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ARTICLE

‘to know’, ‘to teach’, and ‘to learn’ in Germanic

Matteo Tarsi[1] and Stephen Laker[2]

[1]Dipartimento di Studi Umanistici, Università di Pavia, Italy and [2]Faculty of Languages and Cultures, Kyushu University, Japan
Corresponding author: Matteo Tarsi; email: matteo.tarsi@unipv.it

Abstract

Three Germanic verbs with the meanings ‘to know’, ‘to teach’, and ‘to learn’ can all be traced back to the same PIE root **leis-* ‘to follow a track’. While evidence for all three verbs is recoverable from Gothic, only two verbal derivates passed down into the West Germanic languages, and none survived into North Germanic (although there was later reborrowing from Old English). This article charts these developments as well as subsequent ones, including the emergence of new verbs that came to express these key concepts in West and North Germanic up to present times. This etymological trail is guided by insights from Conceptual Metaphor Theory, which seeks to understand how more familiar concrete concepts (e.g. ‘to follow a track’, ‘to grasp’, ‘to see’) capture more abstract ones like ‘to know’, ‘to teach’, and ‘to learn’ in language. The main findings are: (i) that the original system “stative ~ causative ~ present” reconstructible for Proto-Germanic on the PIE root **leis-* is best continued today in German, whereas English already refashioned it early on in its history. North Germanic does not directly continue any verbal formation on that root, whereas Gothic displays a “perfect” system; (ii) formations on PIE **ǵneh$_3$-* ‘to recognize’ and **u̯eid-* ‘to see’ are of common Indo-European heritage, whereas those on **leis-*, also found in nominal formations in Italic, may have arisen polygenetically in the two branches, as also possibly those on PIE **teng-*. Finally, (iii) only one conceptual metaphor among those found can be said to be of common Indo-European descent, namely TO KNOW IS TO RECOGNIZE/HAVE RECOGNIZED.*

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1. Introduction

This article is concerned with the verb-meaning triad 'to know', 'to teach', and 'to learn' in Germanic. All three meanings can be traced to the PIE root **leis-* in Gothic (i.e. Go. *lais, (ga)laisjan, (ga)laisjan sik*), while two continue in West Germanic, namely 'to teach' and 'to learn' (OE *lēran* and *leornian*, *liornan*; OHG *lēren* and *lernōn* [→ *lernēn*, *lirnēn*] etc.). North Germanic has borrowed the root from Old English. The root's basic meaning as reported by *LIV*[2] is 'to learn', but arguments in favor of an original meaning 'to follow' have been produced over the years (chiefly Marstrander 1929, Meid 1971, Tanaka 2011, and most recently Tarsi 2023 with a complete critical overview of the literature and arguments in favor of a basic meaning 'to follow a track').[1] This analysis is based on the more economical explanation that the root in question acquired the sense 'to learn' by a metaphorical process from concrete to abstract (cf. also expressions such as Eng. *to follow a teaching*). The meaning 'to learn' is found at the core of both verbal and noun formations in Germanic and it is also possibly seen in Umbrian *(-)lērā-* 'teaching, instruction, lore'. On the other hand, the meaning 'to follow a track' is attested not only in Germanic, but also indirectly in Baltic (OPr. *lyso* 'flowerbed'; Lith. *lýsė* 'vegetable patch'), Slavic (OCS *lěxa* 'cultivated plot'), and Italic (Lat. *līra* 'the earth thrown up between two furrows, ridge'; possibly Osc. **luisarifs** 'the month in which furrows are traced' (see in detail Tarsi 2023, with extensive arguments and references).

The meanings 'to know', 'to teach', and 'to learn' are also represented by other verbs throughout Germanic in both space and time. This article explores how these words came into being in this branch of Indo-European and asks, from the standpoint of lexical typology, what "systems" these formations instantiate, and what developments they testify.[2] Such a description of lexical "systems" involves a lexical-morphological analysis of the relevant components throughout time and is aimed at assessing what kind of relationship there is between lexical items in the set of complementary meanings under focus. In particular, the analysis ought to evaluate the typology of the systems encountered, and whether a tendency towards some particular intra-systemic relationship type can be observed. Such a description is inspired by the typology of valency orientation of transitive/intransitive verb pairs developed by Nichols et al. (2004). Here, however, the focus is on a semantically complementary verb triad and its lexical realizations. Of interest is the extent to which the addressed languages lexicalize the selected meanings from one or more roots, through which morphological processes, and whether there are any tendencies

[1] Against this analysis, of chief importance are the contributions of Benveniste (1947–1948), Vine (2011), and Ziegler (2012, on whose proposal see Tarsi 2023: §§ 3.16.1–2), who is followed in *EWAhd* (s.v. *lesa*[1] and elsewhere).

[2] For overviews of the state-of-the-art, objectives, and ongoing research strands of lexical typology, see Koptjevskaja-Tamm (2008), Koptjevskaja-Tamm, Rakhilina, & Vanhove (2016), and Koptjevskaja-Tamm & Veselinova (2020).

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Table 1. *The system of attested verb forms based on PIE* *leis̯-

Root	Language	'to know'	'to teach'	'to learn'
PIE *leis̯-	Gothic	*lais*	*(ga)laisjan*	*(ga)laisjan sik*
	West Gmc	–	**laizijan-*	**liznōn-*

to be seen diachronically, for example towards suppletion or lability, and to evaluate contact-induced effects.[3]

Furthermore, the present study also addresses the lexical make-up of 'to know', 'to teach', and 'to learn' in Germanic within the framework of Conceptual Metaphor Theory (Lakoff & Johnson 1980, Kövecses 2002) as employed in cognitive historical linguistic studies with an etymological focus (e.g. Kölligan 2020, 2021, 2022, Ginevra 2024a, b). The main question that this research addresses thus concerns the patterns of human conceptualization from concrete to abstract. Of interest to the enquiry is which concrete domains are selected to convey the meanings addressed and whether the same choice can be claimed to be of common Indo-European descent, polygenetic, or as arising as an effect of contact. With respect to this latter point, the present study seeks to further develop a well-known line of research within cognitive linguistics, namely the cognitively motivated lexical make-up of a selected portion of the lexicon.[4]

2. "Germanic systems"

2.1. The oldest stages

The oldest attested Germanic system encompassing the verb meaning triad 'to know', 'to teach', and 'to learn' is that of Gothic, where the root PIE *leis̯- underlies verbs for all three meanings: (1) a stative verb (preterite-present) only attested twice as *lais* 'οἶδα; I know', beside *witan*; (2) a causative verb *(ga)laisjan* 'to teach', beside the marginal denominal *(ga)talzjan*; and (3) a "proto-reflexive middle" *(ga)laisjan sik* 'to learn', beside *ganiman*. West Germanic attests to a similar system, differing from Gothic in its formation of the verb for 'to learn', besides lacking a stative 'to know' from PIE *leis̯- and resorting instead primarily to PIE *u̯eid- 'to see'. A summary is provided in table 1.

