Abstract: Future in Old and Modern Icelandic

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Future tense is a category that is expressed in various ways crosslinguistically. While classical languages like Latin or Greek can express future actions synthetically, the Germanic languages are known for only having periphrastic futures or simply using present tense to refer to the future (cf. Harbert 2007: 297). The phase model of grammaticalization of future tenses developed by Bybee et al. (1991, 1994) describes how grammaticalization always proceeds in predetermined paths ("source determination") and how the different phases of these paths are characterized. For periphrastic futures, that are supposed to grammaticalize into synthetic futures sooner or later, the factors that can determine these paths are the semantics of the auxiliary verb that is used to form the periphrasis as well as the other parts of the periphrasis like prepositions (cf. Bybee et al. 1994: 268).

In the case of Icelandic, there is only one real study that deals with how future was expressed in Old Icelandic (cf. Morris 1964). No studies exist that examine the way the expression of future has changed over the years. All grammars of Old and Modern Icelandic list various periphrases like *munu* + INF or *skulu* + INF that all express future in some way, but all have their own connotations. In the case of *skulu* for example, some sort of obligation to perform a certain action is implied, so one would expect it to be used primarily with the first or second person. When periphrases are also used with the third person or even in impersonal sentences or with inanimate agents, one can assume that they have already advanced quite far on the path of grammaticalization postulated by Bybee et al.

It is often claimed that Icelandic practically has not changed in the past thousand years. However, if one takes a detailed look at the language in use, one can find a number of differences between Old and Modern Icelandic. I conducted a corpus study of Snorri Sturluson's *Edda* on one hand and a corpus of emails from universities from MÍM (*Mörkuð íslensk málheild* 'Tagged Icelandic Corpus' provided by the Árni Magnússon Institute) on the other hand. The study mainly focused on the periphrases *munu* + INF, *skulu* + INF, *ætla að* + INF und *koma til með að* + INF, which are all used to express future in Modern Icelandic. The first two are present in Old and Modern Icelandic and thus can be compared in terms of how they are used. The second two are rather new periphrases that show how futures can develop from expressions of intention or movement towards a goal. The corpus studies show that the model provided by Bybee et al. can only help discover tendencies in the development of futures, but not all futures fit into their phase model of grammaticalization.

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Monophthongization of -*Vu̯*- before labial in Greek

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As observed by Hyllested and Cohen (2007), no inherited Greek lexeme contains an initial sequence εὐ-, αὐ-, οὐ- followed by a labial consonant; this leads the authors to propose a sound law which operated in the early stages of Greek:

*Vu̯ > ŭ /#_C[+lab]

This explains e.g. ὑφαίνω 'weave' for expected †αὐφαίνω < *h_2*(e)ub*^{h}*-n̥i̯e/o*-. The authors propose that a similar rule might have operated in word-internal position, citing the family of κῡφός 'hunchbacked' < *keu̯b*^{h}-; here, however, the existence of counter-evidence (cf. below) prevents the authors from accepting a general rule (Hyllested and Cohen 2007: 17-18).

The present paper seeks to show that monophthongization was in fact regular in all positions, the general rule being:

*Vu̯ > ū /_C[+lab]

Evidence:

