Phonesthetics and the Etymologies of *Blood* and *Bone*[1]

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An updated version of this paper appears in *English Language & Linguistics* 25(2): 225–255. https://doi.org/10.1017/S1360674319000534

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ABSTRACT

The etymologies of English *blood* and *bone* are obscure. Although their cognates are well represented in the Germanic family, both lack clear cognates in other Indo-European languages. Various explanations of their origins have been proposed, including that they may be non-Indo-European (e.g. Hawkins 1987). *Blood* and *bone*, and their cognates, share an initial /b/ with numerous body-related words (e.g. *beard, breast, bosom*) throughout Germanic. This initial /b/ constitutes a phonestheme. Phonesthemes — 'recurring sound-meaning pairings that are not clearly contrastive morphemes' (Bergen 2004: 290) — are present in many Germanic languages, but their role in lexicogenesis is little understood. I suggest that *blood* and *bone* were formed by blending the initial /b/ phonestheme with two preexisting lexemes: PGmc.**flōda*- 'something that flows' and **staina*- 'stone.' Phonesthetic blending may also be the method by which English *dog* was coined (Gąsiorowski 2006), and may be a fruitful avenue for future etymological research.

1 INTRODUCTION

The etymologies of two common Germanic words, English *blood* and *bone*, are marked by their obscurity. Although their cognates are well represented within the Germanic family, both lack clear cognates in other Indo-European languages. Various explanations of their origins have been put forward, including the claim that neither is Indo-European (Hawkins 1987).

Figure 1 shows the prominent proposed etymologies of *blood*, plus some of its cognates, which are found in all three branches (Eastern, Northern, and Western) of Germanic.

Figure 1

Blood*'s Etymology*

Gothic *bloþ*, Old English *blōd*, Old Norse *blóð*, Dutch *bloed*, German *Blut*

PGmc. **blōda*- 'blood'

Derived from PGmc. **bléan*- 'to blow', relating to the notion of gushing (OED; Skeat 1887; Kroonen 2013), or **blóan*- 'to flower', relating to blushing (Kroonen 2013) or **bléda*- 'breath', with an association with 'life' (Kroonen 2013). Possibly related to PIE **bhle*- 'swell, blow up, bubble' (Boutkan & Siebenga 2005). Watkins (2011) suggests PIE **bhel*- 'to thrive, bloom', suffixed form PIE **bhló-to*- 'possibly in the meaning' 'swell, gush, spurt'. Orel (2003) seconds this position, but asserts that **bhel*- itself meant 'to swell'. Boutkan & Siebenga (2005) suggest that this may not descend from PIE at all.

As an anatomical term, *bone* refers to elements of the skeleton, but its cognates are polysemous: in Dutch and the Scandinavian languages, it may mean 'bone' or 'leg', while in German, it predominantly means the latter. (*Knochen* is the regular German word for 'bone'.) No cognate is found in Gothic. Figure 2 shows its widespread etymologies and some of its cognates.

Figure 2

Bone*'s Etymology*

Old English *bán,* Old Norse *bein* 'bone, leg', Dutch *been* 'bone, leg', German *Bein* 'leg, bone (archaic)'

PGmc. **baina*- 'bone, leg' (Kroonen 2013; but see below)

If connected to Old Norse *beinn* 'straight', it may be derived from PIE **bheh*$_2$- 'to shine', assuming that PGmc. **baina*- originally meant 'beam, ray, post' (Kroonen 2013). Alternatively, original meaning in PGmc. may have been 'long bone' (OED) or just 'bone' (Urban 2015; Orel 2003). May also come from PIE **bhei*- 'to strike' (Orel 2003). Hawkins (1987: 75) claims non Indo-European etymology.

The association between ON *beinn* 'straight' and ON *bein* 'bone, leg' is dubious; the *Oxford English Dictionary Online* (hereafter OED) claims this as 'bare conjecture' and calls into question 'the standing of the Old Norse adjective' itself; Orel (2003: 32) and Kroonen (2013) call for considerable semantic elasticity to account for the name of a basic body part, and neither seems especially confident in their disparate accounts.

Both *blood* and *bone* (and their cognates) share an initial *b*- with many other body-related words throughout Germanic (e.g. *beard, brain, breast*). These words constitute what Dwight Bolinger (1940: 65) dubbed a 'word constellation': a group of words sharing similar semantics and a certain phonetic characteristic – in this case, an initial /b/. I suggest that the association of sound and meaning played a critical role in the lexicogenesis of *blood* and *bone*, formed by blending the initial *b*-, suggestive of the group of body-related words, with two pre-existing lexemes: PGmc.**flōda*- 'something that flows' and **staina*- 'stone', both of which are uncontroversially derived from PIE (Boutkan & Siebenga 2005; Watkins 2011: 87; Kroonen 2013).

2 PHONESTHESIA

Phonesthemes (sometimes *phonaesthemes*) are 'frequently recurring sound-meaning pairings that are not clearly contrastive morphemes' (Bergen 2004: 290). The term was coined by Firth in 1930, but the phenomenon it applies to has been described in English since as far back as 1653, when John Wallis included a list of evocative sound clusters in his *Grammatica Linguae Anglicanae*. Some examples on Wallis' list were *wr-*, showing 'obliquity or twisting', as in *wry, wrong, wreck,* and *wrist,* and *br-*, evoking a 'violent and generally loud splitting apart', as in *break, breach,* and *brook* (Magnus 2013: 198). Wallis argued, like Bolinger (1940) would three centuries later, that the meanings of some words could be ascertained through the sound clusters of which they are composed; in *sparkle,* for instance, the *sp-* 'indicates dispersion', *-ar-* evokes 'high-pitched crackling', *-k-* indicates 'sudden interruption', and *-l* 'frequent repetition', as in *wiggle, wobble,* and *twiddle* (Magnus 2013: 199). Most phonesthemes in English are onsets or initial consonants, but rimes and codas may be phonesthetic as well (Lawler 2006: 1–2; Firth 1930: 185). Phonesthemes can occur in any lexical category (Kwon & Round 2015: 14).

Today, phonesthemes are often thought of within the domain of sound symbolism, a broad field that also encompasses onomatopoeia and ideophones, defined by the hypothesis that 'the meaning of a word is partially affected by its sound (or articulation)' (Magnus 2013: 192). To some extent, sound symbolism is at odds with the notion that the relation between the signifier and the signified is arbitrary, but Blust (2003: 201) sets phonesthemes apart from onomatopoeia, from which they 'appear to be entirely independent'. Instead, their form is arbitrary: their semantic associations arise from their 'use and application to new words in the lexicon', and not some inherent psychological association of sound and meaning (Williams 2013: 597). Firth (1957: 198) railed against associating phonesthemes with 'the fallacy of sound symbolism', positing only that 'a definite

correlation can be felt and observed between the use and occurrence of certain sounds and sound-patterns […] and certain characteristic common features of the contexts of experience and situation in which they function' (45). There is no empirical evidence that phonesthemes tend to occur in any particular semantic domains (Blust 2003: 201), which further distinguishes them from onomatopoeia, which is relegated to imitative sounds.