As proposed in Tarsi (2023: § 7 and summarized in § 8.1.5), stative and causative verbs formed on PIE *leis̯-, namely PGmc *lais-/liz- and *laizijan-, were likely found prehistorically throughout the Germanic linguistic continuum, whereas the formation of a nasal present was restricted to those dialects which later gave rise to West Germanic. Revising the proposal by Lühr (2008), it has been advanced in Tarsi & Zanchi (2025:279) that the Germanic reflexive construction is primary in respect to

[3] Reviewer B suggests a distinction between paradigmatic suppletion, as in *go* : *went*, and lexical suppletion, as in *kill* : *die*. We see both kinds of suppletion as faces of the same coin, namely the use of different roots within a well-defined lexical relationship, be that within a paradigm or between complementary meanings. At any rate, the kind of suppletion which is actually represented in the Germanic data put forth here is of the latter type (as e.g. in *teach* : *learn*).

[4] Notable works within this area include, for example, Sweetser (1990) and Fortescue (2000).

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nō/na-verbs in being the competitor of the inherited middle, namely the synthetic passive, as the noncausal end of the anticausative alternation.[5] Hence it can be proposed that the inherited middle of PGmc **laizijan-* and the reflexive form **laizijan-sik* once competed with one another in East and North Germanic.

The demise of PGmc **lais-/liz-* in West and North Germanic, and nearly so in East Germanic (note incidentally that we do not have the same quality sources for North and West Germanic from the same period as the Gothic Bible), was in all likelihood provoked by the synchronically synonymous verb PGmc **witan-*, a formation on PIE **u̯e̯id-*, which is certainly shared by more than one branch of Indo-European (on this issue see below, section 3). On the same root, a causative is also found, namely PGmc. **waitijan-* 'to let see (*vel sim.*)', attested in Old High German (*weizzen* 'to show, hint, call') and Old Icelandic (*veita* 'to grant, give') and reconstructable for Gothic, also on the basis of comparanda in Indo-Iranian and Celtic (cf. *LIV*^{2}, s.r. *u̯e̯id-*).

What is more, the meaning 'to know' was shared by another Germanic formation, also a preterite-present, namely **kunnan-*, based on PIE **ǵneh$_3$-* 'to recognize' and newly formed within Germanic (cf. Harðarson 1993:80–81, Tanaka 2011:145–180, Ringe 2017:178–179, and Jasanoff 2023:4), with a corresponding causative, PGmc **kannijan-*, which in North Germanic acquires the meaning 'to teach' (OIcel. *kenna* etc.).[6,7]

[5] On the details concerning this interpretation of the Gothic data, see Tarsi & Zanchi (2025:270–272 and 278–279).

[6] A distinction is made, as much as possible, between 'to know (= Lat. *scire*)', represented by PGmc **lais-/liz-* and **witan-*, and 'to know (= Lat. *cognoscere*)', testified by PGmc **kunnan-*. A relative chronology for these verbs can be envisaged, whereby PGmc **witan-* is the oldest formation (PIE+ [±Anatolian and Albanian]; see section 3) and PGmc **lais-/liz-*, which acquires the meaning 'to know' within Germanic, possibly denoted a different modality of knowledge acquisition (similarly so already Meillet 1909 and Benveniste 1947–1948), but later semantically coalesced with PGmc **witan-*, and was then (after the fourth century) dismissed. PGmc **kunnan-* is refashioned within Germanic as a preterite-present verb. From the original present semantics 'to recognize', the meaning 'to know (as having recognized)' is derived (cf. also Jasanoff 2023:4–5)

[7] Reviewer B notes that PIE **ǵneh$_3$-* would not instantiate a concrete-to-abstract conceptual metaphor, as its meaning is already within the sphere of human cognition. PIE **ǵneh$_3$-* belongs to a group of roots of general perception for which no "concrete" sense is immediately recoverable (but a semantic overlapping between sensual to cognitive recognition is possibly found in Homeric Greek, the former semantics being seen in *Iliad* 11.651 as suggested by Olav Hackstein, p.c.), for example, PIE **b^{h}eud^{h}-* 'to awaken, become attentive' (found e.g. in the meanings under discussion here in Pā. *bujjhati* 'to know [= Lat. *scire*]', Sogd. *ptβyδ-*, *ptbyd-* 'to know [= Lat. *cognoscere*]', and Khot. *bud-* 'to know [= Lat. *scire*, *cognoscere*]') and PIE **k$^{\text{u̯}}$e̯it-* 'to perceive, notice' (Ved. *cikéta* 'to know [= Lat. *cognoscere*]'; MP *ncyh-*, *wcyh-* 'to teach'). In addition, there are PIE **mers-* 'to forget' and **(s)mer-* 'to think, remember' (so *LIV*^{2}). The basic semantics of the former root has recently been challenged by Tarsi (2025), who connects the root to PIE **mer-* 'to disappear, die' (on which see Ginevra 2024b:103–104; this connection is already noted in *EDHIL*, s.v. *maršant-* without discussion), and van Beek (p.c.), who holds the view that PIE **mers-* 'to forget' could instantiate the Event Structure Metaphor in the domain of Obstruction. He thinks that the source meaning is preserved in Germanic **marzijan-* 'to obstruct, hinder' and argues that the Germanic verb is a causative, which allows **mers-* 'to forget' to be derived from an intransitive middle 'to get stuck, fail to reach' (the Sanskrit verb has middle inflection: pres. *mṛ́ṣyate*, Ved. aor. *marṣanta*). In view of the general semantic developments from concrete to abstract within the sphere of human cognition, there are good reasons to believe that these roots with no actual primary concrete meaning formerly had one, hence the present analysis. We disagree with Reviewer A's analysis which, *mutatis mutandis*, reconstructs a homophone root with the meaning 'to know' underlying Go. *witan* etc., as the domain of vision constitutes the basis for many other formations within human cognition in Indo-European, such as PIE

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Table 2. Primary verbs related to the meanings 'to know', 'to teach', and 'to learn' in the oldest stages of Germanic

Root	Language	'to know'	'to teach'	'to learn'
PIE *lei̯s-	Gothic	*lais*	*(ga)laisjan*	*(ga)laisjan sik* (∼ synthetic passive)
	NGmc	**lais-/liz-*	**laizijan-*	**laizijan- sik* (∼ synthetic passive)
	WGmc			**liznōn-* (∼ synthetic passive)
PIE *u̯ei̯d-	Germanic	**witan-*	**waitijan-* 'to let see'	–
PIE *ǵneh$_3$-	Germanic	**kunnan-*	**kannijan-*	–
PIE *nem-	Gothic and NGmc	–	–	*ganiman*, *nema*

Besides the aforementioned verbs, East and North Germanic also attest another synonym for 'to learn', namely PGmc **(ga)neman-* (Go. *ganiman*, OIcel. *nema*), with the concrete meaning 'to take' (< PIE **nem-* 'to assign' → middle 'to assign oneself' → PGmc 'to take', *LIV*^{2}, s.r. footnote 2).

The overall situation reconstructable for primary verbs in the oldest stages of Germanic is summarized in table 2.

