involved. Like athematic nouns in general, root nouns are ablauting, their radical vocalism interchanging between ē̄-, ō̄- and zero grade according to morphophonemic criteria from Pre-Proto-Indo-European times, cf. e.g. Brugmann & Delbrück (1906: 130–146), Hirt (1929: 224–230), Kuryłowicz (1968: 26–38), Schindler (1972a: 8–9), Rasmussen (2003: 354–355), Fortson (2004: 73–74, 103–109) etc.

According to Schindler (1972: 32–38), Proto-Indo-European root nouns displayed two basic types of ablaut:

1. e/Ø-ablaut (e.g. PIE nom.sg. *h₂nēr, acc.sg. h₂nēr-ę̄n, gen.sg. *h₂nēr-ós 'man'), associated with action nouns and with agent nouns derived from verbal roots with stative semantics.

2. o/e-ablaut (e.g. PIE nom.sg. *nōkʷt-s, acc.sg. *nōkʷt-ę̄n, gen.sg. *nēkʷt-s 'night'); however o/Ø-ablaut if the root contains a resonant (e.g. PIE nom.sg. *pórk̑-s, gen.sg. *pr̥k̑-ós 'fallow deer'). This type is associated with feminine nouns with resultative or passive semantics and with agent nouns, often with iterative semantics.

According to the communis opinio, root nouns (and consonantal stems in general) were inherited from Proto-Indo-European into Proto-Germanic, but lost their productivity and gradually transitioned to other declensions. Thus, e.g., Krahe (1967: 34):

Von dem im Germ. vorhandenen kons. Stämmen, die sämtlich auf idg. Typen beruhen, stellen die unter "a" bis "d" behandelten Restgruppen [one group being the root nouns] dar, die im Laufe der Entwicklung in den Einzeldialekten als selbständige Gruppen ausgestorben und in andere Klassen übergegangen sind.

This view, however, is contradicted by Brøndum-Nielsen (1935: 146, 154–155) who observes that in North Germanic, the root-noun declension comprises words from other declensions. Similarly, Kroonen (2012: 255) asserts that the Germanic root-noun class had become open to loan words and substrate words. The early Germanic root nouns would thus appear to be if not thriving, at least in the process of recovering from their former moribundity. Consequently, a revision of the fate and vitality of the root-noun declension seems to be in order.

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1 This article serves as an abbreviated version of a longer article published in my Ph.D. thesis (Hansen 2014: 20–50). It contains only the main points of my structural layering hypothesis regarding root nouns such as they were presented at the Etymology and the European Lexicon conference in September 2012.
In this article, I claim that root nouns and synchronically unanalysable, monosyllabic consonant stems be stratified into a number of layers.\(^1\) Basing my analysis on the Germanic material listed in section 2 (and 3.4), I propose the following three layers:

I Root nouns inherited from Proto-Indo-European.

IIa Substrate or loan words.

IIb Nouns transitioned from other declensions in Proto-Germanic.

III Nouns transitioned from other declensions in North Germanic.

2. Material

My list of material consists of 47 lexemes that are inflected entirely or partially as root nouns in Proto-Indo-European (and continued in Proto-Germanic), Proto-Germanic or the individual Germanic languages. Due to limitations of space, an additional 24 nouns attested with aigscolos; \(a\)igmatic or Gr \(\alpha\)magnostic in light of Gr \(\alpha\)magnostic.

A frequently attested in e.g. Lith. \(\alpha\)kas, \(\alpha\)kas 'sacred grove' and Latv. \(\ell\)ks 'idol'; an \(i\)-stem is found in compounded forms such as Gr. \(\alpha\)lksi-. Connections to PIE \(h\)_2eĩk̑-, we might consider reconstructing \(h\)_2i̯g̑- with original (post-)PIE \(\mathbf{a}\)-, which is rendered likely by the semantics (botany) that implies a possible loan-word status, cf. e.g. Kroonen (2013: 9–10) for the Germanic forms and Frisk (1960: 30–31) for the Greek cognates. Layer I or IIa.

\(^1\) PG *\(\text{aik}^-\) *'oak'. Root noun in ON \(\text{eik}\), OE \(\text{æc}\) and (maybe) OS \(\text{ēk}\), OHG \(\text{ei(c)h}\); \(i\)-, \(ō\)- or \(i\)ō-stem elsewhere. Often affiliated with PIE \(*h_2\text{eĩk}^-\) *'shine', cf. e.g. Gr. \(\text{αίγις}\), (e.g. in \(\text{αίγιλως} *\text{kind of oak}\)), Gr. \(\text{αίγες}豹\) *'poplar'. Lat. \(\text{aesclusus}\) *'durmast oak, winter oak' vel sim. (\(\langle\) *aigscolos\)); further maybe ORu. jazvo *'badger', Ru. jazv *'carp', OIr. \(\text{āesc}\) *'concha, clasendix'. As an alternative to PIE \(*h_2\text{eĩk}^\text{-}\), we might consider reconstructing \(*\text{aĩg}^-\) with original (post-)PIE \(*\text{a}\)-, which is rendered likely by the semantics (botany) that implies a possible loan-word status, cf. e.g. Kroonen (2013: 9–10) for the Germanic forms and Frisk (1960: 30–31) for the Greek cognates. Layer I or IIa.