In order for a phonestheme to exist, there must be a set of words that share similar semantics and a similar phonological form. Bolinger (1940: 65) refers to these groups as 'word constellations'; the term used in this paper is 'phonesthetic group'. A phonesthetic group exists regardless of its composite words' 'etymology and language of origin' (Wright 2012: 5), and may contain words belonging to different lexical categories. The number of words necessary to constitute a phonesthetic group is not defined, but the larger the group, the more canonical it is understood to be (Kwon & Round 2015: 13). A phonestheme's location within a word is important: a given phoneme must appear in a particular position in a series of words with a shared semantic domain, such as the onset of the first syllable or coda of the final syllable, for it to become associated with said domain. In Germanic languages, most phonesthemes occupy the beginnings of words.

Bolinger (1975: 219) writes that the strength of a phonesthetic group can influence the meaning of a word that originally shared with the group a formal, but not semantic, feature. For example, *bolster* originally indicated 'a padded and comfortably soft support', but, influenced by other *b-* initial words like *brace*, *bolt*, and *buttress*, came to suggest hardness or rigidity. (Bolinger asked seventeen people to elaborate on what sort of support *bolster* suggests; thirteen of them voted for 'rigid'.)

It has also been argued that phonesthesia can be a deciding factor in which words are borrowed. Firth (1930: 191) opined that 'the importance of

"phonaesthemes" in permanently naturalized borrowed words has not been properly recognized'. Carling & Johansson (2014: 208) write that 'a number of words in sound symbolic [i.e. phonesthetic] networks are loan words', noting that many cases are inter-Germanic, such as Swedish *glas* 'glass' from Middle Low German *glas* 'glass' from ON *gler*, all in the *gl-* 'light-related' phonesthetic group. Others are from outside of Germanic, like English *glair* 'white of an egg' and *glairy* 'wisced, slimy', from Old French *glaire* 'egg white' (*ibid.*).

The question of where phonesthemes originate remains unanswered. Boussidan et al. (2009: 36) suggest that they may have originated as morphemes in a proto-language, which 'may have survived through generations'. Watkins (2011) lists several Indo-European roots as the progenitors of some Germanic phonesthemes (see §2.1, below). Blust (2003: 199–200) thoughtfully considers this topic, but concludes that 'the origin of phonesthemes remains enigmatic'.

There is considerable debate over whether phonesthemes are morphemic. Blust (2011: 407) characterizes phonesthemes as 'submorphemes', because they 'can be identified by recurrence, but not by contrast'. Kwon & Round (2015) review this issue, and conclude that phonesthemes fall within the realm of morphology. It is sufficient for my purposes here to state that a phonestheme expresses a 'recognizable semantic association' without necessarily being classified as a morpheme.

2.1 *Phonesthemes in English and Their Role in Lexicogenesis*

Three well-attested English phonesthemes are *gl-*, *sn-*, and *gr-*. *gl-* suggests luminousness; it appears in words such as *glisten*, *glow*, *gleam*, *gloss*, *glimmer*, and *glitter*. Bolinger (1965: 221–222) estimated that half of the common English words beginning with this cluster had to do with 'light/vision'. Bergen (2004: 293) consulted an online version of *Webster's 7th Collegiate Dictionary* and found that 39% of word types and 60% of word tokens beginning with *gl-* related to

'light' or 'vision', and that 28% of word types and 19% of word tokens beginning with *sn-* had definitions relating to 'nose' or 'mouth'. This was described as an 'overwhelming statistical pairing'. Working with the *Middle English Dictionary* (hereafter MED), Williams (2013: 599) found most *gl-* words in Middle English to fall within five main semantic fields: 'light/vision' (*glisnen*, *glou*), 'joy/gladness' (*gladful*, *glé*), 'vitreousness/viscosity' (*glas*, *gleu*); 'quick/smooth movement' (*glíden*, *glent*); and deceptiveness (*glóse*, *gláberer*). Tabulating all ME *gl-* words in the MED, he found the ratio of phonesthetic to questionably/non-phonesthetic words to be 151: 84 (i.e. nearly 2:1). Williams also identified certain words as bridging these semantic categories. For example, *glem* connoted both brightness and deception; while it literally meant 'a beam or radiance of emitted light', it also indicated 'a type of what is evanescent or fleeting', as in the phrase *maken a glem*, 'to make a deceptive show' (603). Williams found that these polysemous linking words were employed at key points in the Middle English *Pearl* (late 14th century) to heighten the poem's effect.

sn- suggests an association with the nose, as in *snot*, *snort*, *snout*, *snore*, and *sniffle*. According to Philps (2011: 1123), approximately a third of all lexical stems beginning with *sn-* in the *New Short Oxford English Dictionary* have to do with nasality. Francis & Kucera (1982) found 28% of word types and 19% of word tokens beginning with *sn-* in the Brown corpus to have meanings related to 'nose' or 'mouth', a percentage far above chance (Bergen 2004: 293). The association of *sn-* with the nose may account for the modern form of *sneeze*: this word is a cognate of the Dutch *fniezen*, Danish *fnyse*, and Swedish *fnysa*, 'to snort'. In Middle English, the word was *fnese*, from the OE *fnésan*, 'to sneeze, puff, snort'; it's not attested to as *sneeze* until 1493. The transformation of Middle English /f/ to English /s/ is not the result of a regular process of sound change; it is accounted for by the semantic pull of other nose-related *sn-* words, like *snore*,

snoke ‘to snuff or smell’, and *snite* ‘to clean or wipe the nose’ (Burridge & Stebbins 2015: 136).

gr- suggests ‘grasping’, appearing in such words as *grasp, grip, grab, grapple,* and *grope* (Kwon & Round 2015: 16). Piotr Sadowski (2001) studied *gr-* in Middle English alliterative verse, identifying six main clusters of meaning: hand-object contact (*graspen, gropen*), ‘the processes of natural life occurring above the ground’ (*gras, ground*), words pertaining to ‘the inside of the earth and things underground’ (*grave, gravel*), agriculture words (*grist, grain*), words involving negative emotions relating to fear (*grendel*, *grim*), and words involving negative emotions relating to sadness (*greven*, *gronen*). Like Williams, Sadowski found these groups connected by linking words. He also determined that the majority of phonesthetic *gr-* words were of native Anglo-Saxon origin.

Because these three phonesthemes appear in several other Germanic languages (Blust 2003: 188; Abelin 1999: 135; Firth 1957: 45), it is suggested that their phonesthesia dates back to Proto-Germanic (Carling & Johansson 2014: 206). Watkins (2011: 29, 84) suggests that *gl-* and *sn-* be traced back to Proto-Indo-European (hereafter PIE), reconstructing their etyma as **ghel-* ‘to shine’ and **snu-* ‘imitative beginning of Germanic words connected to the nose’.

2.1.1 -g *‘animal name’*

One of the more interesting English phonesthemes is the final *-g* in the names of several animals: *dog*, *frog*, *pig*, *stag*, *earwig*, *teg* (‘a sheep in its second year’), *hog* (and its compounds, like *warthog*), *bug*, and *slug*. This phonesthetic group is presented in Table 1, divided into five subgroups. The first two contain names that have been in the group continuously since Old English. Subgroup 3 contains more recent additions. The fourth contains *sucga*, a group-member in Old English without a descendant in the language today. The final subgroup contains *bagga*, a group member in Old English whose modern form, *badger*, does not end in *-g*,

and which is therefore not a member of this phonesthetic group any longer. Some of the Old English forms, marked with an asterisk, have been reconstructed from placenames (Hogg 1982: 195).