No verb meaning 'to learn (*vel sim.*)' is either attested or reconstructed for PIE **u̯ei̯d-* or **ǵneh$_3$-* for lack of comparative evidence. It is a matter of speculation whether PGmc **waitijan-* and **kannijan-* could convey the meaning 'to learn' in the passive but this issue does not affect the present argument. It appears that Germanic diverged in the realization of the verb for 'to learn' formed on PIE **lei̯s-* in response to the gradual fall of the synthetic passive. However, stative and causative verbs were created from this root by productive patterns for whichever of the three roots in which these are found. Overall, Proto-Germanic testified to a lexical system for the meanings under scrutiny, which made use of productive morphological patterns, with the addition of an outlier, namely PGmc **(ga)neman-*, whose meaning 'to learn' is at least shared by Gothic and North Germanic.[8]

**d^{h}eH(i)-* (so *Add.Corr.LIV*^{2}) 'to seize with the eye' (whence [O]Alb. *di* 'to know'), PIE **kwek-* 'to catch a glimpse' (whence YAv. *cašte*, MP *c'š-* 'to teach', Khot. *kät'-* 'to think'), and PIE **pret-* 'to see, discern, perceive, recognize', whence OPr. *issprestun* 'to understand' and Baltic cognates (see in detail Tarsi 2025).

[8] One can hypothesize either that PGmc **(ga)neman-* in its metaphorical meaning 'to learn' constitutes an East–North isogloss or that both branches innovated independently. From the same root, West Germanic has verbs for 'to understand' (OE *geniman*, OLF *farniman*, ODu. *farneman*, and MHG *vernemen*). Given that the semantic extension from 'to take, grasp' to 'to understand' is cross-linguistically and diachronically common (e.g. Late Lat. *capire* [Lat. *capere*] 'to seize' → 'to understand', *comprehendere* 'to take together' → 'to understand'; Eng. *get* and *grasp* also 'to understand'; Ger. *begreifen* 'to understand'; cf. furthermore the preliminary typological study by Vanhove 2008), it is not possible to make any certain claims about the semantic status of PGmc **(ga)neman-*, also with regard to the meaning 'to learn'; cf., for example, Eng. *to take on/to adopt/to acquire a habit*, It. *prendere un'abitudine*, Ger. *eine Gewohnheit annehmen* 'to acquire a habit'.

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2.2. Evolution

Having seen that the situation, attested or hypothesized, is valid for the oldest layer of Germanic, one can now trace the developments in the different languages of the western and northern branches and evaluate the systematization of the lexicon with regard to the meaning triad under scrutiny. Data was sampled from the following selection of languages:

West Germanic: English (OE, ME, Eng.), Scots (OSc., Sc.), High German (OHG, MHG, Ger.), Old Saxon, Middle Low German, Frisian (OFris., WFris., EFris., NFris.), Old Low Franconian, Dutch (ODu., MDu., Du.), Luxembourgish, Swiss German, Cimbrian (Lusérn), Yiddish;

North Germanic: Danish (ODan., Dan.), Swedish (OSw., Sw.), Icelandic (OIcel., Icel.), Elfdalian.

West Germanic

In describing the situation in West Germanic, English and German are taken as main languages, but data from a range other languages is covered with reference to them.

English

The continuants of the Proto-Germanic causative and nasal present verbs **laizijan-* (OE *lǣran*) and **liznōn-* (OE *leornian*, *liornian*) are found in Middle English (*lēren* and *lērnen*) and Modern English (though *lere* is nowadays obsolete). However, Old English displays a number of other synonyms for 'to teach', namely *(ge)tǣcan*, the ancestor of present-day *teach*; *getȳan* beside *tēon*, where the meaning 'to teach' is derived figuratively from 'to train (*vel sim.*)'; *getyhtan* ('to draw the mind to something' → 'to teach, instruct'); *gewissian*, a deadjectival formation from *gewis(s)* 'certain'; and, finally, the "dubious" *docan**.[9] Beside *(ge)tǣcan* and *gewissian*, continuing into Middle English as *wissen* before dropping out of use except in Scots (*wis* 'to direct, guide, show, instruct'), the other Old English verbs, OE *docan** aside, likely died out in this meaning around 1250 at the latest (cf. *OED*, s.vv. *tee*, *tight*, *wis*). In Middle English, the verb *kennen* is used with the meanings 'to teach' and 'to know'.[10] It has sometimes been proposed that the latter meaning arose through Norse influence (e.g. *OED*, s.v. *ken*;

[9] The verb, listed in the *DOE*, is only found twice in the whole of the Old English corpus, namely as two glosses in the Salisbury Psalter (information provided by Dr. Robert Getz of the *DOE*, whom we thank):

(i) **doce** me don willan þinne
doce me facere uoluntatem tuam
'Teach me to do your will'
(PsGlK 142,10. ABCDFGIJL *lær*, E *lære*)

(ii) þa **doceþ** handa mine to feohte & he sette swa bogan cyperen earmas
qui docet manus meas ad prelium et posuisti ut arcum ereum brachia mea
'He who teaches my hands to fight and he has set my arms like a copper bow'
(PsGlK 17.35. ABCDEGHIJ forms of *læran*, F *tæcð*)

It seems doubtful whether the verb *docan**, which would thus be a loan from Lat. *docere*, existed in any productive sense in Old English. The only two occurrences of the verb reflect the Latin original text and could well be instances where the Latin verb was simply slipped into the Old English text.

[10] This meaning contrasts with its predecessor OE *cennan* 'to bring forth from the mind, to declare, choose, ascribe, clear, prove'.

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Table 3. Synoptic diachronic overview of verbs found in English

	Old English	Middle English	Modern English
'to know'	*cunnan*	*connen*	
	witan	*witen*	*wit*†
	gecnāwan	*(i)knouen*	*know*
		kennen	*ken*†
'to teach'	*lǣran*	*lēren* (also 'to learn')	*lere*† (also 'to learn')
	(ge)tǣcan	*tēchen*	*teach*
	gewissian	*wissen*	
	*docan** (?)		
	tēon, *getȳan*	*tēn*	
	getyhtan	*tighten*	
		kennen	
		sheuen	*show*
'to learn'	*leornian*, *liornian*	*lērnen* (also 'to teach')	*learn* (also 'to teach')
		apprehenden	*apprehend*†

MED, s.v. *kennen* v.1). However, due to the fact that the verb carries this sense in several early Middle English texts well outside of the Danelaw, recent scholarship has cast doubt on this explanation. Instead, we may have to do with an independent native development, though Norse could have supported it especially in northern and eastern dialects (see Dance et al. 2019, s.v. *kenne*). In addition ME *sheuen* 'to show' can be used in the meaning 'to teach', like Eng. *show* today. The meaning 'to learn' acquires a synonym from French in the Middle English period, namely *apprehenden* (< Fr. *appréhender*, *OED*, s.v. *apprehend*), continued in the modern language (but after 1680 no longer in the meaning 'to learn', *OED*, s.v.). ME *lērnen* is also used in the meaning 'to teach', and this nonstandard use is continued in English varieties worldwide. The same tendency is found with ME *lēren*. Finally, 'to know' is conveyed by three well-known old formations beside ME *kennen*: OE *cunnan*, continued in that sense also in Middle English but not in the modern language, where it only has modal force, *can*; *witan*, whose modern continuant *wit* is obsolete (except in Scots and in the phrase *to wit*), and *gecnāwan* (ME *[i]knouen*, Eng. *know*). A summary is given in table 3.