\(^2\) Henceforward, for the sake of convenience and brevity, nouns inflected entirely or partially as root nouns or as unanalysable consonant stems will merely be labelled "root nouns".
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... If it is to be analysed as an original root noun (layer I), a partial transition from root-noun to i-stem inflection seems to have taken place in Proto-Indo-European already: cf. also Hansen (2014: 112) and Hinderling (1967: 113–115). The presence of the enigmatic second vowel PG */a/ ~ */i/ ~ */u/ may be regarded as further support for a root-noun origin. Thus, Hamp (1978: 30) sees this second vowel of the lexical stem as a "continuation of non-initial non-medial schwa". If such an analysis does not convince, another way of arguing for an inherited root noun is Kümmel’s (2004: 298–300) proposal that an anaptyctic PG */u/ is inserted between the resonant and the plosive in word-final */-RTS#. Alternatively, analysable as an originally ablauting i-stem PIE */h2énh2-et-/ ~ */h2phh2-t-, cf. Kroonen (2013: 26) and Beekes (1985: 63–64). Layer I or III.

4 PG */and-, *anj-, *umði- ‘about’ etc. with a wide array of descendants in individual Germanic languages. Fossilised case forms of PIE */h2ént- ~ */h2ht- ‘front, forehead’; cf. Hitt. ha-an-za/hant-s ‘front’ etc. Outside Anatolian, this root noun is used only adverbially in fossilised case forms.

5 PG */bök- ‘beech; book’. Root noun in ON bök, OE bóc ‘book’, OS bōk, OHG buoh; ø-and */jôn-stem elsewhere. From PIE */bʰeh₂g(-eh₂)- or */bʰoh₂g(-eh₂)- to the root PIE */bʰeh₂g- ‘beech’, cf. Gr. φῦντος ‘oak’, Gr.(Dom) φῦντος and Lat. fūns ‘beech’. Root-noun forms are known only in Germanic, the remaining IE branches displaying a feminine o-stem. Griepentrog (1995: 73–74) believes that both forms are archaic and that both originally meant ‘beech’, the feminine o-stem originating as an adjective of appurtenance secondarily altered into a synchronically more transparent feminine ø-stem in Germanic, cf. also Thöny (2013: 105–106). It is equally plausible, however, that the Germanic root noun arose when Proto-Germanic speakers, failing to acknowledge a feminine a-stem, turned it into part feminine root noun, part feminine o-stem. Layer I or IIb.

6 PG */brōk- ‘trousers, breeches’ (mostly pl.). Root noun in ON brókr (pl.), OE brócc (sg.), brēc, brēcc (pl.), OFris. brēc (pl.), OS brog(?)(sg./pl.), OHG buoh, pruo, pruah. Griepentrog (1995: 88–90) suggests borrowing from PCelt. */brák- after the Germanic sound shift but before PIE */a/ > PG */o/, cf. Gaul. brōc, brāca, which has probably also been borrowed into the Romance languages, e.g. Ital. braca ‘trousers’, Prov. braya, OFrench braie, Port. braça etc. Layer Ia.4

7 PG */brüst- ‘breast, chest’. Root noun in Goth. brusts (pl.), OFrfr. brust, burst and OHG brust, prust; a vṛddhi derivative with radical full grade is attested in the a-stem PG */brestu- ‘heart, courage, breast’ > ON brjóst etc., cf. e.g. Griepentrog (1995: 469–470). To be reconstructed as PIE */bʰrēs-t-/ to the root PIE */bʰrēs-t-/ ‘swell’, cf. without the t-enlargement: OFr. brū ‘abdomen, womb; bruinne ‘breast, bosom, chest’ etc. Layer I.

8 PG */brū- ‘brow’. Attested as a w-o-stem in OE brū ‘brow’ (only pl.); also ON brūn ‘brow; edge’ (pl. brýnn), in reality, an n-stem with radical and suffixal zero grade. To be recon-
structured as PIE *h₂bʰruH- ‘(eye) brow’, cf. Skt. bhrā-, Gr. ἰφρώς, Lith. bruvis, OCS břvô etc. Layer I.

9 PG *burg- ‘city, town, citadel’. Root noun in Goth. baursg ‘fortified place; town; OE burg, burh ‘castle; city’, OS burg, OHG burg, purk; o̞i-stem elsewhere. From PIE *bʰrgk- ‘elevate’, cf. also e.g. Av. bhrz- ‘mountain’, ‘high, tall’, OIr. bri ‘hill, elevated spot’ and further Hitt. parku- ‘tall, large, Toch. A pārkār, B pārkār ‘becomes strong’, Arm. barj ‘high, tall’. Layer I.

10 PG *dulp- ‘festival, celebration’. Root noun only in Goth. dulp (only dat.sg. dulp); normally i-stem in Gothic, e.g. dat.sg. dulpi, and elsewhere. According to Griepentrog (1995: 487), a possible misinterpretation of acc.sg. and not a root-noun at all.

11 PG *dur- ‘door’ (only pl.). Root noun in ON dýrr, a-, ön- or u-stem elsewhere. From PIE *dʰur- ~ *dʰur- ‘(double) door’ (only du.), cf. also e.g. Skt. dvārau (with d instead of dh from Skt. dvau ‘two’), Arm. dur-k’ (pl.), Gr. θόρα, Gr.(Ion.) θόρη, Alb. derē, Lat. forēs (pl.), OIr. dorus, Lith. dūrys (pl.). Layer I.