- κῡφός 'hunchbacked', κύπτω 'bend forward' < √*keu̯b*^{h}- 'bend forward', cf. Ved. *kubjá*- 'humpbacked, crooked', *kubhrá*- 'humpbacked bull', Lith. *kaũbras*, *kaũburas* 'hump, bulge, hill'
    - ῡ : ŭ reflects ablaut: κῡφός, κέκῡφα (pf.) < *kou̯b*^{h}- ~ κύπτω, κύψαι, κύβδα < *kub*^{h}-.
- στῡ́φω 'contract, draw together, astringe', στῡφελός 'astringent, sour' << *στρυφ- (Ruijgh 1967: 114) < √*streu̯b*^{h}-, cf. OHG *strūbēn* 'to be stiff', Lith. *strùbas* 'cut short, curtailed'
    - ῡ : ŭ points to *eu̯ : *u, as do the extra-Greek cognates.
- τῡ́φω 'raise a smoke', τῦφος 'delusion', τῦφλός 'blind; dark, obscure', < √*d^heu̯b*^{h}- 'scatter dust', cf. ON *dupt* 'dust', Go *daufs* 'deaf', OIr *dub* 'black'; NHG *stieben* 'fly around in a cloud' (< *s-d^heu̯b*^{h}-)
    - verbal ablaut preserved in τῡ́φω ~ ἐτῡ́φην (aor. pass.) < *d^heu̯b*^{h}- ~ *d^hub*^{h}-, excluding the reconstruction *d^huh_2-b*^{h}-.
- λῡπέω 'harass, annoy', λῡ́πη 'pain' < √*leu̯p*- 'to peel, cut off, harm', cf. e.g. Lith. *lùpti* as 'schälen, abhäuten, prügeln, etc.', *laupýti* 'zerbrechen, zerkrümeln'.
- τρῡπάω 'to bore, pierce through', τρῡ́πη 'hole' < √*treu̯p*- 'crumble', cf. Lith. *trupéti*, Rus. *truplit'* 'to crumble'
- θῡμός 'soul, spirit' = PGmc *dau̯ma*- 'vapor' (e.g. OHG *tuom*), Lat. *fūmus* 'smoke' < *d^hou̯(h_2)-mó*- 'smoke' (new etymology)
    - the assumption of an o-grade accounts for both the lack of laryngeal breaking in Greek (*d^huh_2-mó*- > PGk †*t^hu̯āmó*- vs. *d^hou̯(h_2)-mó*- > *t^hou̯mó*- > θῡμός) and of Dybo's shortening in Latin (*d^huh_2-mó*- > *†fŭmus* vs. *d^hou̯(h_2)-mó*- > *fou̯mos > *fūmus*). The zero-grade formation *d^huh_2-mó*- is confined to Indo-Aryan (Ved. *dhūmá*-) and Balto-Slavic (Lith. *dū́mai*), interpretable as a common innovation in these two branches.
- χῡμός 'juice' = Ved. *hóma*- (m.) 'libation, offering' < *$ĝ^h$ou̯-mó*- (√*$ĝ^h$eu̯*- 'pour')
- -νῡ-/-νῦ- (verbal suffix) < *-neu̯-/-nu*-, cf. ὄρνῡμι, Ved. *ṛṇóti*
    - Explaining -νῡ-/-νῦ- as purely analogical to -νᾱ-/-νᾰ- (< *-ne-h_2-/-n-h_2-) is unsatisfactory since ablaut †-νευ-/-νῦ- would be fully acceptable in Greek. The change was regular in 1sg *-neu̯-mi > -νῡμι, whence it spread to 2sg and 3sg (*-neu̯-si, *-neu̯-si >> -νῡς, -νῡσι).

Most counterevidence can be rejected. Lexemes containing the sequence -Vu̯C[+lab]- (other than compounds or Lallwörter, e.g. βαυβάω 'sleep') are mainly formations with the highly productive suffix -μα, only two of which have extra-Greek cognates:

- ῥεῦμα 'stream' (ῥέω, ἔρρευσα) = OIr. *sruaim* 'flow'; independent formations according to Porzig (1942: 268).
- χεῦμα 'that which is poured' = Vedic *hóman-* (n.) 'libation'; χευ- easily restored from χέ(ϝ)ω, ἔχευσα.

Isolated formations are all inner-Greek creations:

- θαῦμα 'miracle' built to *θᾱ́ϝᾱ (GEW: I, 456-57).
- τραῦμα 'wound' built to τιτρώσκω 'wound' with analogical -αυ- (Peters 1980).
- τευμήσατο 'built, fashioned' (hapax) does not reflect *τεῦμα = Av. *šiiaoman-* (n.) 'deed, work' (as per GEW: II, 887), but is rather a (poetical) backformation to τεύχω 'make, build'.

The little remaining counterevidence is inconclusive:

- πλεύμων 'lung' (= Ved. *klomán-*); isolated formation, but restoration of -ευ- from πλέ(ϝ)ω 'float' is possible (cf. πλεύμων 'jellyfish').
- κοῦφος 'light, nimble'; archaic in appearance, but no generally accepted etymology.