Table 1

The -g Animal Names

	English	**Old English**
1	*dog*, *frog*, *pig*, *stag*, *earwig*, *teg*	*docga*, *frogga*, **picga*, **stacga*, *(ēar-)wicga*, **tacga~tecga*
2	*hog* (+ its compounds, e.g. *hedgehog*)	*hogg~*hogga*
3	*bug*, *slug*	N/A
4	N/A	*sucga* 'hedge sparrow'
5	N/A [*badger*]	*bagga* 'badger'

2.1.2 *Old English* -cga, -gga *'hypocoristic animal name'*

According to the OED, the words in subgroup 1 form a set 'of uncertain or phonologically problematic etymology' dating back to Old English, where each of them contained the medial [gg] geminate, written as *-cg-* or *-gg-*. Hogg (1982: 195) highlights this geminate's rarity: including actual samples plus those reconstructed from place names, it appeared in only 21 Old English words. The majority of geminates in Old English are attributed to West Germanic doubleting of a consonant before **j*; however, a [gg] cluster in this environment would have subsequently been palatalized early on in the development of Old English. The fact that these words contain [gg], as opposed to [ʤ], indicates that they cannot have resulted from West Germanic gemination, meaning that their development was the result of an innovative process taking place within Old English itself.

A significant portion of all Old English [gg] words are animal names that take the form of masculine weak nouns, including the etyma of the words listed above: *docga*, *frogga*, **picga*, **stacga*, *(ēar-)wicga*, and **tacga ~ *tecga*, as well as *sucga* 'hedge sparrow'.[2] Gąsiorowski (2006: 279) suggests that *bagga* 'badger' be added to this list, and the OED would add *hogga* 'hog', a strong masculine that may originally have been weak. Most of these words have etymologically transparent, 'more important' synonyms in Old English: *hund*, *frosc* ('the normal form in the Germanic languages') or *frox*, *swīn*, *heorot* 'male deer', *ceafer* 'beetle, locust, caterpillar, or other pest', *scēap* or *ēowu*, and *spearwe* 'sparrow', which they only came to replace gradually (Hogg 1982: 196). As a result, there is general consensus that the [gg] animal names were originally hypocoristic forms (Gąsiorowski 2006: 280; Hogg 1982: 196; OED).

2.1.3 *Development of the Phonesthetic Group*

While *hog* is generally considered a Celtic borrowing (see Welsh *hwch*, Cornish *hogh*), it is suggested by both Hogg (1982) and the OED that it 'may have been partially assimilated to the group of which **picga* is a member, on purely semantic grounds' (Hogg 1982: 197). This semantic pull may also be responsible for *frogga*, derived by replacing the final consonants of the original *frosc~frox* 'frog' with the *-gga* phonestheme (OED; Gąsiorowski 2006: 280). *Bug* 'insect', first attested to in 1622, was influenced by this process as well. The OED notes:

> Etymology unknown. Usually supposed to be transferred sense of *bug* ['an object of terror']; but this is merely a conjecture, without actual evidence […] Sense 1 ['a name given vaguely to various insects'] shows either connection or confusion with the earlier *budde*; […] *shorn bug* appears for Middle English *scearn-budde (-bude)* < Old English *scearn-budda* dung beetle.

Just as *frosc~frox* became *frogga* within Old English, ME *budde* became English *bugge*, later *bug* – and both transformations were apparently motivated by the words' semantic connections with the same phonesthetic group.

Brian D. Joseph (1997: 209–210) calls this phenomenon 'phonesthematic attraction', applicable when 'sound symbolic clusters of words […] draw other words into their "orbit", so that these other words change their form in the direction of the sound symbol'. More poetically, Bolinger (1953: 328) describes this as 'a change of form to make the word seem to mean what it really means'.

Using the analogical transformation of *frosc~frox* to *frogga* as a starting point, Gąsiorowski (2006: 281–282) suggests that *docga* is derived from *dox ~ dohx* 'yellowish-brown', an appropriate source given the fawn or brindle color of the mastiff. The usage of color words for hypocoristics is well-attested in Old, Middle, and Modern English: Gąsiorowski (2006: 280) mentions *Blæcca,* from *blæc*, an Old English nickname for someone with black hair; *Bruin* 'bear', printed by Caxton in *Reynard the Fox* (1481), relates to *brown*; and *Red, Blondie,* and *Blackie* are commonly used to refer to people or animals with hair of those colors today.

Under Gąsiorowski's analysis, the lexeme *dox* 'yellowish-brown' was taken as the base for the creation of a new term for an animal of that color. The new lexeme was intended to fit into a group of other animal names, all of which ended in *-cga* or *-gga*. As such, the base was blended with this phonestheme. Its final consonant sounds were replaced with *-cga*, thereby making it conform to the rest of the series (281–282).

Figure 3

Dog

dox	x	*-cga*	=	*docga*
'yellowish-brown'		'hypocoristic animal name'		'dog'

This process is similar to that by which *frosc* yielded *frogga,* and by which *fnese* became *sneeze*, but differs in that it took a distinct lexeme as its base. *Frosc* always meant 'frog', and *fnese* always meant 'sneeze' – their phonological forms were changed in order to fit them into phonesthetic groups, but their actual meanings remained the same (although their formality diminished). *Dox,* on the other hand, never referred to any creature in particular. By blending it with the phonestheme *-cga*, 'animal', a new lexeme, *docga* 'dog', was created.

Finally, *Slug* completes the group. From the Middle English adjective *slugge* 'to be lazy, slow, or inert', a likely Scandinavian borrowing, it is not attested to as an animal name until 1703. Although its derivation has nothing to do with its phonesthetic quality, this is a member of the group today due to its shared semantic and phonological affinities.

2.3 b- *'body-related'*

I suggest that *b-* is a phonestheme in English, indicating 'part of the body, body-related'. Magnus (1998) proposed the phonesthetic group of *b-* 'body parts', and calculated the words in this group as constituting 5.31% of the 583 English words with an initial *b-*.[3] Notably, she populated this phonesthetic group with fewer words than I do.

The words that I have placed in the *b-* phonesthetic group, listed in Table 2, all feature an initial *b-* and are spread across four primary semantic subdomains relating to the body: external body-parts (including some of animals, e.g. *beak, bill*), internal body-parts (including fluids and gases), bodily injuries or malformations, and bodily verbs, as well as *body* itself. A few are body-related adjectives. I also included two words which survive only in dialectical English: *bree* 'the eyelid', described in the OED as 'obsolete except in Northern English', and *bouk* 'the trunk of the body', now 'Scottish and dialectical'.