12 PG *fot- ‘foot’. Root noun in ON fôr, OE fôt, OFris. føt, OS føt, OHG fúoz, fuaz (normally i-stem); u-stem elsewhere. From PIE *pōd- ‘foot’, cf. also e.g. Skt. pad-, Av. pad-, Gr. πόδι (ποδός), Arm. ôtel, Lat. pes (ped-) etc. Layer I.

13 PG *furh- ‘furrow’. Root noun only in OE furh; i- and o-stem elsewhere. From PIE *prok- ~ *prk- ‘stain’, cf. the root noun Gr. πόζι ‘roe deer’, πνωξ ‘dewdrop’ whose semantic connection to PG *furh- is, however, weak; as pointed out by Griepentrog (1995: 198–199), appartenance to PIE *perk- ‘dig, tear up’ may therefore be a more attractive option, cf. further Lat. porca ‘soil between two furrows’, P Celt. *ricā ‘furrow’ (e.g. Gallo-Lat. rica) etc. Probably layer I.

15 PG *gait- ‘goat’. Root noun in Goth. gaits (or i-stem), ON gait, OE gāt, OS gàt; i-stem elsewhere. From PIE *gʰaiz- vel sim. (original PIE a-vowel), cf. Lat. haecus ‘young goat, kid’. Apparent cognates without an initial consonant and with a different final consonant also exist, cf. e.g. Gr. αἰζ (ai-’) ‘goat’ and the possible connection to PG *tigōn- ‘billy-goat’ > OHG ziga and additional roots with similar semantics. Kroonen (2012: 246–247) follows D’akonov (1985: 132) in presuming borrowing from a Caucasian language into the European languages. Layer I (if original PIE a-vowel) or IIa (if loan word).

16 PG *gans- ‘goose’. Root noun in ON gás, OE gās; i-stem elsewhere. From PIE *gʰans- ‘goose’ (original PIE *a), cf. also e.g. Skt. haṁśa-, Gr.(Att./Ion.) ḷus, Gr.(Dor./Boeot.) ḷav, Lat. ānser, OIr. gēis ‘swan’, Lith. žąsis ‘goose’ etc. Layer I.


18 PG *hert- ‘heart’. Root-noun inflection not preserved in Germanic; reinterpreted as neuter n-stem (Goth. hairto, ON hjarta etc.). From PIE *kərd- ‘heart’, cf. also e.g. Hitt. ker ~ kard(ı) ‘heart, centre, core’, Skt. hṛd- ‘heart’, Av. ẓr̥ḍ-, Arm. sirt, Gr. κέφ, Lat. cor (cord-), Lith. širdis ‘heart; anger’. Layer I.

19 PG *hnit- ~ *gnit- ‘nit’. Root noun in OSw. gnit and OE hnitu (acc.pl. hnitē); also OHG nīz, nhiz. From PIE *knid- alternating with PIE *kon-id- in e.g. Gr. κοβίς (κοβίδ-) ‘nit’; Alb. thēnī. Kroonen (2012: 247) presumes substrate origin on the basis of the suffix *-id(h)~ *
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Kroonen (2012: 248) presumes substrate origin on the basis of the widely divergent root extensions: PG *-d- (< PIE *-t-), Lat. -k- and Celtic vowel length from PIE *-H- of which PG *-d- may be described as a substrate suffix *-u(n)d-. (variant of *-ind-.)

Layer I.  

PG *hnu- 'nut'. Root noun in ON hnut, OE hnuta (acc.pl. hnyte); i-stem elsewhere. From PIE *knHu-; for cognates without the d-extension cf. e.g. Lat. max (nuc-.) 'nut tree'; OIr. cmnú 'nut'. Kroonen (2012: 248) presumes substrate origin on the basis of the widely divergent root extensions: PG *-d- (< PIE *-t-), Lat. -k- and Celtic vowel length from PIE *-H- of which PG *-d- may be described as a substrate suffix *-u(n)d-. (variant of *-ind-.)

Layer IIa.

PG *idis-*edis- 'lady'. Root noun in OE ides 'female, lady', OS idis, ides 'wife', OHG itis 'divine' woman. Maybe originally identical with the i-stem ON dis 'woman, girl; fairy, nymph; goddess' if we choose to follow Grimm (1844 [1865]:4–5) and Kroonen (2012: 248–250). On the basis of the unexpected vowel alternation between the West and North Germanic examples, Kroonen (2012: 249–250) posits a substrate word containing a prefix *-a- (umlauted at an early stage to *e-) in PG *idis-*edis- 'lady' which also displays reduction of the radical vowel resulting from the prefixation, the full vowel being attested in the unprefix form represented by ON dis. For previous attempts at an etymology, cf. Hansen (2014: 142). Layer Ia.

Layer II.b.  

PG *kwō- 'cow'. Root noun in ON kyr, OE cū, OFris. kū, OHG chuo (also i-stem); i-stem in OS kū. Hollifield (1979: 54) has explained the Germanic paradigm as *kwō- (> *kō- ~ *kū-) abstracted from the acc.sg. PIE *grōw- of the diphthongal stem PIE *gроw- ~ *gro- vel sim. 'cow', cf. also e.g. Skt. gā-, Av. gāuḥ, Gr. βοῦς 'cow, bull', Gr.(Dor.) βως, Lat. bōs (bōv- 'cow', OIr. bó etc.) Layer I.

Layer III.