To complete the overview of the English situation, it needs to be said that in Old Scots (up to 1700), *lere* and *lern(e)* were used interchangeably in the respective complementary meanings (cf. the Middle English situation), and this persisted at least up to the nineteenth century (*DSL*, s.v. *lair* n.3, v.3). As for 'to know', Sc. *ken* (< ME *kennen* 'to make known, teach, know' [< PGmc **kannijan*-]) replaced *knaw*, *know* in the broad variety. *Wit* is found in Scots up until the nineteenth and early twentieth century too (*DSL*, s.v. *wit* v.1, v.2).

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Table 4. Synoptic diachronic overview of verbs found in German

	Old High German	Middle High German	Modern High German
'to know'	*wizzan*	*wizzen*	*wissen*
	kunnan	*kunnen, künnen*	
	bikennen	*kennen*	*kennen*
	irknāen		
'to teach'	*(gi)lēren*	*lēren* (also 'to learn')	*lehren* (also 'to learn')
		anebringen	*beibringen*
		underrihten	*unterrichten*
		underwīsen	*unterweisen*
'to learn'	*lernōn, lernēn, lirnēn*	*lernen*	*lernen* (also 'to teach')
		nemen	*(nehmen?)*

Overall, the system found nowadays in English, which is one of suppletion (*know* ~ *teach* ~ *learn*), has its roots already in the Old English period (*gecnāwan* ~ *[ge]tæcan* ~ *leornian*, *liornian*). The general tendency was lexical reduction *en route* from Middle to Modern English. Contact-induced effects are found in the form of loanwords such as Eng. *apprehend* and (maybe) OE *docan**. Since the Middle English period, *learn* can carry also the meaning 'to teach' dialectally, hence becoming a (marginally) labile verb, the causative *lere* took a similar path but has since fallen out of use.

German

Starting from the same core West Germanic system found in English, namely that of the causative and nasal present verbs from PIE **leis-* and the main stative verb from PIE **u̯eid-*, German (table 4) displays many affinities with English in the oldest period, with the exception of *bikennen* 'to know' and a number of synonyms for 'to teach' only found in English. In the middle period, German solidly continues the inherited core system but adds, for 'to teach', the following: a preverbed form of *bringen* 'to bring', continued in the modern language with a different preverb (MHG *ane-* : Ger. *bei-*); preverbed forms of *richten* 'to direct' and *weisen* 'to show' (factitives from PGmc **rehta-* 'straight' and PGmc **wīsa-* 'wise', respectively), MHG *underwīsen* and *underrihten*; MHG *lēren* and *nemen* also for 'to learn'. Modern High German is substantially in line with Middle High German, with the addition of *lernen* used also with the meaning 'to teach' in nonstandard usage (from at least the fifteenth century; see *FWB*, s.v.). Although Ger. *nehmen* does not seem to preserve the meaning 'to learn', it appears reasonable to assume that the verb might, in preverbed form, occasionally be used in something approaching that sense, for example, *eine Gewohnheit annehmen* (see also footnote 8).[11]

[11] Cf. Eng. *acquire* in similar senses, e.g. 'to acquire a new language (or some other skill)', as well as the phrasal verb *pick up*, and perhaps *gain*. Conversely, *pass on/down* can be used for the other direction, namely, 'to teach (*vel sim.*)'; cf. also Eng. *transmit* and relative Latin and Romance cognates, e.g. *he passed on his knowledge* or *he passed on/transmitted the passion for fishing to his son*. So it appears the concrete

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Other continental West Germanic languages generally show a conflation of the meanings 'to learn' and 'to teach' through time in verbs formed on PIE *leis̯-, whereby it is usually the causative that takes on the meaning of the nasal present (e.g. Du. *leren*, WFris. *leare*, EFris. [Saterland] *lere*, NFris. [Fering-Öömrang] *liar* all 'teach, learn'). However, the opposite direction of semantic coalescence is attested in Cimbrian (Lusérn) and Yiddish, the latter eventually reflexivizing the verb in the meaning 'to learn', namely *lernen zikh*.[12] Moreover, Dutch and Frisian also show a compound of 'bring', as well as forms akin to Ger. *unterrichten* and *unterweisen*: in Du. *bijbrengen*, *onderrichten*, *onderwijzen* (all attested first in Middle Dutch), WFris. *bybringe*, *ûnderrjochtsje*, *ûnderwize*, EFris. (Saterland) *biebrange*, *unnergjuchte*, *unnerwise*, NFris. (Fering-Öömrang) *bibring*, *onerracht*, *onerwise* (the latter verb attested in late Old Frisian). Luxembourgish also has *enseignéieren* 'to teach' from French. For 'to know', the sampled languages either preserve a three-verb system, such as Dutch (*weten*, *kennen*, *kunnen*), or have reduced it to two, such as Luxembourgish (*wëssen*, *kennen*), with the continuant of PGmc **kunnan-* taking on modal functions exclusively.

In summary, German preserves the original system of West Germanic best among modern languages (*wissen* ~ *lehren* ~ *lernen*), with a mild degree of suppletion due to the early loss of PGmc **lais-/liz-*. The widespread tendency of conflating the meanings 'to teach' and 'to learn' is seen already in the middle period, and this gives rise to the situation in a number of other languages and dialects, such as Cimbrian, Dutch, Luxembourgish, Swiss German, and Yiddish. Lexical borrowing aside, contact-induced effects are relevant in Yiddish, which makes use of reflexivization as a detransitivizing strategy. Although this feature was no doubt found already in the oldest period of Germanic (cf. Go. *laisjan sik*), its morphosyntactic use in Yiddish stems from contact with Slavic (see footnote 12).

North Germanic

The situation in North Germanic is less varied. An overview of the relevant Icelandic, Swedish, and Danish verbs is presented in table 5. Elfdalian aligns closely with Swedish.[13]

From table 5 it is clear that not only Icelandic is semantically conservative. Icelandic preserves the meaning 'to learn' for *nema* (in line with Gothic and the other old Nordic languages), yet the continental languages preserve the original meaning in which OE *lǣran* was borrowed. Swedish does this entirely, whereas both meanings have coalesced in one form in Danish. Icelandic innovates by a complementary

concepts for teach and learn can be (i) of the follow and lead type in one concrete sense (TO LEARN IS TO FOLLOW A TRACK), but there is also (ii) the give and take concrete sense, hence instantiating the TO LEARN IS TO GET HOLD OF SOMETHING conceptual metaphor.