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κάλλος and καλός

Καλός ‘beautiful, good’ still lacks a satisfactory etymology (Frisk 1960:766–7, Chantraine 2009:467–8, and Beekes 2010:626–7). This is primarily due to a reliance on reconstructed root semantics and phonological resemblance rather than independently observable derivational morphemes (e.g. van Beek 2013:307; Willi 2017:507–12).

The lexical family of καλός is characterized by root allomorphy between /kal-/ in the simplex and /kall-/ everywhere else (e.g. καλλίων, κάλλιστος, καλλι-, κάλλος). Of all forms that employ the geminated allomorph, the *s*-stem abstract κάλλος ‘beauty’ is by far the most frequent. This prevalence suggests that the *s*-stem is the derivational input for the comparative, superlative, and compositive (cf. κῆδος ‘care’ → PN Κηδι-κράτης : κήδιστος, κέρδος ‘gain, advantage’ → κερδίων : κέρδιστος, etc.).

Given the centrality of καλός and its abstract, it is reasonable to suppose that these two items constitute the inherited material around which the entire system was built. It is therefore probable not only that the root allomorphy was original in the preforms of καλός and κάλλος, but also that the variation originated in reconstructable morphological processes whose identification in the case of καλός may finally yield a root etymology.

As the Boeotian and Homeric forms attest (Ion. κᾱλός, Boeot. καλϝός), the non-radical, pre-desinential material in the simple adjective consists of the sequence glide /w/ + thematic vowel, on the basis of which we may reconstruct a Proto-Greek **kəlwós*. In the case of κάλλος, there are but two sequences that cause gemination: */ln/ or */lj/ (e.g. ἐλλός ‘young deer’ : ἔλαφος ‘deer’, cf. Lith. *élnis* ‘id.’; e.g. ἄλλος ‘other’, cf. Lat. *alius* ‘id.’). While the former may offer a phonologically permissible preform, the latter is morphologically compelling, as the καλός family belongs to a class of lexemes characterized by the compositional substitution of *i*-stems and, on occasion, *u*-stems for the simple adnominal or substantive (e.g. κῡδρός ‘glorious’ : κῦδος ‘glory’ : κῡδιάνειρα ‘bringing men glory’; ἀργός ‘shining’ : Aeol. ἀργεννός ‘id.’ : ἀργικέραυνος ‘with bright thunderbolts’; ταναός ‘outstretched’: τανύπεπλος ‘with flowing robes’; Ion. στεινός ‘narrow’ < *στενϝός : TN Στενύκληρος ‘Narrow Lot’ [Hdt.9.64.2]).

Fundamentally akin to the compositional representation of a derived adnominal by its substantive (e.g. χρύσεος ‘golden’ : χρυσόθρονος ‘gold-throned’), this phenomenon has revealed that both *i*- and *u*-stem acrostatic abstracts are derived from thematic adjectives (e.g. **leu̯k-ó-* ‘bright’ [> Ved. *roká-* ‘shining’] → **ló/éu̯k-i-* ‘light’ [> Lat. *lūcī clārō* ‘in broad daylight’]; **b^{h}eh$_2$-no-* ‘radiant’ [> OIr. *bán* ‘white’] → **b^{h}eh$_2$-nu-* ‘the radiant one/radiance’ [> Ved. *bhānú-* ‘beam of light’], etc. Nussbaum 2014a:235). Among simple thematics (e.g. ἀργός, λευκός, etc.), Middle Irish *cel*, which appears in the idiom *téit for cel* ‘goes to concealment, i.e. dies’ (cf. OE *helle* ‘underworld’), provides evidence for an adjective **ḱel-ó-* ‘covered/covering’ (cf. Ved. *śárman-* ‘protection’ < **ḱel-mn̥* ‘cover’). This formed an *i*-stem **ḱó/él-i-* (→**ḱl-i-tó-* ‘providing cover’ > OE *hlid* > PDE *lid*), and a *u*-stem **ḱó/él-u-* (→ [1] delocatival **ḱl-eu̯-ó-* ‘under-cover’ (adj.) > ON *hlé* ‘shelter’, OS *hlēo* ‘concealment’, OE *hlēow* ‘cover, shelter’ > PDE *lee* and [2] suffixally vṛddhied **ḱol-eu̯-ó-* ‘cover-like (thing)’ > Epic *and* Attic κολεόν ‘sheath’).