PG *lās- 'louse'. Root noun in ON lās, OE lās; i-stem elsewhere. From PIE *luaH-s- (possibly with *s from hypostasis of the nom.sg. ending), cf. also e.g. W lāu 'louse' (pl.) and Toch. A lwa 'animal', B lwāsā (pl.) Layer I.

Layer IIb.  

PG *mann- 'man'. Partial root-noun inflection in Goth. manna (n-stem), ON maðr, mannr (a-stem), OE man(n), mon(n) (a-stem), OFris. mann, monn (a-stem), OS mann (a-stem), OHG mann (a-stem). Probably to be compared to PIE *muno- a-, a thematisation of PIE *muno- 'man, cf. e.g. Skt. manu- 'man, progenitor' and the u-stem reflected in WG Manus. An alternative etymology suggests that PG *mann- split off from PIE *dīghm-on- 'man, cf. e.g. Lat. homō 'man. In either case, the transition to root-noun inflection is undoubtedly a secondary development within Germanic. Layer IIIb.

Layer IIc.

PG *mark- 'border, region; mark (unity)'. Root noun only in ON mork 'mark (unity)' (partially i-stem) and maybe in OFris. merk 'certain currency'; ò-stem elsewhere, including in ON mork 'border area, forest'. From PIE *mrogi- ~ *mrg-, cf. the root noun of P Celt. *brogi- ~ *brig- (Gaul. -broges, OIr. bri); secondary i-stem in P Celt. *mrogi- ~ *brogi- (> OIr. mruig, bruig 'mark, landscape') and o-stem in Av. marzzom 'border, mark' (acc.sg.) etc. Probably an original PG a- or ò-stem (PIE *mrg-o/uh- > PG *marka/ò-) with Schwa-bealaut that was formed from the zero grade of the root noun, i.e. PIE *mrg- > PG *mørk- > PG *mark- (a-ò-). Alternatively, P Celt. may have formed *brogi- analogically from the zero grade P Celt. *brig- (< PIE *mrg-); consequently, the root noun would have been PIE *ind- etc. also found in e.g. PG *arwit- 'pea' corresponding to Gr. ἠρβινθος 'chickpea'.
*morg̑k̑ ~ *mg̑k̑, and the PG form might be a direct continuation of the PIE root noun. Layer I or IIb.

26 PG *međ- ‘with, within’ with cognates in all the major individual Germanic languages. From PIE *mēdʰ-‘ with, within, in the middle of’ (loc.sg.). Layer I.

27 PG *meluk- ‘milk’. Root noun in Goth. miluks (only gen.sg. miluks 1c), ON mjólk, mjólk, OE meolc, OFris. melók, OHG miuč; a-stem in OS miuks (only gen.sg. milukas 1c). From PIE *hmelg̑k̑- (hardly PIE *hmelHg̑k̑ > PG *meluk-, cf. Gr. αὐλέλυῳ ‘milk’ without traces of PIE schwa; however, Lith. mēžu would appear to preserve a trace of the laryngeal, unless the acute accent is due to Winter’s Law or Narten status of the root itself; cf. further Skt. māṛṣṭi ‘wipes off’, Av. mazrāṣáti, mazrāṣáti ‘brushes, touches lightly’. Gr. αὐλέλυω ‘milk’, Lat. miulgo, Mr. bligim, Lith. mēžu etc. PG *meluk- may be explained as a contamination of full grade *melk- and secondary zero grade *melk- (according to Griepentrog (1995: 300–301 with further lit.) formed analogically from a secondary full grade PG *mlek-s < *mēlk-s in the nom.sg.). Bammesberger (1990: 197) remains sceptical to that analysis and prefers to explain the *u of PG *meluk- as due to analogical influence from PG *aluk- ‘ale, beer, intoxicant’. Kümml (2004: 291–292, 301) provides a different analysis: that an anaptyctic PG *u has been inserted between the resonant and the plosive in word-final *-VR Tiȓs̑; thus PG *melk-s > *meluks-s. Layer I.

28 PG *mās- ‘mouse; muscle’. Root noun in ON mās ‘mouse; biceps’, OE mās ‘mouse’; i-stem elsewhere. From PIE *muHs-, cf. also e.g. Gr. μῦς ‘mouse; muscle’, Lat. mās ‘mouse’, OCS myšь etc. Layer I.

29 PG *naht- ‘night’. Root noun in Goth. nahts, ON nátt, nót, nótt, OE neahht, niht, OFris. nachht, OS nacht, OHG naht. From PIE *nok+t- ~ *nek+t- ‘night’, cf. also e.g. Hitt. nekuz ‘in the (gen.sg.)’, Gr. νῦξ ‘night’, Lat. nōx, Lith. naktis, OCS nošč etc. Layer I.


31 PG *(ga-)naut- ‘fellow, companion’. Root noun possibly (and if so only partially) in OHG ginōs, kinōs, kanōs; otherwise a- or an-stem in OHG and (a)stem elsewhere. Griepentrog (1995: 490–491) regards the root-noun forms as scribal errors.

32 PG *nōt- ‘large (fishing) net’. Root noun only in ON nót (also i- and o-stem inflection) which was borrowed into multiple Finno-Ugric languages. Either from PIE *netHd- or *notHd- ‘tie together’, probably as a nomen rei actae *(no)Hd- ‘tied together’ (cf. Lat. nōdus ‘knot’), or as a PG vṛddhi-derivation *(n)ōtō- ← PG *natja- *(fishing) net’. In the latter case, the root noun would be secondary and probably late, though cf. Darms (1978: 308–310). Layer I or II.