[12] As in Slavic, the Yiddish reflexive pronoun does not change with the subject; cf. the parallel structure of OCS *učiti* 'to teach' and *učiti sę* 'to learn' and cognates (Russ. *učit'* and *učit'sja*, Pol. *uczyć* and *uczyć się*, Cz. *učit* and *učit se* etc.). On Yidd. *zikh* as intransitivity, viz. valency reducing, marker see briefly Katz (1987: § 7.3.2 and esp. 7.3.2.1 on Yidd. *lernen*).

[13] Elfdalian aligns closely with Swedish in that Elfd. *kunna* overlaps with Swedish in the meaning 'to know' (= 'to have learned sth'), yet it has a more delimited use than its Swedish counterpart. Sw. *kunna* can be used in the senses 'to be physically able' and 'to have the possibility', where Elfdalian instead employs the verbs *dugå* and *bella*, respectively (Mikael Tsiouris, p.c.).

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Table 5. Synoptic overview of verbs found in Icelandic, Swedish, and Danish

	Old Icelandic	Modern Icelandic	Old Swedish	Modern Swedish	Old Danish	Modern Danish
'to know'	*vita*	*vita*	*veta*	*veta*	*vite*	*vide*
	kunna	*kunna*	*kunna*	*kunna*	*kunne*	*kunne*
			känna	*känna*	*kænne*	*kende*
	þekkja	*þekkja*				
'to teach'	*læra*		*lära*	*lära ut*	*lære*	*lære*
	kenna	*kenna*	*känna*		*kænne*	
'to learn'	*nema*	*nema*	*nima*		*nime*	
	lærask		*lära sik*	*lära sig*	*læræs*	
		læra				*lære*

semantic change 'to teach' → 'to learn'. Danish nowadays has a labile verb *lære*, which has arisen in all likelihood due to the loss of reflexivization, as seen in ODan. *læræs* and common also to Old and Modern Swedish as well as Old Icelandic and Gothic (on this issue cf. Tarsi & Zanchi 2025:274–275). Contact-induced effects are seen in Danish and Swedish, where the causative formation is also used in the meaning 'to know', this likely stemming from Middle Low German (*kennen*). Icel. *kenna* only marginally attests to that meaning in Middle Icelandic, where the verb translates Eng. *know* in a couple of translated *ævintýri* (see *ONP*, s.v. *kenna*).

In summary, North Germanic shows stability in its systems throughout time. Most of all, the system of Modern Icelandic continues that of Old Icelandic with the sole, yet paramount, exception of the semantic shift of *læra*. In comparison to the system reconstructible for Proto-Germanic, North Germanic does not continue any of the verbs based on PIE **leu̯is-*, but rather acquires the corresponding causative from Old English. The continuants of PIE **u̯eu̯id-*, **ǵneh$_3$-*, and **nem-* are found everywhere, but are faithfully preserved to the fullest only in Icelandic (with the exception of PGmc **waitijan-* > OIcel. *veita* 'to grant, give' rather than 'to let know [*vel sim.*]', as in Ved. *-vedáya-* 'to announce'),[14] where a further lexeme for 'to know (= Lat. *cognoscere*)' is found, namely *þekkja*, a causative formation on PIE **teng-* 'to come to mind' (on which see below, section 3).

Finally, a summary of the different strategies found for the meanings 'to teach' and 'to learn' in Germanic formations based on PIE **leu̯is-* is given in table 6. The verbs for 'to know' are consistently formed on roots other than PIE **leu̯is-* from early on.

3. Indo-European background

In light of the current lexical typological investigation, it is worth returning to a key issue presented in section 1, namely the observable connections between the

[14] On the semantic development of the Icelandic verb, cf. similarly OAv. *-uuaēdaiia-* 'to allocate' and, more indirectly, OIr. *foídid* 'sends' (*LIV*^{2}, s.r. *u̯eu̯id-* and footnote 15).

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Table 6. Different lexicalization strategies for 'to teach' and 'to learn' in Germanic

	'to teach'	'to learn'	Verbs	Language (not exhaustive list)
1	causative verb	*nō*/*na*-verb	*lehren* : *lernen*	German
2	causative verb	causative verb + refl. pron.	*laisjan* : *laisjan sik* *lära (ut)* : *lära sig*	Gothic Swedish
3a	lability (causative ~ causative)		*leren* : *leren*	Dutch
3b	lability (*nō*/*na*-verb ~ *nō*/*na*-verb)		*learn* : *learn*	English (dial.)
4	suppletion		*learn* : *teach* *læra*, *nema* : *kenna*	English Icelandic
5	active	middle	*læra* : *lærask*	Old Icelandic

Germanic formations and their Indo-European background. This is done in two steps: firstly with a focus on the Proto-Indo-European roots involved, and secondly by looking into the conceptual metaphors instantiated. The latter issue is the focal point of the next section.

As summarized in table 2, Proto-Germanic originally had a system for the meaning triad 'to know', 'to teach', and 'to learn' based on at least three different roots: **ǵneh₃-* 'to recognize', **leis̯-* 'to follow a track', and **u̯eid̯-* 'to see', to which can be added **nem-* 'to assign' → middle 'to assign oneself' → PGmc 'to take' (*LIV*², s.r. **nem-*[1], footnote 2). This system is best attested in Gothic, which uniquely preserves a preterite-present *lais* 'οἶδα; I know', once very likely spread throughout Germanic (Tarsi 2023: § 7), and Old Icelandic.

In addition to these three roots, Icelandic also attests to a verb for 'to know' formed on PIE **teng-* 'to let come to mind' (so *Add.Corr.LIV*²), OIcel. *þekkja*, but this represents an inner-Icelandic semantic innovation 'to think' → 'to know'.[15] The same formation is otherwise well attested with its basic meaning throughout Germanic (and later borrowed from Middle Low German into Icelandic as *þenkja*; Óskarsson 2003:343–344) and paralleled by a single verbal occurrence in Latin, namely *tongēre* '*noscere*' (Ennius *apud* Paulus Diaconus' *Epitoma Festi*; cf. furthermore *tongitio** 'notion' and Osc. *tanginom* '*sententiam*'; *LIV*², s.r. **teng/ǵ-*[2], footnote 2). Zero-grade present formations such as Go. *þugkjan* 'to seem, believe' etc., a few verbal formations in Tocharian B, and other scattered nominal formations in Italic and Tocharian A and B complete the apparent reflexes of PIE **teng-* 'to come to mind' (cf. *LIV*², s.r. 2.**teng/ǵ-*, footnote 2, and *Add.Corr.LIV*², s.r. 2.?**teng-*, with lit.).

Of the roots on which Germanic forms verbs for the meaning triad under scrutiny, two may be candidates for formations of common Indo-European descent, namely **ǵneh₃-* and **u̯eid̯-*. The remarkably sparse attestation of PIE **leis̯-* 'to follow a track' in intellectual meanings in Italic (possibly U. *[-]lērā-* 'teaching, instruction, lore') solidly

[15] Cleasby & Vigfússon (1975, s.v.) claim that the meaning 'to think' in Old Icelandic "was still undeveloped." In light of comparative evidence, it appears instead clear that the meaning 'to think' should have existed in the precursor of Icelandic but was then lost (cf. *LIV*², s.r. **teng/ǵ-*[2], footnote 3).