These abstracts, by virtue of their meaning ‘covering’, developed the aesthetic sense ‘outward appearance, form’ (cf. *oc-culere* : *color* ‘hue, external form, lustre’ de Vaan 2008:126; Ved. *vṛṇóti* ‘covers’ : *várṇa-* ‘Farbe, Glanz, Herrlichkeit’ Grassmann 1996:1222–3). Based on the ameliorated sense ‘(seemly) form’, both **ḱó/él-u-* and **ḱó/él-i-* formed radical zero-grade possessives, **ḱl̥-u̯-ó-* and **ḱl̥-i̯-ó-* respectively, both meaning ‘shapely, seemly’ (cf. TB *eṅkwe* ‘man’ < **n̥ḱ-u̯-ó-* ‘mortal’ ← **nó/éḱ-u-* ‘death’, Campanile 1969; Ved. FCM *tuvi-* ‘strong’ :

tū́yam ‘swiftly’ << **tuh₂-i̯-ó-* ‘strong’ ← **tó/éu̯h₂-i-* ‘strength’). From the latter was formed the *s*-stem abstract **k̑l̥-i̯-o/es-* (> κάλλος) corresponding to **k̑l̥-u̯-ó-* > καλός (cf. στεινός → τὸ στεῖνος [Nussbaum 2014b:235]).

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Palatalization of labials in Ancient Greek and beyond

Palatalization is among the most common and well-researched subtypes of assimilatory sound change affecting consonants (BHAT 1978, CHEN 1996, HALL 2000, BATEMAN 2007, BATEMAN 2011, KOCHETOV 2011, KRÄMER & UREK 2016). Palatalization of labial consonants is comparatively rare, and its outcomes and pathways appear to differ signficantly from language to language (OHALA 1978, HOCK 2006). In recent years, some cases of palatalization of labials have been interpreted as instances of glide hardening (BATEMAN 2010, KOCHETOV 2016), but it is not yet clear whether these analyses can be generalized. My contribution addresses this question with regard to Ancient Greek and places the results in an Indo-European context.

The palatalizations which affected dental and velar consonants in the pre-history of Ancient Greek, contributing significantly to its distinctive phonological character, have received ample attention in terms of dialectology, relative chronology, and historical phonetics (e.g. DIVER 1958, ALLEN 1958, SHEETS 1976, BRIXHE 1978, RISCH 1979). The development of the Proto-Greek sequences *by >? bd, *$p^{(h)}y$ > pt, and *my > *ny (merging with original *ny > yn / n / nn) has been neglected by comparison, in part because of the uniformity of their outcomes across dialects. I detail the sometimes controversial evidence for these outcomes and their chronology, and evaluate the main proposals for the phonetic pathways involved, taking into consideration both speaker- and listener-oriented models of sound change (HANSSON 2008, GARRETT & JOHNSON 2013). I determine on phonetic grounds that obstruent epenthesis as a result of misperception is a more likely explanation than glide hardening or other phenomena. This is supported by Optimality Theoretic modeling of the sound changes

in question, showing that the required epentheses can be generated from a small set of independently motivated constraints.

The other branches of Indo-European showing early and widespread palatalization of dentals and velars either exempt labials from this process (as in Armenian) or repair sequences of labial + yod by other means than Ancient Greek (such as "*l*-epenthesis" in Slavic). However, typological parallels to the Ancient Greek developments can be found in some Modern Greek and Romance languages. I suggest that in these cases, too, obstruent epenthesis rather than glide hardening deserves serious consideration as a mechanism of change.

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Aspiration in stops from the Greek outcome of Indo-European clusters of sibilant + stop

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This work investigates the outcomes of PIE clusters of sibilant + stop (**sC*) in Greek in order to evaluate the distribution of the aspirated stops.