The first column lists basic words, while the second lists relevant derivatives, e.g. dialectical variants, clippings, or compounds. The third column provides a brief etymology of each word. For development from Old English, my sources were Hall's (1960) *A Concise Anglo-Saxon Dictionary*, Skeat's (1887) *Principles of English Etymology, Vol. I*, and the OED. Proto-Germanic (PGmc.) reconstructions are from Kroonen's (2013) *Etymological Dictionary of Proto-Germanic*. Where Kroonen provided no etymology, I used Orel's (2003) *A Handbook of Germanic Etymology*; where Orel was lacking, I turned to Fick et al'.s (1909) *Wortschatz der Germanischen Spracheinheit* (cited as 'Fick' in Table 2 to cut down on length). Although Kroonen's reconstructions take primacy, I consulted all three of these dictionaries for background information and alternative analyses. PIE reconstructions are from Watkins's (2011) *The American Heritage Dictionary of Indo-European Roots*, with Fortson's (2010) *Indo-European Language and Culture* consulted as well.

Notes on the reliability of the Proto-Germanic and PIE roots are informed by the sources listed above plus Boutkan & Siebenga's (2005) *Old Frisian Etymological Dictionary* (cited in Table 2 as 'Boutkan' to save space) and Liberman's (2008) *An Analytical Dictionary of English Etymology*, as well as Liberman's (nd.*a*) review of Boutkan & Siebenga, Beekes' (nd) 'rejoinder' to that review, and Liberman's (nd.*b*) response.

Table 2

Body-related b-*words in English*

Basic Word	**Derived Words**	**Brief Etymology**
back	backbone, backside	OE *bæc*, PGmc. **baka*- (Orel). No likely PIE root. Possibly related to Slavic **bokъ* 'side'.

ball	bollock (early OE; *ball* + *-ock* ‘diminutive’)	OE *beallucas*, PGmc. **ballan-* ‘ball’, PIE **bhel-* ‘to blow, swell; with derivatives referring to various round objects and to the notion of tumescent masculinity’. *Bollock* is attested to before *ball*, although *bollock* contains the diminutive *-ock* suffix, suggesting *ball*’s precedence. See *buttock*.
bare		OE *bær*, PGmc. **baza-*, PIE **bhoso-* ‘naked’
beak		ME *bec*, French *bec*
beard		OE *beard*, PGmc. **barzda-* ‘beard’. Strong doubt over origins. Although attested in other IE languages, likely borrowed into Balto-Slavic, and possibly Latin, from Germanic (Boutkan, Kroonen). Watkins posits PIE **bhardh-á-* ‘beard’. No consensus.
belch		OE *bealcan, bealcettan, bælcan*. Unknown etymology. Perhaps related to PGmc. **bulgjan-~*bulkjan-* ‘to bellow’, from PIE **bhel-* ‘to cry out, yell’, but this is debated (Kroonen). Fick gives PGmc. **bel-* ‘sound, roaring’ as the source of OE *bealcan*, Dutch *balken* ‘screaming of a donkey’, *bulken* ‘roar’, Middle Dutch *bulghen* ‘burp’, *bulsen* ‘cough’, ME *belsen* ‘yell’, and others, listing PGmc. **buljan-* (i.e. Kroonen’s **bulgjan*) as a derived form.
bell-end		Compound, 1827

belly	belly button	OE *bælg*, *belg* ‘a bag, skin (for holding things)’, PGmc. **balgi-* ‘skin bag’, PIE **bhelgh-* ‘to swell’
bile		French *bile*, Latin *bílis*
bill		OE *bile*. Unknown etymology. ‘Not found elsewhere in Germanic’. Watkins (2011) suggests PIE **bheiə-* ‘to strike’
bite (*n.* & *v.*)		OE *bite*, PGmc. **bítan-* ‘to bite, be sharp’, PIE **bheid-* ‘to split’
bladder		OE *blǣdre* ‘blister, bladder’, PGmc. **blaðron* ‘bladder’ (Orel), PIE **bhlé-* ‘to blow’
blain		OE *blegen*. Unknown etymology. OED suggests PGmc. **bleganâ-*. Not likely IE.
bleat		OE *blǽtan*, PGmc. **blējan*, PIE **bhlé-* ‘to howl’. Disagreement over PIE form, but broadly understood to be IE.
blemish		ME *blemyss*, *blemiss*, and other forms, Old French *blemiss* ‘to render livid or pale’. Further etymology unclear. Watkins suggests OF borrowed from PGmc. **blas-* ‘shining white’, ultimately from PIE **bhel-* ‘to shine, flash, burn’
blind		OE *blind*, PGmc. **blinda-*, PIE **bhel-* ‘to shine, flash, burn’
blink		ME *blynke*, ‘occasional variant of [ME] *blenk*’, itself from OE *blencan* ‘to deceive, cheat’, PGmc. **blanka* ‘colorless?’ (question mark Kroonen’s), PIE **bhel-* ‘to shine, flash, burn’

blister		ME *blester*, *blister*, possibly from Old French *blestre* ‘tumor’. OED: ‘An Old English *blǽster*, *blést*er or *blýster*, cognate with the Old Norse [*blástr*, *blǽstri* ‘swelling’] or Dutch [*bluyster* ‘blister’], might have been expected, but is not found’. Kroonen (2013) suggests ME borrowed an OF word which developed from a Latin borrowing from Germanic, **bulgjón.*
blood	bleed	OE *blód*, PGmc. **blōda*- ‘blood’. No clear further etymology – possibly from PIE **bhlò-to*- ‘swell, gush, spurt’, derived from **bhel*- ‘to thrive, bloom’; or meaning ‘life’, derived from PIE **bhlé*- ‘to blow’. See discussion in Kroonen. Widely suggested as non-Indo-European, as in Boutkan.
blow		OE *bláwan*, PGmc. **blēan*-, PIE **bhlé*-
body		OE *bodig*; cognates in OHG *potach* ‘body, trunk, corpse’, regional German (Austrian, Swabian, Bavarian) *Bottig*. No proposed PGmc. or PIE etymology.
boil *n.*		OE *býl*, PGmc. **bùljò(n)* (Orel), PIE **bheuə*- ‘to be, exist, grow’ or **bhelgh*- ‘to swell’. Unclear etymology; generally considered IE.
bone	boner (1962)	OE *bán*, PGmc. **baina*- ‘bone, leg’. Dubious IE etymology; maybe meant ‘beam, post, ray’, from PIE **bheh*$_2$- ‘to shine’; also possibly from PIE **bheiə*- ‘to strike’; see definitions in Kroonen

		and Orel. Often suggested as non-Indo-European, as in Hawkins (1987: 75).
bosom		OE *bōsm*, PGmc. **bosmaz* 'bosom, breast'. Only in West Germanic. Not likely IE.
bottom	botty (1874), booty (1926; from botty), batty (1935; from botty, Caribbean)	OE *botm*, PGmc. **budman*~**buttman*, PIE **bhudh-* 'bottom, base'. OED: *bottom* as anatomical term dates to 1794 – but then what of Shakespeare's Bottom appearing as an ass in *A Midsummer Night's Dream* (c. 1590)? This pun relies on *bottom* and *ass* being synonyms.
bowel		ME *buel*, *bouel*, Old French *boel*, *buel*, *bouel*, late Latin *botellus* 'pudding, sausage, a small intestine'
bouk ('Now only Scottish and dialectical')		OE *búc*, PGmc. **būkaz* 'belly' (Orel). No likely PIE root. Maybe from **beu-*/**bheu-* 'imitative root […] associated with the notion 'to swell'' (Watkins).
brain		OE *brægen*, PGmc. **bragna*, unclear PIE etymology. PIE **mregh-m(n)o-* 'brain' is the classic etymon, but this has been broadly challenged for phonological reasons. Maybe from PIE **bherəgh* 'high' (Orel), maybe from PIE **bhragno* 'something broken' (Liberman), maybe not PIE at all (Boutkan). If not from PIE, then no cognates outside of Western Germanic.
breast		OE *bréost*, PGmc. **breusta-*, **brust-* 'breast, chest', PIE **bhreus-* 'to swell'