33 PG *rik- ‘ruler, king’. Root noun in Goth. reiks ‘ruler’. Borrowed into PG from PCelt. *rig- (< PIE *h1rēg-, cf. also Lat. reg ‘king’) as reflected in e.g. Ofr. rē before the Germanic sound shift but after PIE *ē > PCelt. *i. Layer IIa.

34 PG *si-dl- (?) ‘herring’. Root noun only in ON síld; ō-stem elsewhere (if any attestations beyond North Germanic). Owing to its opaque etymology, PG *si-dlō- (?) may be a lexical borrowing from an unknown source, i.e. a substrate word. This, however, remains speculative since the phonotactics of the form do not specifically suggest so. Kroonen (2013: 436) tentatively reconstructs an old i-stem PIE nom.sg. *sēil-ōt, gen.sg. *sīl-t-ōs, thereby
suggesting Du. *zeelt* ‘tench’ to be related to ON *sild*. Layer I or IIa – or layer III seeing that root-noun inflection is, after all, found only in Old Norse.

PG *skœ̀d* - *robes*. Root noun only in OE *scrœ̀d* and maybe only as a pseudo root noun 1x or 2x (dat.sg. and acc.pl., respectively) in the Psalter of glosses; normally an a-stem in OE and elsewhere. According to Griepentrog (1995: 489–490), no or only scant basis for root-noun assumptions.


PG *stadr* - ~ *stuf̥t* - ~ *stød* - *prop, support, post, pillar*. Consonant stem perhaps in OE *studu*, *stuthu* (u-stem otherwise) and ON *stød* (pl. *stæðr*, *stæd*); ablauts unrel. apparent. Root noun status rejected by Griepentrog (1995: 490) but ascertained by Schaffner (2001: 639) who, without mentioning PG *stadr*- reconstructs *stuf̥t*- on the basis of PIE *sthr̥u-t*- i.e. the zero grade of PIE *sthr̥u*- *stand firm*, possibly an extension of PIE *sthr̥u*- *stand*; compare Skt. *sthū́ṇā*- ‘pillar’ < PIE *stθh₂*- (with laryngeal metathesis). Layer I.

PG *su-s* - *sow*. Root noun in ON *sýr*, OHG *síu*. According to Kroonen (2011: 154–155), the “gō-extension” in OE *sugu* and OHG *sugu* developed regularly from PG *su-we*- (e.g. PG *suwe*- < PIE *suH-ŋ*). From PIE *suH*- cf. also e.g. Gr. *βίος* ‘swine, sow, boar’, Alb. *thi* ‘pig’, Lat. *sís* ‘pig, sow’ etc. Layer I.

PG *sulh* - *plough*. Root noun only in OE *sulh*; related a-stem in PG *selhα*- *seal, i.e. (animal) that drags itself along the ground* > e.g. ON *sér*, OE *sōl*, OHG *sól*. From PIE *sλk-*, cf. Gr. *δέλτα* ‘furlow’, Alb. *helq, heq* ‘pull, lead’, Lat. *sulcus* ‘furrow’ etc. Layer I.

PG *tanb̥*- ~ *tund̥*- *tooth*. Consonant stem in ON *tønn*, OE *tøþ*, OFris. *tøth*, OS *tan* and OHG *zan*, *zand*; u-stem in Goth. *tunþus*. From PIE *h₁t-ont-/*h₁d-nt*- ‘tooth’ (present participle of *h₁ed*- ‘eat’), cf. also Skt. *dán* (dent-), Gr. *δόνω* (dōν-), Lat. *dens* (dent-), Lith. *dantis* etc. Layer I.

PG *traf*- *fringe*. Root noun only in ON *tref* ‘fringes’ (pl.) which coexists with *tref* (pl.) to *traf* ‘scarf’; ó-stem elsewhere. Due to the lack of comparative evidence, Griepentrog (1995: 462) is cautious about accepting inherited root-noun inflection. From PIE *dɾ̥p̥*- ‘pluck, cut off’; cf. e.g. Skt. *drāp- ‘mantle, garment’, Gr. *δέρνα* ‘pluck, cut off’. Granted the existence of a root noun PIE *dɾ̥p̥*- > PG *traf*- ‘fringe’, we would need to understand its meaning as ‘what has been cut off’; i.e. an o/e-grade root noun with resultative semantics. Layer I or III.


45 PG *weht- ‘thing’. Root noun only in Goth. waihts – and only 1x (acc.pl. waihts); normally i-stem in Gothic (gen.sg. waihtais) and elsewhere. According to Griepentrog (1995: 488–489), most likely an original ti-stem with unique and spontaneous analogy to the root-noun inflection (maybe caused by the formal coalescence of the dat.pl. of root nouns and i-stems) or as an old t-stem for which, however, he finds no further evidence.


47 PG *wrōt- ‘root’. Root noun in ON rót which was subsequently borrowed into late OE rōt; i-stem elsewhere (PG *wurti- ‘medicinal root, herb’), though ōn-stem in OHG wurza. From PIE *yreh2d- ~ *yreh2d-, cf. e.g. the iht-stems Gr.(Myc.) wi-ri-za ‘root’, Gr. ἱβα and Lat. radix. Vine (1999) explains the aberrant Greek vocalism by schwa secundum.