The aspiratory effect of a PIE sibilant on a following stop has been proposed by Hiersche (1964), who placed this phenomenon into a 'Central Indo-European area' composed of Old Indian, Armenian and Greek. The author raises difficulties only in accounting for the (alleged) fluctuating outcomes of the Armenian **sk*. This problem has been later solved assuming the effect that PIE **sk*, **sḱ* and **skʷ* > Arm. *c'* while PIE **skhₓ-* > Arm. *š-* (cf. Beekes 2003: 198). However, counterexamples in Armenian and Old Indian (cf. i.e. PIE **sper-n-* > Arm. *sparnam*, OI *spṛnóti*) led scholars to question Hirsche's assumptions, now no longer accepted (cf. *EDAIL* 719-720).

Elbourne (1998) suggested the restoration of the *tenues aspiratae* within the PIE stops' inventory. In a series of articles (1998; 2001; 2012), he argued for a deaspiration in Greek of the alleged PIE voiceless stops when preceded by **s*, **n*, **m*, **r* or **l*. By contrast, Old Indian would preserve the aspirates. The proofs provided consist of seven correspondences showing Greek *C* as a counterpart to Old Indian *Cʰ* (πόντος/*pánthās*, πόρτις/*pṛthuka-*, πλατύς/*práthas-*, ὀστέον/*asthi-*, ἵστημι/*sthā-*, στέγω/*sthag-*, -ιστος/*-iṣṭha*). Most of these pairs, however, are commonly explained assuming the aspiratory effect of PIE **h₂* (and possibly **h₁*) on a previous stop in Old Indian.

The present research analyses a large number of Greek forms reputed as going back to PIE **sC* clusters, whose outcomes are **(s)Cʰ* or alternatively **(s)C*.

It is argued that, in Greek, the regular outcome should yield the aspiration of the stop due to the preceding sibilant (e.g. ἰσχάς < **si-sk-* and σφήν < **speh₂-n*), even visible where the PIE **s* has disappeared (cf. ἄρχω < **h₂r-(h₁)sk-*, θριγκός < **streing-*, παρθένος < **pṛ-steno-* and π(τ)όρθος < **porstos*). This assumption can shed light on Greek forms for which the PIE source cannot explain the emergence of the aspiration, such as αἶσχος < **h₂eigʷʰ-(i)sk-* and σχάζω <**skeh₂-di̯-*.

Conversely, the aspiratory effect would have been prevented by the presence of a tautomorphemic aspirate in PIE (according to 'Grassman's law', e.g. σπλήν < *$spl(\bar{e})g^h$-*n*-, φάσκος < *b^h*arsk*-). Equally, the aspiration does not occur if a laryngeal *$h_{1/2}$ was adjacent to the cluster (cf. the regular outcome -σκ- of *-h_1*sk*-, σκῦτος < *skh_1u-, ἀστήρ < *h_2*stér* and σκαζω < *$skh_2d\underset{\frown}{i}$-), while no clear evidence is available for *h_3. This case is clearly shown by homoradical evidence like σπάω < *sph_2- *vs* σφήν < *$speh_2$-, in which the 0-grade predictably corresponds to the lack of aspiration. Phonetically, these constraints would be the result of the dissimilation of a feature shared by both the aspirates and the laryngeals and also carried by the sibilant. In this respect, the aerodynamic feature [large airflow] is therefore tentatively proposed after the comparison of a typology of acoustic data on fricatives in co-articulation with stops. According to Hiersche (1964), as Greek generally avoids an anlauting cluster σθ (attested only one time in the form σθένος), the aspiratory effect does not work for PIE *#*st*. The forms σπένδω < *$spend$- and σπεύδω < *$speud$- seem to represent the only counterexamples.

The dialectal distribution of the aspirated outcomes -σθ- of PIE *-*st*- shows as in three marginal regions, namely Elis, Arkadia and in the place of Chaleion, the aspiration of PIE *-*st*- clusters seems to emerge only after the 6th century BC, while the earliest inscriptions always attest -στ-.