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backs up the thesis of polygenesis.[16] As for the intellectual meanings connected with PIE *teng-, they may also have arisen polygenetically, in particular if Seebold's (Kluge/Seebold 2011, s.v. *denken*) proposal on the connection with PIE *teng^{h}- 'to weigh' is taken as valid (see most recently and convincingly Kümmel 2016), and hence the semantic shift from 'to pull, weigh' to 'to think', which is somewhat paralleled, for instance, in Lat. *pēnsāre* from PIE *(s)pend- 'to stretch'.[17] Evidence in favor of this proposal is, however, less compelling than that for PIE *leis-. Finally, it is important to note that no contact-induced effects can be claimed for the oldest Germanic formations.

As far as PIE *ǵneh$_3$- is concerned, it is solidly attested throughout the Indo-European family and is therefore transparent in terms of origin. Morphologically, the attested formations continue those of the proto-language, albeit with language-specific innovations. In terms of semantics, the core meaning 'to recognize' underlies all semantic developments reflected in the particular languages. The semantic span of the attested formations is 'to recognize', 'to teach', 'to understand, 'to know'.

The canonically reconstructed core meaning for PIE *u̯ei̯d- is 'to see'. In addition to Germanic, the root attests to perfect formations in the sense 'to know' in Armenian (CArm. *gitem*), Baltic (OPr. *waist*), Celtic (OIr. *ro-fetar*, MW *gwyr*, MBret. *goar*), Hellenic (Gk οἶδα), Indo-Iranian (Ved. *véda*, OAv. *vaēdā*), and Slavic (OCS *vědě*). Morphologically, *LIV*^{2} (s.r., footnote 9) reconstructs a nonreduplicated formation, whose origin is not clear. The root is moreover apparently attested in its metaphorical sense in Tocharian B (*ūwe* 'learned, skillful'),[18] and is hence well and widely enough attested that its common Indo-European origin is hardly to be disputed. Therefore, the most economical explanation available is that the specific metaphorical development related to sight was common to Indo-European in its earliest stage, and that the root was lost in Albanian[19] and Anatolian, hence at very different times and places,[20] or, alternatively, it was not present in Anatolian and lost much later in Albanian.

4. Conceptual metaphors: Germanic and elsewhere

Finally, we can turn to the results of this research with respect to Conceptual Metaphor Theory and ask which of the identified conceptual metaphors find parallels in other Indo-European languages.

Within the oldest layer of Germanic, four main conceptual metaphors arise, namely TO LEARN IS TO FOLLOW A TRACK, TO LEARN IS TO GET HOLD OF SOMETHING, TO KNOW IS TO

[16] Cf. also Lat. *delīrāre* 'to go insane', a hypostasis from *de līrā(d) (īre)* '(to go) off the track' (*EDLat*., s.v. *līra*, Vine 2011:333, Tarsi 2023: § 4.4.3). The hypostatic origin of the word does not change the outcome that a cognitive, psychological meaning for the root is likely attested in Italic.

[17] Cf. also Lat. *pondero*, whence Fr. *pondérer* and, subsequently, Eng. *ponder*, and Ger. *abwägen*. This further parallel was kindly pointed out by Reviewer B.

[18] So Adams (2013, s.v., *contra* van Windekens 1976:539). Toch. B *īme* 'consciousness, awareness; thought, memory, recollection' could also be related (Adams 2013, s.v., with lit.).

[19] Sergio Neri (p.c.) informs us that the root has in fact entered Albanian through loanwords such as dialectal *vid* 'vision' from Serbo-Croatian.

[20] This is incidentally further confirmed by, for example, the Greek suppletive paradigm of ὁράω 'to see', of denominative origin (*LIV*^{2}, s.r. 1. *ser-, footnote 3), which makes use of three different stems. In the perfect, the use of PIE *u̯ei̯d- is replaced by that from PIE *h_3ek^{μ}- 'to catch with the eye, observe' (ὄπωπα).

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HAVE SEEN, and TO KNOW IS TO RECOGNIZE/HAVE RECOGNIZED.[21] All the oldest attested Germanic verbs for the meaning triad 'to know', 'to teach', and 'to learn' belong to one of these metaphors, namely the PIE roots **leis̯-* 'to follow a track', **nem-* 'to take', **u̯eid-* 'to see', and **ǵneh₃-* 'to recognize'. In addition to these, verbs of teaching relating to activities such as pulling (whence 'to train' → 'to teach': OE *tēon*, ME *tēn*),[22] drawing (*sc.* the mind to something → 'to teach': OE *getyhtan*), bringing (MHG *anebringen*, Ger. *beibringen*), showing (OE *[ge]tācan* etc., MHG *underwīsen* etc.), and giving direction (MHG *underrihten* etc., possibly to be classified under the TO LEARN IS TO FOLLOW A TRACK metaphor) are recorded.

Quite a few etymologically unrelated parallels are found throughout Indo-European for these conceptual metaphors, besides those relating to recognition on the one hand and to bringing on the other (but see below), which would support the polygenetic hypothesis. The parallels, with short etymological discussions, are given below:

TO LEARN IS TO FOLLOW A TRACK

This conceptual metaphor is apparent in the Scottish Gaelic verb *ionnsaich* 'to learn' and, secondarily, 'to teach, educate, instruct, train' (*Am Faclair Beag*, s.v.). The verb goes back to OIr. *indsaig* 'to approach, go to, reach', a preverbed form of *saig* 'to go towards, approach; to seek out, strive after' (*eDIL*, s.vv. *ind-saig ?*, *1 saigid*), which is formed on PIE **seh₂g-* 'to follow a track', like, for example, Lat. *sāgīre* 'to perceive keenly, discern acutely'; Go. *sakan* 'to quarrel, scold', *sokjan* 'to search' (and cognates) and a number of other verbs, among which are verbs of perception such as OAlb. /gjegjetë/ 'hears' and, in affixed form, *sheh* 'to see, look' (*LIV*², s.v. **seh₂g/ǵ-*, *Add.Corr.LIV*², s.v. **seh₂g-*, and Imberciadori & Demiraj 2023).[23]

TO LEARN IS TO GET HOLD OF SOMETHING

The conceptualization of learning as getting hold of something is paralleled by that of understanding.[24] In Indo-European, this is seen in Lat. *apprehendere* 'to seize' and western and central continuants, Fr. *apprendre*, It. *apprendere*, Sp. *aprender* etc., or with a different preverb, OIt. *imprendere*, Rom. *imprender*, here with a semantic change from

[21] On this last conceptual metaphor, see what is said about PIE **ǵneh₃-* in footnote 7.

[22] Cf. other metaphorical semantic shifts concerned with motion such as TO LEARN IS TO FOLLOW A TRACK and TO THINK IS TO DRIVE SOMETHING SOMEWHERE as testified by, for example, Lat. *cogito* (compound of *con* 'with' and *agitāre*, frequentative of *agere* 'to conduct' [< PIE **h₂eǵ-* 'to drive']).