3. Three layers of Germanic root nouns

3.1. Layer I: Root nouns inherited from Proto-Indo-European

Besides the two main types of root nouns, viz. those ablauting ó/é and those ablauting ó/Ø, Schindler (1972: 34–36) establishes a third type, originating as a subtype of the ó/é type. Nouns of this type, which have the root structure -ERT, would develop radical zero grade in the weak form, resulting in a new ó/Ø ablauting type. Building on this claim by Schindler, Nielsen Whitehead (2010; 2013; ms.) demonstrates that, out of 32 examined roots of the structures -RC and -HC, the vast majority displays generalised zero grade in both the strong and the weak cases. She concludes that root nouns in Proto-Indo-European eventually come to appear in a form that meets three criteria: (1) that the root has to contain at least one consonant in the syllable onset; (2) that it must display a vocalic element; and (3) that no more than one consonant is allowed in the radical syllable coda. The third constraint, however, does not apply to roots with only obstruents in their syllable coda.

Scrutinising the Germanic root nouns reveals that Nielsen Whitehead’s claim is partially valid: the ablaut of a Proto-Germanic root noun is highly predictable from the root structure; cf. also Griepentrog (1995: 419) and Kümmel (2004: 298–299) for similar statements. In particular, I believe that inherited Germanic root nouns display:

1. Radical é-/ô-grade with the structure CV(C): *bôk- (layer IIb also possible), *fôt-, *kwô-, *nuht-, *nôt- (layer III also possible), *traf- (layer III also possible), *wôh- and *wrôt- (layer III also possible).

2. Radical zero grade with the structure CVRC: *brust-, *brû-, *burg-, *dur-, *furht-, *lûs-, *mûs-, *spûrd-, *sû-, *sulh-, *turb-, *þrûh-.

3. Preservation of original a-vowel regardless of the structure: *aik- (layer Ia also possible), possibly *ahl- (layer Ia or IIb also possible), *gait- (layer Ia also possible), *gans- and *nás-.10

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10 The argument of attributing (some of) these root nouns to layer Ia rather than layer I obviously gains further strength under the theory that Proto-Indo-European had no true *a.
3.1.1. Apparent counterexamples

As neat as this distribution may seem, a range of apparent counterarguments or exceptions present themselves.

Firstly, in the case of *aik-, we would a priori expect PIE ʰmärk̑- > PG ʰmrk-. If, however, we posit *aik̑- with an original (post-)PIE *a, we may postulate a lexical borrowing. A further alternative to consider is that Germanic, like Greek, displayed vocalised reflexes of initial laryngeals (at least of PIE ʰh₂) followed by either *i or *u, cf. Hansen (2014: 166–167; 2015: 43), in other words that PIE ʰmärk̑- yielded PG *aik- by regular sound law.

If reconstructed with PIE ʰmärk- rather than *a-, *alh- seems to constitute another exception. However, we find root-noun inflection of this lexeme only in Gothic; the remaining Germanic languages display an a-stem which is probably very old since it lacks the anaptyctic PG *u between the resonant and the plosive as normally expected for word-final *-VRTs#,

cf. e.g. Kümmel (2004: 301). Outside Germanic, we find root-noun inflection in Greek (only attested in dat.sg.), too, albeit with somewhat aberrant semantics. If this is really an inherited root noun and not, say, a PG a-stem (in which case *alh- would belong to layer IIb), the a-vowel may be original. This possibility can only be rejected by invoking a relation to the root PIE ʰhr̥ leuk- ‘ward off, guard, protect’. Skt. rākṣati, Arm. aracel, Gr. ἀλέξω etc. (IEW 2005: 32). Alternatively, PG *alh- may be a lexical borrowing and thus affiliated with layer IIa, cf. Kroonen (2013: 22).

Adverbial or prepositional forms like *andr-, *anhr-, *undr-, *unhr-, *umbi, *fur- and *med are not valid counterexamples, since they appear as archaisms in fossilised case forms with adverbial or prefixal function even in the earliest attestations; they probably hark back to a period prior to the introduction of the distributional rules outlined in section 3.1.\(^\text{11}\) Consequently, we may disregard them.

Also to be disregarded is *hert-. If the distributional rules are valid, we would expect PG ʰhert- < PIE ʰkrd-. However, this lexeme is attested as a neuter a-stem, never as a root noun, in Germanic. Already in Proto-Germanic, there was a tendency of assigning body parts to that inflectional class, cf. e.g. PG *ausan-/*tuzan- ‘ear’ and *augan- ‘eye’; see also Thöny (2013: 152–169). If this transition happened early enough, *hert- would not have been a member of the root noun class at the time when the distributional rules were active.

Perhaps the most serious counterexample is *mark- where the distributional rules predict ʰmark-. However, *mark- may have been an original a-stem PG *marko- or an a-stem *marka-, with a secondary full grade formed from the zero grade of the PIE root noun *mrogh- ~ *mrgk- attested in Celtic, since, as noted by Kümmel (2004: 301), an inherited root noun formed from a full grade PIE *mrogh- would have appeared as PG ʰmaruk-. In Germanic, such a Schwebeablaut development may have occurred after the zero grade PIE *mrgk- was vocalised as PG **mark- with the epenthetic vowel inserted before the resonant. Granted the survival of only the zero grade of the root noun in Germanic, a new full grade would most likely develop as PG *mark-, not as **mruk-. This analysis is not unproblematic, though. First, the purportedly secondary full grade is also attested in Av. marz̄em ‘border, mark’ < PIE *mrgk-. Secondly, PCelt. *brog- may easily be secondary, formed in analogy with the zero grade PCelt *brig- < PIE *mr̥g-, cf. also Schindler (1972: 34–35) who reconstructs PIE *mr̥g- ~ *mrg-; and assumes that PG *mark- reflects the PIE root noun directly. Only if we accept either of these premises is *mark- a true exception to the distributional rules outlined above.