By analysing the data for a (tentative) preliminary relative chronology of this sound change, it is possible to argue that it would be previous (or contemporaneous) to the neutralization of mobile-*s*, as proved by doublets like θριγχός/στριγκός and σχερός/κείρω. It would be previous also to the simplification of triconsonantal clusters *-*rsC*- > (*)-*rC*- where *s disappears. The aspiration in θριγχός would show that the aspiratory effect was active when *#st^h was (still) permitted in Greek and it preserves the aspiration because of the loss of the mobile-*s*. Contrariwise, a proto-form *σθριγχός would have been changed into στριγκός in order to adhere to the subsequent constrain.

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Conference : : 6th Indo-European Research Colloquium
Isabelle de Meyer; PhD-student at University Ghent & École Pratique des Hautes Études
Title : Solving etymologies with semantics: the case of *armenta*, *arma* and *armillae*

Abstract

My PhD dissertation aims to determine the exact relationship between a selection of Indo-European stems which all point to a Proto-Indo-European root **(h)ar-*. One of the most striking features of these stems is the fact that they all belong to remarkably divergent semantic fields. Notable examples include Greek ἄριστος 'the best', ἄρθρον 'joint', Latin *ars* 'art, manner', *artus* 'narrow' and Vedic *ṛtá-*. As a result my etymological research is not restricted to an examination of the phonological/morphological features of these stems, but primarily consists in a thorough semantic analysis of their oldest attestations. In this talk I will present the outcome of the (morpho-)semantic analysis of three Latin words starting with /arm-/: *armenta* 'cattle', *arma* 'armour' and *armillae* 'arm-let'.

As a matter of fact, none of these three nouns is provided with a complete and satisfactory etymological analysis. To begin with, three derivations have been hypothesised for *armenta*: either from the verb(root) 'to plough' (e.g. Varro, *De lingua latina*, 5.96), or from **(h)ar-* 'to join together' (= *communis opinio*, e.g. Walde & Hofmann (1938-1954: 1, 68), Pokorny (1959-1969: 1, 72-73), Perrot (1961: 170), *DELL* (2001: 47), de Vaan (2008: 54)), or from a stem $*h_2an(h_1)mn$- 'breath of life' (Nussbaum 2014). According to the first theory the noun would have originally denoted 'the ploughing animals', according to the second 'the things grouped/joined together', i.e. 'a herd', and according to the last 'living thing; livestock'. Nevertheless, these three interpretations seem hardly convincing from a semantic standpoint. Nussbaum (2014) points out that the *armenta* do not indicate plough animals and that **(h)ar-* does not mean 'to group'; yet, Nussbaum's own theory appears semantically too vague.

Furthermore, unlike *armenta*, the root of *arma* is uncontroversial and commonly reconstructed as **(h)ar-*. However, information as to its suffix and precise semantic reconstruction is either completely missing (e.g. Walde & Hofmann (1938-1954: 1, 67- 68) and *DELL* (2001: 46-47)), or uncomplete/conflicting. De Vaan (2008: 54) reconstructs an adjective, Weiss (2020: 306) a substantive; the former 'what is fitted together' or 'tools', the latter 'fittings'.

Finally, *armillae* is standardly derived from *armus* 'arm' due to obvious semantic reasons (see e.g. Walde & Hofmann (1938-1954: 1, 68), Leumann (1977: 307), *DELL* (2001: 48), de Vaan (2008: 55)). However, this derivation is untenable for phonological reasons: the diminutive of a *mo*-stem cannot result in a sequence -*illa*- (cf. already Strodach (1933: 39)).

In sum, there is no scholarly consensus on the root of *armenta*, nor on the exact suffix of *armillae* and *arma*, nor on the precise semantics of the stem of *armenta*, *arma* and *armillae*. In this talk I will give an overview of the thorough semantic analysis which leads me to conclude that *armillae*, *arma* and *armenta* most likely share the same *men*-stem 'the attachment' from the root **(h)ar-* 'to join closely'.

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Semantic Relations in Diachronic Word Families

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Words in a language's lexicon are historically related to each other in various dimensions, among them the semantic and morphological dimensions (Koch 2001: 1156-1159). Semantic relations can be found 1) within one word, namely between the original meaning and new meaning of words undergoing semantic change and 2) between two words, one of which being derived from the other word via a word formation process.