breath	breathe	OE *brǽþ, bréþ*, PGmc. **brēan* ‘to fume, smell’, PIE **gwhré-* ‘to smell, breathe’
bree (‘Northern English’)		OE *brǽw, bréaw*, PGmc. **brēwō-*, PIE **h₃bʰrēuH-o* (Boutkan, Kroonen)
brow		OE *brū*, PGmc. **brú-* ‘bridge’, PIE **bhrú-* ‘eyebrow’. Etymology sometimes confused with that of *bree*; possibly both are from the paradigm of a shared etymon in PIE (Kroonen).
bruise		OE *brýsan* ‘to crush, bruise’. Unknown etymology. Watkins provided PGmc. **brúsjan*, PIE **bhreu-* ‘to cut, break up’
bubby	boob (1908; shortening of bubby; as ‘breasts’, 1949), booby (1934; from bubby)	1690, unknown etymology. Compared with German *bübbi* ‘teat’.
bum		ME *bom*. OED: ‘probably onomatopoeic […] to be compared with other words of similar sound and with the general sense of ‘protuberance, swelling’, e.g. *bump, bumb* ‘a pimple’, modern Icelandic *bumba* ‘belly of a cask or other vessel’, French *bombe* ‘bomb’’. Clearly the OED is here referring to a phonesthetic group.
bump *n.*		OED: ‘onomatopoeic’. Dated to 1566. No certain etymology.
bunion		First attested 1718. Perhaps from Italian *bugnone* ‘a push, a bile, a blane, a blotch’ (Skeat), but OED is very skeptical of this. No certain etymology.

burp		OED: ‘imitative’. Dated to 1932. Kroonen: ‘of sound-symbolic origin’, akin to, but not descended from PGmc. **rup(p)ōn*- ‘to belch’
bust	busty	First attested 1660. French *buste* ‘upper part of the trunk’, Italian *busto* ‘upper part of the human trunk, from the neck to the hips’, possibly from Latin *bustum* ‘funeral pyre, tomb’
buxom		ME *buhsum*, probably OE **(ge)búhsum*, possibly PGmc. **beugan*-~**būgan*- ‘to bow, bend’. Acquired its modern meaning late, perhaps only after *bust* came to refer to a woman’s bosom (c.1858).
butt	buttock (1300; *butt* + *-ock* ‘diminutive’)	ME *buttok*. Possibly PGmc. **buttaz* ~ **bútaz* (Orel), the etymon of Norwegian *bútr* ‘log’, Low German *butt* ‘blunt, plump’, and Middle High German *butze* ‘cut out piece’ (Orel). Possibly related to **bautanan* ‘to beat’, and thence PIE **bhau*- ‘to strike’ (Orel, Watkins), but this semantic leap is never explained. *Buttock* is attested to before *butt*, although *buttock* contains the diminutive *-ock* suffix, suggesting *butt*’s precedence. See *bollock*.

Nearly all of the words date back to Proto-Germanic, suggesting that this phonesthetic group existed in that language as well. This is somewhat supported by the phonesthetic group’s presence in other modern Germanic languages. For example, German includes many cognates of English, such as *Bälle* ‘balls’, *Bart*

'beard', and *Busen* 'bosom', but also *Beule* 'bump' and *Bauch* 'stomach'. Still, phonesthesia is more prominent in English than other Germanic languages, and the above group is no exception. A comparison can be made to the *sn-* 'nasal/oral area' phonesthetic group, which Blust (2003: 188) reckons as containing 19 words in English, 11 in German, and 12 in Dutch.

Alliteration is the major characteristic of the oldest surviving Germanic poetry (Lehmann 1971: 4; Fortson 2010: 350). It is attested to in Old High German, Old Icelandic, Old Saxon, and Old English (23). Alliteration is found in several of the oldest runic inscriptions, such as that on the fifth century Gallehus horn: *Ek HlewagastiR HoltijaR horna tawidó* ('I Hlegestr of Holt made the horn') (Lehmann 1971: 28). The Ström whetstone from Norway, carved in the early seventh century, includes the inscription *wate hali hino horna hahaska þi haþu ligi* ('Let the horn moisten this hanging stone, so that the grass may lie') (Owen 1928: 3). These runes are believed to be the closest surviving approximants of Proto-Germanic (Lehmann 1971: 77). Early runic inscriptions like these date to 'some stage of development between a relatively homogenous [North-West Germanic]' and the earliest manuscripts in the differentiated Germanic languages (Findell 2012: 3).

Many *b-* 'body-related' words appear together in verse. This is demonstrated in the Old English *St. Guthlac A* poem (late 10th century). When demons attack Guthlac, an angel commands them not to harm him: *Ne sy him* ***banes bryce****, ne* ***blodig*** *wund* ('let there be in him no break of a bone, nor bloody wound') (Gollancz 1895: 147).

The common alliterative grouping of words from this phonesthetic group may have contributed to the coining or borrowing of some *b*-initial body-related words. The OED cites the *Cursor Mundi* (c.1325) as the first attestation of *blester* 'blister' in Middle English, where it appears alongside *bile* 'boil' and *bolnand* 'swelling (up)' in a passage about the plagues of Egypt affecting the *bodis* of the

pharaoh's people: ***Bile** and **blester**, **bolnand** sare* ('boil and blister, swelling sore').

In England, alliteration rhyming largely replaced alliteration after the Norman conquest, although it survived in the north and the west. There was something of an alliteration revival from the thirteenth through sixteenth centuries, perhaps suggesting a continued tradition or Scandinavian influence (Lehmann 1971: 23–24).

3 Germanic Vocabulary

From the inception of Indo-European philology, Germanic has been regarded as something of an outsider. Sir William Jones (1798: 423) described 'the Gothick' and Celtic languages as 'blended with a very different idiom'. One of the hallmarks of its apparent otherness is its vocabulary: it is estimated by some scholars that up to a full third of the Germanic lexicon is of non-Indo-European origin (Feist 1914: 88; Hawkins 1987: 71; Kroonen 2011: 126). Hawkins asserts that these words 'belong to the very core of the basic vocabulary of Common Germanic', being particularly well represented in a few semantic domains: 'seafaring terms [*sea*, *ship*]; terms for warfare and weaponry [*sword*, *shield*]; animal names […] and terms for hunting and farming [*lamb*, *stork*]; communal activities and social institutions and titles [*king*, *knight*]', as well as '*drink*, *leap*, *bone*, and *wife*' (1987: 74–75). Others have arrived at far more conservative estimates, including Prokosch (1939: 23), who posits 'a negligible quantity' of substratum words, and Kroonen (2013), who cites 15% as 'etymologically unclear' and only 4-5% as explicitly non-Indo-European.