\(^{11}\) PG *fur, *med and *unhr- (incl. *umbi), i.e. the by-forms of *anhr-/andr-, display the outcome expected from the distributional rules regarding the root nouns of layer I. Consequently, they are mentioned together with the true counterexample of PG *anhr-, *andr- only for methodological reasons.
This is because they had not yet entered the -

tan

tan.

He suggests that these borrowings all appeared

g

g.

tang.

tang.

Rather, they were adopted

e-

Alternatively, Schaffner

If such a contamination took place prior to the generalisation of the radical ablaut grade in root nouns according to their phonotactics, the language users may no longer have been able to analyse and interpret *meluk- as a root noun proper. It may simply have been analysed as consisting of a root and a suffix. Bammesberger (1990: 197) and Kümmel (2004: 291–292, 301) provide alternative explanations (see section 2) that allow for identical synchronic analyses by the language users. If a root noun at all, *anad- ~ *anid- ~ *
anud- may have undergone a similar fate.

An original t-stem may be reflected in *stad- ~ *stuphem- ~ *stud-, i.e. PIE *st₂-t > PG *sted- reinterpreted as an o-grade form. A secondary zero grade *stud- may have been formed in analogy with the ablaut pattern known from e.g. *tanp- ~ *tund-. Alternatively, Schaffner (2001: 639) analyses PG *stuphem-/*stud- as a true, and in Germanic terms expected, zero grade formation PIE *sth₂u-t-. Either way, PG *stud- is not a valid counterexample to the distributional rules outlined in section 3.1. A somewhat similar explanation, viz. an ablauting t-stem that was still analysable to the language users, might be provided for *srid- (?) if, as suggested by Kroonen (2013: 436), this is not a substrate term.

PG *tanp- might count as a counterexample per se (next to expected *tund-). However, if *tanp-, with its retained ablaut, was still interpreted as a participle or at least as an "nd-stem" (< PIE *h₁d-óṃ-t- ~ *h₁d-ŋt- eating”), it cannot be expected to follow the distributional rules outlined in section 3.1.

Finally, *(fer-)ud- should ideally have full, lengthened or o-grade, since according to the distributional rules outlined in section 3.1, all root nouns should have at least one consonant in the syllable onset. However, PG *ud- never occurs as a simplex but only as a second member of a compound where radical zero grade of a root noun is expected whenever phonetically possible, cf. e.g. Skt. pratīcáḥ ‘face’ (gen.sg.) < PIE *prəti-h₂k*-ós.

A number of items analysed in section 2 (and 3.4) cannot reasonably be treated as counterexamples even if their radical ablaut grade deviates from what the distributional rules outlined in section 3.1 predict, e.g. "PG" *tang- ‘tongs’. This is because they had not yet entered the root-noun declension at the stage when the rules were still active. Rather, they were adopted into the root-noun declension at one of the later stages represented by my suggested layers IIa, IIb or III.

3.2. Layer IIa: Substrate or loan words

Kroonen (2012: 242–255) accounts convincingly for some problematic lexemes by listing a number of known substrate markers, including the suffix PG *-lit- ~ *-üt-, seemingly related to Gr. -ivò- ~ -ivh- ~ -iv- ~ -ib-; the prefix *a-/*e- alternating with *O-; and consonant clusters that violate the general phonotactic constraints of Proto-Indo-European and Proto-Germanic. According to Kroonen, these and further criteria are met in the four root nouns *gait- , *hnit- ~ *gnit- , *hnut- and *idis-/*edis-. He suggests that these borrowings all appeared unsegmentable to the speakers of Proto-Germanic and were consequently assigned to the root-noun declension.

Kroonen’s etymologies have the general advantage to those of a range of other substrate theories that they are proposed on the basis of structural considerations and, in many cases, known possible substrate sources. It is beyond the scope of this article to assess the details of

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12 Kroonen (2012) also includes the two cases of PG *arwīt- ‘pea’ and *wūs∧nd- ~ *wūs∧nd- ‘European bison, Bison bonasus’, but since these are not monosyllabic root nouns, we may leave them out of consideration here.
Layers of root nouns in Germanic

Kroonen’s etymologies and general idea, but I will note that the identification of these root nouns as borrowings is of great utility to my claim regarding the predictability of the ablaut grade of inherited root nouns (layer I). Assuming that the items on Kroonen’s list were borrowed into Proto-Germanic at a time subsequent to the active application of the distributional rules outlined in section 3.1, a root noun like PG *gait-*, whose ablaut grade would violate these rules, becomes irrelevant due to its late borrowing.

Besides the items listed by Kroonen (2012), yet another handful of obvious candidates for membership in layer IIA must be considered, viz. *ai̯k-* (layer I also possible), *alh-* (layer I or IIB also possible), *brāk-, *rik- and *si̯-dl- (?) (layer I and III also possible) which are all, with divergent degrees of certainty, possible lexical borrowings, cf. the discussion in section 2.