For example, the German word *Glück* ‘good fortune, happiness’ used to mean only ‘good fortune’, so there is a semantic relation to be found between the original and the new meaning in this process of semantic change. Back in Middle High German, when *gelücke* had yet still another meaning, ‘(good or bad) fortune’, *ungelücke* ‘bad fortune’ was derived from it. So also here exists a semantic relation, in this case between the source and target of this word formation process.

In this talk, I present results of a study on these relations, investigating the history of words referring to a set of concepts and the semantic pathways chosen for designating them, i.e. using an onomasiological approach in the terms of Blank (2001). The data used are 480 German nouns and their etymological histories (as described in Kroonen 2013 and Pfeifer et al. 1993). The set of nouns was adopted from the German concept list of basic vocabulary by Dellert et al. (2020).

I categorized the semantic relations based on a schema distinguishing between taxonomic and metaphoric similarity, contiguity, contrast, and identity, as proposed by Koch (2001), with further sub-categorizations derived from Pepper and Arnaud (2020), Comrie and Thompson (2007), and Bierwisch (2015). Figure 1 illustrates a range of semantic relations via the concept ‘bow’.

My findings show that the choice of the kind of semantic relation in semantic change and word formation is influenced by various factors. These factors include the part of speech of the words involved, the semantic field of the new concepts, and whether the semantic relation is found in normal semantic change, in semantic change accompanying borrowing from another language, or in word formation, in the last case further dependent on the kind of word formation.

This can be interpreted in a usage-based model of the creation of lexical meaning, as described for instance in Enfield (2015) and Koch (2016). According to this model, semantic change involves either innovative word use by the speaker and a reanalysis by the hearer of this innovative use as a usual meaning, or an innovative understanding by the hearer via reanalysis of a word that was meant in the usual meaning. Word formation on the other hand is always driven by speaker-innovation, and semantic change during borrowing is primarily based on reanalysis by the listener.

Overall, contiguity is the most important semantic relation (confirming the findings by Koch and Marzo 2007). Yet in borrowing processes, hyperonymy is a much more frequent semantic relation than in other processes, implying that it is particularly associated with reanalysis. In word formation, hyponymy and contiguity play a larger role than in other processes and hyperonymy is relatively rare.

Additionally, data including reconstructed forms and meanings behaves significantly different from data only including attested forms and meanings. If replicable cross-linguistically and for other parts of the lexicon, this could be utilized in improving etymological reconstruction.

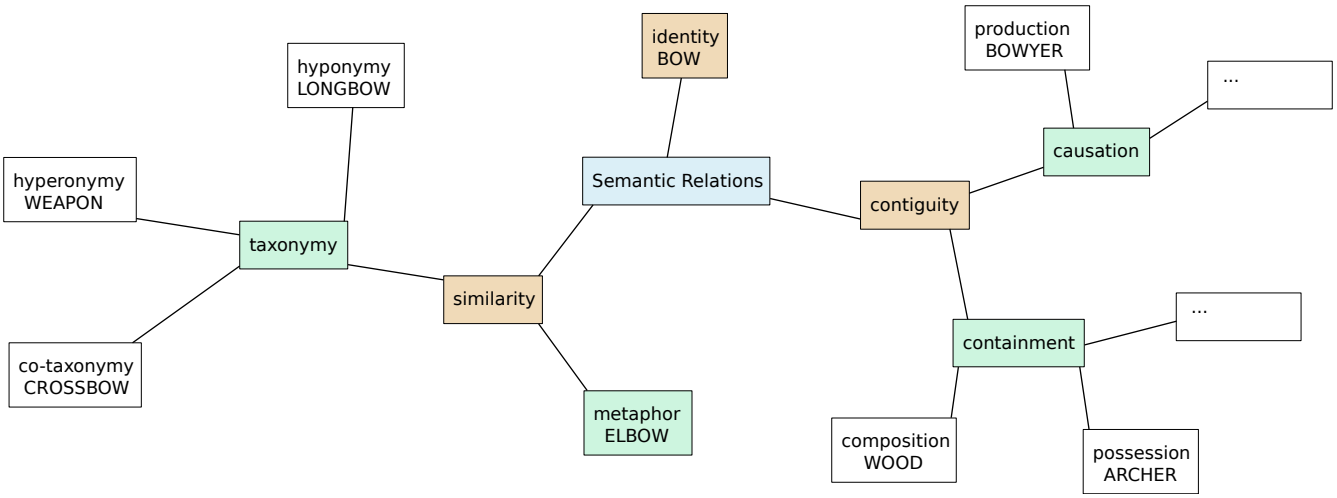

Figure 1: Semantic relations of the concept 'bow'.