[23] OAlb. *sheh* is traditionally connected with PIE **sekᵘ-* 'to join, accompany' like synonymous Go. *saihvan* and cognates, but see Schumacher & Matzinger (2014:996) for discussion and most recently Imberciadori & Demiraj (2023), who are followed here. The formation could also be from **seh₁p-* 'to take notice' (Lat. *sapere* etc.), whose semantics would then not be limited to 'to take notice (through taste)' as instead reported in *LIV*².

[24] In the collected data, the conceptual metaphor TO UNDERSTAND IS TO GET HOLD OF SOMETHING is found in all clades with the exception of Albanian, Anatolian, and Celtic (e.g. Go. *ganiman*, MHG *vernemen*; CArm. *imanal*; Lith. *zgrìbti*; Gk λαμβάνω; Sogd. *γrβ-*, *γrb-*; Lat. *comprehendere*, Med.Lat. *capere*, *-ire*; Russ. *ponimat'*; Toch. A *eṃts-*, Toch. B *eṅk-*). It cannot be ruled out, however, that the conceptual metaphor arises in nouns and/or phraseologically in those branches of Indo-European, where it seems otherwise unattested, or even in a verb form which has presently eluded data collection.

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'to undertake' to 'to learn' (cf. *REW*, s.vv., and, for example, It. *impresa* 'endeavor, undertaking, business, enterprise'). Similarly, also It. *imparare* (Lat. *parāre* 'to procure, obtain, get'). Finally, the present conceptualization is also appreciable in (O)Alb. *nxë*, a prefixed form of *zë* 'to seize'.[25]

TO KNOW IS TO HAVE SEEN

This conceptual metaphor is mainly represented by formations on PIE **u̯ei̯d-* (cf. above, section 3). In Albanian the root is not preserved but the language nevertheless attests to a verb, (O)Alb. *di*, instantiating the conceptual metaphor. The Albanian verb is built on PIE **dʰeH(i)-* 'to seize with the eye' (cf. Khot. *daiyä* 'sees' and other forms in Iranian, *EDIrV*, s.v. **daiH*[1]). Although it constitutes a present formation, it derives its semantics from the perfect ('to have seized with the eye' → 'to know', Demiraj & Neri 2020, with exhaustive discussion and literature).

TO TEACH IS TO SHOW

This conceptual metaphor is found outside of Germanic in Anatolian and Iranian. The Anatolian witness to 'showing as a means of teaching' is the fientive formation *maniyaḫḫ-*, whose core meanings cover the sphere of distributing and assigning but can secondarily mean also 'to teach, show' (so *eCHD*, s.v.), allegedly 'to teach by showing with the hand (*vel sim.*)'. The Hittite formation, for which a nominal base has not (yet) been recorded, is traditionally compared to Lat. *manus* 'hand', OIcel. *mund* 'id.', OIr. *muin* 'patronage, protection' (Tischler 1990:120–121; cf. also Lgb.-Lat. *mundium* 'id.' and *mundoaldus* 'guardian, tutor' and Ger. *-mund* in *Vormund* 'guardian, tutor'). The Iranian witnesses for formations on roots whose primary semantics is 'to show' are found at least in Avestan, namely *daxš-* 'to teach' (*LIV*[2], s.v. ?**dek*$^{(u)}$*s-*, esp. footnote 1 on the root's semantics; *EDIrV*, s.v. **daxš*) and, possibly, also in Av. *sāh-* 'to teach', if the PIE root **keHs-* 'to give instructions' (on which see Kümmel 1998:201–202) originally meant 'to show'.

As for the metaphor TO KNOW IS TO RECOGNIZE/ HAVE RECOGNIZED, the Indo-European parallels all go back to the same root as the Germanic formations, namely **ǵneh*$_3$*-* (Alb. *njoh*, OArm. *čanač̌el*, OLith. *žĩnóti*, OPr. *°sinnat*; Go. *kunnan*, OIr. *adgnin*, Gk γιγνώσκω, Ved. *jānā́ti*, OAv., YAv. *zā̆n-*, Lat. *(co)gnosco*, SPic. KNÚSKEM, OCS *znati*).

Finally, the verbs of teaching related to the activity of bringing into proximity found in Middle and Modern High German (*anebringen*, *beibringen*) do not constitute an isolated conceptualization but can be compared to verbs and expressions meaning 'to remember' found throughout Indo-European and going back to the concrete idea of 'driving to, bringing forth in the mind' as in Toch. A *opyāc kälā-*/B *epiyac käl-* lit. 'to bring to mind/to memory' – the Tocharian word for 'mind, memory' being an Iranian loan (Adams 2013, s.v. *epiyac*), Sw. *komma ihåg*, Rum. *aducere aminte*, It. *portare alla mente* and others, not least Eng. *to call/bring to mind*. Similarly, there is also OFr. *amoutevoir* from Lat. **ad mente habere* 'to have in mind' (*REW*, s.v.).[26]

[25] According to the newest analysis of Neri (2021), with extensive references, Alb. *zë* could either go back to PIE ** gʷeu̯H-* 'to gain, receive' or PIE **gʷʰen-* 'to beat'. In both cases, however, the end-point of the semantic development would be 'to seize'.

[26] On cognitive verbs in Indo-European and their cognitive-metaphorical basis see Tarsi (2025).

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5. Excursus: OE *(ge)tǣcan* (Eng. *teach*)

West Germanic attests to a possible candidate for a contact-induced semantic extension, namely OE *(ge)tǣcan* (and continuants, whence Eng. *teach*). Given the *lato sensu* similarity between Lat. *insignāre* 'to point out, signify, indicate' → 'to teach' (⇐ *signum* 'sign', It. *insegnare*, Lad. *ensegné*, Fr. *enseigner*, Sp. *enseñar* etc., *REW*, s.v. **insignāre*), the lexical family of the Old English verb (among which is *tācn* 'token, sign'), and the importance of Latin as a language of instruction in the Middle Ages, it is worth investigating whether the semantics of the Old English verb could have been influenced by Latin.

According to some scholars, the Old English lexical family apparently attests to a Proto-Indo-European root ?**deig̑/ǵ-* (e.g. Seebold 1970, s.v. TEIH-A-; Lehmann 1986, s.v. *taikn*). This in turn is assumed to be a synonymous variant of PIE **deik̑-* 'to show, point at', which not infrequently shows a metaphorical semantic change towards the sphere of saying for example in Germanic and Italic.[27] Formations, such as Go. *taikn(s)*, OHG *zeihhan*, OIcel. *teikn* 'sign' (*tákn* being an Old English loan), would then go back to PIE ? **deig̑/ǵ-*. Go. *gateihan* 'to show, announce', OHG *zīhan* 'to blame, accuse' beside *zeigōn* 'to show', OFris. *tīgia* 'to blame, accuse', ON *tjá* 'to relate' etc. are instead regular reflexes of PIE **deik̑-*. Lat. *digitus* 'finger' could go back to the same root variant (see *EDLat.*, s.v. for an overview of the relevant literature). If the Old English verb indeed goes back to the Proto-Indo-European root hypothesized above, it would constitute a causative-iterative formation PIE ?**doig̑/ǵ-éie/o-* 'to show repeatedly (*vel sim.*)'. A parallel to this formation is OE *rāc(e)an* 'to reach', OFris. *rētsa* beside *rēka* 'to give, pay' (< PIE **roig̑/ǵ-éie/o-*) beside OHG *reihhōn*, *-ēn* 'to reach, refer' (cf. furthermore *EWAhd*, s.v. *reichen*).