3.3. Layer IIb: Nouns transitioned from other declensions in Proto-Germanic

Of the three suggested layers, IIb is the one most difficult to define, but we are aided by the descriptions of transitional tendencies and inflectional class profiles provided by Thöny (2013: 79–82, 314–325). It consists of nouns that have transitioned from other declensions into the root-noun declension, probably in Proto-Germanic. In principle, it is likely that layer IIA and IIb are simultaneous, the only difference being that they are fed with material from two different sources.

According to the survey in section 2, the following root nouns may belong here: *alh-* (layer I or IIA also possible), *bōk-* (layer I also possible), *gau̯þ-* and *mān-* and *mārk-* (layer I also possible, cf. section 3.1.1). It may be noted that some of the root nouns fitting the distributional rules outlined in section 3.1 may just as well have entered Proto-Germanic at this later stage. Evidently we often rely on extra-Germanic comparanda when ascertaining if an item belongs to layer I or to layer IIb.

A further complicating factor regarding layer IIb is the lack of transparency as to what motivated the transition of a noun from one of the vocalic declensions to the root-noun declension. Partial case syncretism between the providing *a-* and *ō*-stem declensions and the receiving root-noun declension is, in my view, the most appealing explanation. The question remains, however, why so few nouns of this type made the (full or partial) transition to the root-noun declension. Why not, say, PG *gebō- ‘gift’ (→ †geb-) or *fugla- ‘bird’ (→ †fugl-)?

3.4. Layer III: Nouns that transitioned from other declensions in North Germanic

As noted in section 1, it is a long-known fact that the North Germanic root-noun declension was, at some point, revitalised and began to accept new members from other declensions. Contrary to the situation in layer IIb, North Germanic thus saw an extensive influx of nouns to the root-noun declension.

The catalysts behind this North Germanic development are far more transparent than those behind the similar developments of layer IIb, cf. Brøndum-Nielsen (1935: 146, 154–155) and Hansen (2014: 45–46), so we can safely posit a third layer distinct from and considerably younger than the former one. It can hardly be excluded, though, that this layer is a mere continuation of the second layer, i.e. that the developments and mechanisms initiated in layer IIb ceased to be productive in West Germanic but continued to be so in North Germanic where they were even intensified, thus creating what I have labelled layer III.

Nouns belonging here include the PG projections *anad-*, *anid-*, *anud- ‘duck’ (layer I also possible), *bōt- ‘penalty, compensation’ (ON bōt), *fingr- ‘finger’ (ON fingr), *fōðr- ‘layer, stratum’ (ON fōð, fōð) (if with root-noun inflection at all, cf. Griepentrog (1995: 452–454)), *glōð- ‘red-hot ember’ (ON glōð), *hand- ‘hand’ (ON hōnd), *kinn- ‘cheek’ (ON kinn), *klōw-
'claw' (ON *klo), *nagl- 'nail' (ON nagl), *nōt- 'large (fishing) net' (layer I also possible), *rand- 'edge' (ON rōnd), *spang- 'spangle' (ON spang), *stang- 'pole' (ON stang), *strand- 'beach' (ON strand), *tailw- 'toe' (ON tā), *tang- 'tongs' (ON tōng), *traf- 'fringe' (layer I also possible), *wand- 'wall' (ODa. wand), *wintr- 'winter' (ON vetr), *wrang- 'frame, rib (mar.)' (ON rōng) and *wrōt- (layer I also possible).

A few newly created root nouns of layer III are not that easily explained, however. It remains enigmatic what triggered the transitions of *hind- 'fallow buck, hind' (ON hind), *kwerk- 'throat' (pl. 'neck') (ON kverk), *si-dl- (?) 'herring' (layer I or Ia also possible), *sē-ing- (?) 'bed' (ON sæ(i)ng), *tīk- 'bitch' (ON tik), *wik- 'creek, inlet' (ON vik), *t(a)ug- 'ortug (unity)' (OEN/Gutn. *t(a)ug) and maybe *hnik 'sheaf' (OEN nek).

4. Conclusion

I have argued that root nouns in Proto-Germanic and the individual Germanic languages may be attributed to three chronological layers:

I Root nouns inherited from Proto-Indo-European.
IIa Substrate or loan words.
IIb Nouns transitioned from other declensions in Proto-Germanic.
III Nouns transitioned from other declensions in North Germanic.

I have further argued that the ablaut grade of the inherited root nouns (layer I) is predictable from the phonotactics of the root in partial accordance with the rules suggested by Nielsen Whitehead (2010; 2013; ms.):

1 Radical ē-/ō-grade with the structure CVC(C).
2 Radical zero grade with the structure CVRC.
3 Preservation of original a-vowel regardless of the structure.

However, these distributional rules should not be applied to the Germanic material until the subsequently created root nouns of layers IIa, IIb and III have been identified and filtered out. Also, we do not expect the rules to be fully operational until, depending on the preferred analysis, PIE *H in final syllables has been vocalised or an anaptyctic PG *u has been inserted between the resonant and the plosive in word-final *-VRT#.

At least three problems remain to be solved, though, viz. (1) that it is often impossible to distinguish between an original, Proto-Indo-European a-vowel (layer I) and an a-vowel that has entered the language through borrowing (layer IIa); (2) that it is not clear what triggered the transitions of layer IIb; and (3) that, even in layer III, we find a residual quantity of root nouns with no obvious catalyst. Future studies will hopefully unravel some of these matters.

References


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