3.1 *Germanic Substrate Hypothesis*

The Germanic Substrate Hypothesis is a popular but controversial theory that explains the origins of these etymologically difficult words. It posits that these are

the remnants of an extinct substrate language spoken by the natives of northern Europe (Sŏrgo 2015: 13). The Germanic languages, it is argued, retained a large share of words from this substrate, but relics may be found in the Celtic, Slavic, Italic, and Baltic families as well (Boutkan 1998: 102). The hypothesis is that 'the Germanic family emerged from a contact language spoken by both the Indo-European newcomers and indigenous inhabitants' (Pereltsvaig & Lewis 2015: 138).[4]

Short of throwing the Germanic Substrate Hypothesis out entirely, many have argued that it has been grossly over-applied (Kroonen 2013; Kroonen 2011: 126–132; Roberge 2010; Pereltsvaig & Lewis 2015: 138). Kroonen (2012) supports a conservative version. He identifies several Proto-Germanic words with apparently non-Indo-European origin, all of which relate to agriculture. Although critical of the breadth of the Germanic Substrate Hypothesis, he asserts that 'at least a part of the data rather supports the Agricultural Substrate Hypothesis', which holds that the Indo-European migrants settled among Neolithic Europeans, from whom they borrowed at least agricultural terms (255). Others contend that the theory has essentially no merit at all (Schuhmann 2012). Liberman (nd.*a*) points out the improbability of the conquering Indo-Europeans needing to borrow basic vocabulary from the northern Europe's vanquished natives.

3.2 *Germanic Lexicogenesis*

Whether or not the Germanic Substrate Hypothesis is credible, it has called for a closer look at Germanic words with problematic etymologies. If a given word has unclear origins, advocates of the hypothesis often suggest that it is a relic of the Pre-Germanic substrate. This does not take into account the fact that new words are frequently coined in living languages, often without recoverable etymologies. In his review of Boutkan & Siebenga (2005), Anatoly Liberman (nd.*a*: 4) takes issue with the over-attribution of difficult words to a substrate origin, writing:

> In American slang, a state of nervous excitement can be called *tizzy*, *dither*, and *swivet*. Their phonetic shape is somewhat unusual, their related forms have not been found, and their origin, except possibly for *tizzy*, is 'unknown'. To complicate matters, *tizzy*, recorded only in the 19th century, first surfaced in texts with the meaning 'sixpence' (the same word?). *Tizzy*, *dither*, and *swivet* are not substrate words, are they?

Throughout the Germanic languages, the primary methods of lexicogenesis are compounding, derivation (the application of affixes to roots), and borrowing. Affixes may have their origins as independent roots, such as the *-hood* of *childhood*, from OE *hád* 'person, personality, sex, condition, quality, rank' – as a result, synchronic derived forms may have been compounds when they were first created. New words may also be introduced by several relatively minor processes; relevant to this paper are blending and phonesthesia.

3.2.1 *Blending & Phonesthesia*

Blending is an inexact process whereby at least two elements are combined to create a single, new lexeme, known as either a 'blend' or 'portmanteau' (Bauer 2006: 502). Bat-El (2013: 371) notes that 'blends are somewhat like compounds, but with fewer restrictions'. Blending is found in many languages, including English, Russian, Icelandic, German, and Hebrew (Pereltsvaig 2010; Tappenden 2009; Bat-El 2013).

Most blends use two separate lexemes as their elements. Typically, these elements are clipped word-internally at the blend's 'switchpoint' (Gries 2004: 645). The switchpoint is usually located at a place of phonetic or graphemic overlap. For example, the switchpoint of *spork* is *o*, found in both elements, *spoon* and *fork*. Blends, especially those without overlapping segments, usually bear the

prosody of the longer of the two elements. If a polysyllabic blend's first element is monosyllabic, it will not usually be clipped (e.g. *foolosopher*). If its first element is polysyllabic, but can be fit into the prosodic structure of the blend's second element, it usually won't be clipped either (e.g. *dramedy*). Blends are frequently used in the media (like as celebrity couple nicknames, such as *Brangelina* (*Brad* x *Angelina*)), as product names, and as scientific and technical terms (Szymanek 2005: 434).

Chris Smith (2014) explored the role of phonesthesia in blends, and found that 55% of blends coined between 1200 and 1900 fit within phonesthetic groups. For example, eight blends fit within the *fl-* 'motion, repeated or fluid' phonesthetic group: *flaunt*, *flounder* v., *flurry*, *flush*, *flare*, *flustrate*, *fluff*, and *flimmer*. This is unsurprising: if the first element contains an initial phonestheme, or if the second element contains a final phonestheme, then the resulting blend should contain that phonestheme too. More interesting is Smith's finding that blends are often reanalyzed to fit into phonesthetic groups that their elements might not have belonged to, especially when the blend's form is opaque enough that its elements are hard to recognize. In other words, phonesthematic attraction commonly asserts itself on blends. Another interesting finding is that only 1.5% of the 202 blends coined after 1900 seemed to be phonesthetic. This is attributed to the more recent blends tending to be more transparent, and thus less likely to be reanalyzed (29). It is also possible that blends belonging to phonesthetic groups tend to be longer lasting, perhaps owing to their phonesthesia. Smith uses the OED as the source for pre-1900 blends, but contemporary research for those coined after 1900. As a result, there is an imbalance in the blends studied: prejudice in favor of well-attested, long-lasting pre-1900 words, is mixed with a laissez faire acceptance of more recent neologisms, regardless of their popularity and longevity.

As discussed in §2.1.3, blends may be composed of a phonestheme and a lexeme from the outset. Several words from Lewis Carroll's 'Jabberwocky' are blends that depend in part upon phonesthesia to be understood, including *slithy* (*lithe* x *slimy*), with the pejorative *sl-* phonestheme (*sludge*, *slop*), and *mimsy* (*flimsy* x *miserable*), evocative of *whimsy* and *clumsy* as well as *flimsy* (Firth 1957: 194). Gąsiorowski's (2006) etymology of *dog* is also based on phonestheme-lexeme blending. Firth (1930: 186) suggests that many words formally identified as blends of two lexemes are really blends of phonesthetic groups. He takes issue with Jespersen's accounting of *twirl* as a blend of *twist* and *whirl*, suggesting that 'we cannot limit the habit background of *twirl* to those two words. This background probably includes the *tw-* and *-irl*/*-url* phonaesthemes'. It is likely that the whole *tw-* phonesthetic group is represented in this blend, including *twist, twitch, twinge,* and others – selecting only one as the definitive initial element of this blend is 'not […] a satisfactory basis' (*ibid*.). Algeo (1977: 60) also noted that blending may take place between 'classes of words', citing *glop*, 'a liquid or viscous substance or mixture; spec. inferior or unappetising food' (OED), which 'might be explained simply as a blend of *glob* and *slop*', but is more likely a blend of the *gl-*, found in *gloom*, *glug*, and *glum*, with the *-op* in *slop*, *drop*, and *flop*.