Whatever the exact background of the Old English lexical family, the formal and semantic connection between *(ge)tācan* and *tācn* was in all likelihood synchronically transparent enough to have been influenced by Latin as a form of calquing, given the semantic shift from 'to show, point' to 'to teach' with this root being isolated to the history of English (attested from the ninth century on, Bosworth/Toller, s.vv. *getácan* and *tácan*).

However, by comparing the relevant Old English attestations listed in Bosworth/Toller with their Latin equivalent, it is readily seen that OE *(ge)tācan* never translates Lat. *insignāre*, but rather corresponds to *dirigere* 'to give a particular direction, direct', *indicare* 'to show', *monstrare* 'id.', *offerre* 'to present', *ostendere* 'to show, point out', *praescribere* 'to prescribe', *significare* 'to signify'.

Therefore, Latin influence seems invalidated, and the verb's semantic extension comes via a different route and is thus not connected with "leaving a mark" – this having repercussions on the conceptual metaphorical system to which the verb belongs (see section 4 above).

From the available data, the meaning 'to teach' appears to have arisen in connection with the original root semantics, namely 'to show'. This is readily seen from a handful of examples (from Bosworth/Toller, s.v. *tácan*):

[27] Compare also Lat. *dīcere* and Osc. *dicust*, U. *dersicust* 'will have said' (contrast with Lat. *indicāre* 'to point' ⇐ *index* 'one who indicates'); Lat. *iūdex* 'judge; lit. he who recites the law'; Gk δίκη 'custom, usage, order, right'.

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(1) 'to offer, view, present'
Táhte hé ðá ðam pápan sumne munuc ðæs nama wæs Andreas
cum monachum quemdam, nomine Andream, pontifici offerret
'He presented to the Pope a monk, whose name was Andreas.'
(2) 'to present sb with sth'
Him mon setl táhte and hé sæt æt ðam symble
'He was shewn a seat, and sat at the feast.'
(3) 'to show an object, the way'
Ic táce sumum men his weg
dirigo
'I show to some men their way, I direct.'
(4) absol. 'to show the way'
On niht hé táhte eów þurh fýr
nocte ostendens vobis iter per ignem
'Showing you the way at night by means of fire.'
(5) 'to show the direction that must be taken'
Nán man ne táce his getihtledan man fram him
'Let no one send his accused man away from himself.'

Whence the intellectual meaning 'to show (the direction) to the mind' → 'to teach'.

As for the conceptual metaphorical system involved, it seems that the Old English lexical innovation does not depart in any significant way from the original Germanic system represented by the verb triad formed on PIE **leiˆs-* and exemplified by the conceptual metaphor TO LEARN IS TO FOLLOW A TRACK, if the present proposal is valid, namely that 'to teach' is the outcome of the following semantic extension: 'to show' → 'to show the direction' → 'to show the direction to the mind' (hence learning would still be following such a showed direction, and teaching would be showing the way; cf. also MHG *underwīsen* etc.).

6. Conclusions

In this article, the developments of the meaning triad 'to know', 'to teach', and 'to learn' in Germanic were traced and their Indo-European background illuminated. It was shown that Proto-Germanic devised a system which made use of productive morphological patterns, but also further supplied the meaning 'to learn' with PGmc **(ga)neman-*, with certainty in East and North Germanic, whereas in West Germanic the verb is attested with the meaning 'to understand' (see footnote 8).

In West Germanic, a twofold scenario appears: Whereas English, already in its oldest stage, refashioned its system as a suppletive one, where each of the three meanings is also (and later on only) rendered by a formation based on a different root, German continues the core system inherited from West Germanic, which is mildly suppletive due to the demise of the preterite-present PGmc **lais-/liz-*, once likely found throughout the Germanic language continuum (Tarsi 2023: §§ 7, 8.1.5). Everywhere in West Germanic a conflation of the meanings 'to teach' and 'to learn' is appreciable at different times and places. Middle English attests 'to teach' → 'to learn' and vice versa, whereas Cimbrian and Yiddish have 'to learn' → 'to teach'. Relevant contact-induced effects in the West Germanic linguistic area are a few loans, such as ME *apprehenden*, Lux. *enseignéieren*, and possibly the Frisian and Dutch equivalents of

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Ger. *unterrichten* and *unterweisen*, and morphosyntactic calquing from Slavic into Yiddish *lernen zikh*. This latter phenomenon, namely reflexivization, is of interest as it resurfaces at different times, places, and under different circumstances in Gothic and North Germanic as well.

North Germanic does not directly continue any formation on PIE * *l̥eis̯-*, but acquires the causative from Old English. The status of Icelandic is deemed to be partially conservative, as are Danish and Swedish for their part. Specifically, Icelandic preserves a no doubt very old lexical specimen in *nema* 'to learn', also found in Gothic and other old North Germanic languages, whereas primarily Swedish, but also Danish with the rise of lability, continue the original meaning in which the verb for 'to teach' was borrowed. Another innovation of Icelandic is a verb for 'to know' based on PIE **teng-*, which other Germanic languages use as the main verb to express thinking. Here, we see a semantic development in Icelandic, which necessarily has gone through the stage of 'to think' (see section 3 and footnote 15).

As for the roots involved in shaping the portion of the lexicon under focus in the Indo-European language family, it can be claimed that those based on PIE **ǵneh₃-* 'to recognize' and **u̯ei̯d-* 'to see' constitute common heritage, whereas the formations on PIE * *l̥eis̯-* 'to follow a track' would constitute a case of polygenesis, as meanings related to cognitive activities are only reconstructible for Germanic and, in all likelihood, Italic. Similarly, those formations based on PIE **teng-* could also have arisen polygenetically in Germanic and Italic, in particular if the connection with PIE **teng^{h}-* 'to weigh' is valid.

Finally, of the conceptual metaphors observed in the data gathered for Indo-European, only one can be claimed to be of common Indo-European descent, namely TO KNOW IS TO RECOGNIZE/HAVE RECOGNIZED, as all formations are based on PIE **ǵneh₃-* (see footnote 7). Instead, the conceptual metaphors TO LEARN IS TO FOLLOW A TRACK, TO LEARN IS TO GET HOLD OF SOMETHING, TO KNOW IS TO HAVE SEEN, and TO TEACH IS TO SHOW all surface in some branches of Indo-European at some point in time in a way, which, through the use of different formations based on different roots, points to the polygenetic nature of the conceptual semantic shift.

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