4 *Blood* and *Bone*

Supporters of the Germanic Substrate Hypothesis often mention *blood* and *bone* as words with possible non-IE origins (Boutkan & Siebenga 2005; Hawkins 1987). Neither has clear non-Germanic cognates or widely-accepted origins, and their proposed etymologies are semantically problematic. I believe the role of phonesthesia in lexical development has been overlooked, and that applying its principles to these words may be fruitful. Based on the attraction of the *b-* 'body-

related' phonestheme, I suggest that *blood* and *bone* were formed as phonesthetic blends, along the same lines as OE *docga* 'dog', as discussed in §2.1.3.

4.1 Blood

Figure 1 lists some of *blood*'s cognates and provides an overview of its proposed etymologies. It is reproduced as Figure 4 below.

Figure 4

Blood*'s Etymology*

Gothic *bloþ*, Old English *blōd*, Old Norse *blóð*, Dutch *bloed*, German *Blut*

PGmc. **blōda*- 'blood'

Derived from PGmc. **bléan*- 'to blow', relating to the notion of gushing (OED; Skeat 1887; Kroonen 2013), or **blóan*- 'to flower', relating to blushing (Kroonen 2013) or **bléda*- 'breath', with an association with 'life' (Kroonen 2013). Possibly related to PIE **bhle*- 'swell, blow up, bubble' (Boutkan & Siebenga 2005). Watkins (2011) suggests PIE **bhel*- 'to thrive, bloom', suffixed form PIE **bhló-to*- 'possibly in the meaning' 'swell, gush, spurt'. Orel (2003) seconds this position, but asserts that **bhel*- itself meant 'to swell'. Boutkan & Siebenga (2005) suggest that this may not descend from PIE at all.

None of these etymologies seem definitive. All require some imagination, none are accompanied by an explicit explanation of how the word arrived at its Proto-Germanic form, and none are reported with particular confidence: Kroonen (2013) lists three suggestions without any mention of which one is most likely valid, Watkins carefully qualifies his etymology, Boutkan doubts the PIE in his own entry, and Orel provides a different definition of the PIE root than does Watkins. Clearly, the etymology of *blood* is extremely uncertain: the only two things that all of the sources I've consulted agree on is that the word existed in Proto-Germanic as an a-stem noun, and that it is a derived form of some kind.

With apologies, I add to the discord. I propose that the etymon of *blood*, reconstructed by Kroonen (2013) as PGmc. **blóda-*, was formed by blending the *b-* 'body-related' phonestheme with the Proto-Germanic etymon of *flood*. Figure 5 below lists some of *flood*'s cognates and provides a brief sketch of its etymology.

Figure 5

Flood*'s Etymology*

OE *flód*, Go. *flodus*, Old Norse *flóð*, Dutch *vloed* 'flood, high tide', German *Flut* 'river, tide'

PGmc. **flōdu-* (Kroonen 2013; but see below)

A nominalized form of PGmc. **flōan-* 'to flow', thus 'something that flows'. Kroonen (2013) notes that 'the u-suffix has been replaced by a- and i- stems in many languages', and bases his reconstruction on the Gothic form. Orel (2003) gives **flōđan*, an a-stem, also derived from the PGmc. verb meaning 'to flow'. Fick et al. (1909) suggest an a-stem and u-stem, *flôda* and *flôdu*, as coexisting in PGmc.

Note that *flood*'s meaning has changed substantially through the centuries. As stated above, PGmc. **flōdu-* is simply a nominalization of the verb meaning 'to flow'; it could refer to a flood in the modern sense of the word, but also to any body of flowing water. This was still the case for OE *flód*. According to the *Dictionary of Old English: A to G Online* (Cameron et al. 2016; hereafter DOE), *flód* could variously mean 'flowing (in) of the tide', 'body of (flowing) waters', 'river, stream', 'sea, ocean', 'water (as opposed to other elements)', 'deluge, inundation', and the 'Deluge recorded in the book of Genesis', along with figurative meanings, like 'copious flow/stream (of blood/tears)' and 'a stream of

words'. That OE *blód* is recorded as also meaning 'vein' is intriguing, since *flód* could refer to water as well as the channel that carried it (Hall 1960: 52).

In combining *b-* 'part of the body' with **flōdu-* 'something that flows', one constructs a word that denotes the substance that flows through the body. I suggest that the semantics of this etymology are clearer than many of those previously cited: blood is the (most salient) fluid that flows through the body. This concept surfaces even today: when we speak of the *bloodstream*, we relate blood with flowing water, and when we say *bloodflow*, we connect *blood* with a cognate of *flood*.

4.1.2 *The Stem Problem*

For the etymon of *blood*, Kroonen (2013) reconstructs PGmc. **blōda-* as an a-stem, yet reconstructs the etymon of *flood* as PGmc. **flōdu-*, a u-stem. This presents a problem for my analysis: if **blōda-* is a blend of an initial *b-* with **flōdu-*, why should the stem of the noun have changed in the process?

I believe that the explanation is found in the way that Kroonen reconstructs **flōdu-*. He notes that Gothic *flodus* provides the basis of his reconstruction, writing that many Germanic languages have 'replaced' the apparently original u-suffix – but offers no explanation for this development, nor of why one should favor the Gothic over the Old English or Old Norse. Stem discrepancies themselves are not strange. For example, OE *gát* 'goat' and Gothic *gaits* are inconsistent: the Gothic suggests a PGmc. i-stem, reconstructed as **gaitiz*, but this would have produced OE *gǣt* and English [git]; the stem-type of the Proto-Germanic form is necessarily ambiguous (Peeters 1977: 167). In the case of *flood*, however, the cross-linguistic discrepancies are numerous. It seems likely that the variation existed in Proto-Germanic. If the Proto-Germanic form was grammatically unstable, this would explain the great variation in its child forms.

Kroonen is apparently alone in his reconstruction; I have found no independent sources that cite *flood*'s Proto-Germanic origin exclusively as a u-stem. Orel (2003) reconstructs **flóðan*, and Fick et al. (1909) reconstruct **flôda* and **flôdu* as coexisting in PIE. As shown below, the stem for the etyma of *flood* and *blood* are identical in these two sources.

Table 3

Flood & Blood *Reconstructions*

	Flood	**Blood**
Kroonen	**flōdu-*	**blōda-*
Orel	**flóðan*	**þloðan*
Fick	**flôda* & **flôdu*	**blôda*

If the attested-to Germanic words in Table 3 are compared to the attested-to Germanic words in Table 4, it becomes immediately apparent that, apart from the initial *b-*, apart from Gothic, they are identical.

Table 4

Flood & Blood *by Language*

	Flood	**Blood**
OE	*flód*	*blód*
Go.	*flodus*	*bloþ*
ON	*flóð*	*blóð*
Du.	*vloed*	*bloed*
Gm.	*Flut*	*Blut*

The Gothic divergence is accounted for easily enough. Like Fick et al., I believe that **flōdu-*, a u-stem version of *flood*'s etymon, coexisted in Proto-Germanic with **flōda-*, an a-stem version of this same word. In Proto-Germanic, it was **flōda-* that was blended with *b-* to yield **blōda-*, which became Gothic *bloþ*. Meanwhile, it was **flōdu-* that became Gothic *flodus*. Meanwhile, **flōdu-* and **flōda-*, which coexisted in Proto-Germanic, competed for survival in the Germanic languages, leading to a noteworthy degree of variation.

4.1.3 Blood *as a Phonesthetic Blend*

In light of the above, I suggest the following blending process as responsible for *blood* and its cognates:

Figure 6

Blood

b-	x	**flōda-*	=	**blōda-*
'body-related'		'body of flowing water'		'blood'

In this sort of blend, there is a motivation to preserve as much of the second element as phonologically possible. As the initial *bl-* cluster is permissible in Proto-Germanic, the *b-* phonestheme only replaces the initial *f-* of **flōda-*, and not the entire onset.

4.2 Bone

Figure 2, reproduced below as Figure 7, lists some of *bone*'s cognates and summarizes its proposed etymologies.

Figure 7

Bone*'s Etymology*

Old English *bán,* Old Norse *bein* 'bone, leg', Dutch *been* 'bone, leg', German *Bein* 'leg, bone (archaic)'

PGmc. **baina*- 'bone, leg' (Kroonen 2013; but see below)

If connected to Old Norse *beinn* 'straight', it may be derived from PIE **bheh*$_2$- 'to shine', assuming that PGmc. **baina*- originally meant 'beam, ray, post' (Kroonen 2013). Alternatively, original meaning in PGmc. may have been 'long bone' (OED) or just 'bone' (Urban 2015; Orel 2003). May also come from PIE **bhei*- 'to strike' (Orel 2003). Hawkins (1987: 75) claims non Indo-European etymology.

As is the case with *blood,* there is little consensus regarding the development of *bone*. A derivational relationship with ON *beinn* is referred to by the OED as 'bare conjecture'. Even if the words shared a Proto-Germanic root, there is no reason to suggest that the word for 'bone' is derived from the word for 'straight' in Proto-Germanic, especially given that *beinn* 'straight' is attested to only in Old Norse. The possible semantic development from 'beam, ray, post' is opaque; Orel's (2003) connection to 'to strike' is unclear as well.

4.2.1 Bone*'s Polysemy*

Because of its polysemy in the Germanic languages, Kroonen (2013) reconstructs the meaning of **baina*- as 'bone, leg'. This is at odds with general consensus: Seebold (2001), Orel (2003), and Urban (2015: 385) reconstruct the original meaning as 'bone', while the OED provides 'long bone'. There is considerable evidence that PGmc. **baina*- meant 'bone', and that 'leg' was a later development. Urban (2015) bases this on many factors, including extensive internal evidence in the development of German, the surviving textual evidence,

and the meaning of *bone*'s cognates in most compounds and derived forms that include it.

Old Norse, Old English, and Old High German are the earliest languages with a written cognate of *bone*. No Gothic words for 'bone' or 'leg' have survived; the passages in the Bible that would have contained word for 'bone' are missing from Ulfila's translation (Cleasby & Vigfusson 1874: 55). In Old Norse, *bein* primarily meant 'bone', but a meaning of 'leg', specifically from the knee to the foot, is attested to in later sources (Cleasby & Vigfusson 1874: 55). The usual word for 'leg' in Old Norse was *leggr* (Arthur 2002: 85). OE *bán* chiefly meant 'bone', but could mean 'leg' too; *sceanca* – today's *shank* – was the more common word for 'leg'.

In none of these languages did the cognates of *bone* refer exclusively to the bones of the leg, and numerous compounds containing *bone*-cognates point to its general meaning. Consider the ON *viðbeina* 'collar-bone' and *höfuðbein* 'head-bones', OHG *brustbein* 'breast bone', and OE *cinbán* 'jawbone, jaw, chin'.

The hints at polysemy in Old English are found in a couple of compounds, including *bānece,* translated by Hall (1960: 33) as 'in pain in the thigh', and *bānrift*, 'leg armour, greave(s), literally 'bone-covering' or 'leg-covering', which was used to gloss the Latin *tibialis* (DOE). Like the situation in Old Norse, the OHG *bein* originally meant 'bone', but later came to mean 'leg' as well (Urban 2015: 374). Urban explains the semantic broadening of **baina*- as an example of metonymy, 'based on spatial contiguity' (2015: 375). The bones of the leg may have been the most salient, being the largest in the body.

4.2.2 Bone *as a Phonesthetic Blend*

Accepting the original Proto-Germanic meaning as 'bone', I suggest that **baina*- is a blend of the *b*- 'body-related' phonestheme with Proto-Germanic **staina*- 'stone'. Figure 8 below provides some of *stone*'s cognates and an overview of its

etymology. Table 5 compares *bone* and *stone* and their cognates across several Germanic languages. Gothic is absent because no cognate of *bone* is attested to in that language.

Figure 8

Stone*'s Etymology*

OE *stán*, Go. *stains*, Old Norse *steinn*, Dutch *steen*, German *Stein*

PGmc. **staina*- 'stone'

From PIE **stái*- 'stone' (Watkins 2011). Kroonon (2013) lists OCS *stěna*, Russian *stená* 'wall', and Greek *stía*, *stîon* 'small stone, pebble' as cognates. Orel (2003) seconds the Slavic connection, providing Proto-Slavic **stěna* '(stone) wall'.

Table 5

Bone & Stone *by Language*

	Bone	**Stone**
OE	bán	stán
ON	bein	steinn
Du.	been	steen
Gm.	Bein	Stein

The Germanic peoples were intimately familiar with both bones and stones, and runic inscriptions are found carved in both materials. Stones are the hard mineral objects abundant in the natural world, and bones are the hard, seemingly mineral objects in the body. I believe that thinking of a 'bone' as a 'body-stone' is semantically transparent – the only other real contender for this meaning would have been 'teeth'.

I suggest the following blending process as responsible for *bone* and its cognates:

Figure 9

Bone

b-	x	**staina-*	=	**baina-*
‘body-related’		‘stone’	‘bone’	

As with *blood*, as much of the second element was preserved as phonologically possible. Because an initial *bt-* cluster is illegal in Proto-Germanic, the *b-* phonestheme replaces the whole onset of the syllable.

5 Conclusion

Because of a paucity of data from outside Germanic, it is impossible to know the origins of words like *blood* and *bone* with certainty. As shown above, there is very little concord on their origins. The Germanic Substrate Hypothesis has accounted for many difficult words by calling upon a hypothetical substrate language. While this method may be valid, I believe that it is also fruitful to appeal to productive processes of word development. By applying the principles of phonesthetics to the problem of *blood* and *bone*, I believe that new avenues of etymology have been opened. I suspect that this sort of analysis may be useful in tackling other Germanic words with problematic etymologies; Gąsiorowski (2006) has already used it to good effect regarding the origin of *dog*, and Bolinger and Firth have used it to account for many other, perhaps less important words.

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FOOTNOTES

[1] Many thanks to Juliette Blevins, Michael Sargent, and Bill Haddican. This article is dedicated to my wife, Rebecca.

[2] *Wicga* survives in *earwig*, but was also a general term for an insect or beetle.

[3] Note that Magnus does not explain where she got her list of 583 English *b*-initial words.

[4] Sigmund Feist (1932) is often credited as the theory's originator. Although he asserts that 'the Pre-Germans […] had previously spoken a different language' (248) than the Indo-Europeans, he makes no claims regarding a special status of Germanic or of a particularly noteworthy linguistic substrate. His theory, in his own words, is 'that to the Pre-Germans of northern Europe speech as well as writing was brought by the Veneti-Illyrii' (251).