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Exploring the usage of phonology in Indo-European phylogenetics (Tiago Tresoldi)

Methods of quantitative inference of trees and networks for historical linguistics have gained a lot of traction in the last two decades, particularly in the adoption and adaption of phylogenetic pipelines first developed for biology (Greenhill et al. 2020, Jäger 2019). Indo-European, both in terms of tree topology and split dating (in a matter related to hypotheses on the *Urheimat*), has a been a particular favorite of these studies, including works such as Ringe et al. (2002), Rexová et al. (2003), Gray and Atkinson (2003), Nakhleh et al. (2005), Bouckaert et al. (2012), and Chang et al. (2015), with the famous opposition of Pereltsvaig and Martin (2015). For a more comprehensive review, see Ringe (2017).

The main and usually only character of evolution in such studies are events of "lexical replacement", that is, when the most neutral lexeme for expressing a certain basic concept is replaced by one belonging to a different cognate set (thus including different types of events, such as neologisms, semantic shifts, and loans). Studies involving different linguistic features, either as characters for inference or reconstruction, are in much smaller number: among few others, we can recall sound changes in Turkic languages (Hruschka et al., 2014), phonotactics in Pama-Nyungan (Macklin-Cordes et al., 2021), and morphosyntactic features in Indo-European (Carling and Cathcart, 2021). The choice of such an evolutionary character is based on different matters including historical practice, data availability, and adequacy to the underlying biological analogy, being at times wrongly accused of being just a rehashing of past glottochronological methods. Attempts at improving the results in Indo-European have mostly focused on refining the annotation of such events, in projects involving the annotation by experts (cf. Krause 2017), along with general work on the mathematical optimizations of phylogenetic methods.

In this work, I explore some of immediate possibilities in terms of using phonology for a phylogenetic inference of Indo-European. I discuss some of the reasons usually put forward against the usage of sound changes, including homoplasy and annotation bias, and discuss the complexities involved in an automatic or assisted inference of sound changes from cognate sets. Finally, by combining automatic sound change inference (Tresoldi et al. 2018) and phonological correspondence detection (List 2019), I present the results of a pilot study that infers a tree for Indo-European based on such traits, following a pipeline adapted from the standard one in phylolinguistic (Hoffman et al 2021). This allows to discuss technical issues such the suitability of the evolutionary models commonly used for phylolinguistics and potential new approaches.

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6TH INDO-EUROPEAN RESEARCH COLLOQUIUM
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Word-internal "thorn" clusters and the dative singular of the PIE 1st person pronoun

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Any attempt of reconstructing the personal pronouns of Proto-Indo-European (PIE) must deal with their well-known tendency to come under analogical influence of each other. The application of the comparative method is further complicated by the fact that the individual Indo-European (IE) branches vary greatly with regard to the precise phonological shape of any form in question (cf. the dative singular of the first person: Greek ἐμοί, Vedic *máhyam*, Old Avestan *ma*^{i}*biiā*, Old Latin *mihei*, Gothic *mis*, Armenian *inj*, Old Church Slavonic *mĭně*, Lithuanian *mán*, Hittite *ammuk*). Consequently, reconstructions of the PIE state of affairs (or rather reconstructions of concrete pronominal forms) are highly divergent.

However, a convincing reconstruction of PIE personal pronouns is possible, if we dare to focus on very old layers of the proto-language, and if we apply both the historical-comparative method and internal reconstruction side by side. Special attention should also be given to traditionally inexplicable forms which, at least in some cases, need not be the result of analogy, but can turn out to be fully regular descendants of the PIE archetype. This shall be exemplified by focusing on the PIE dative singular of the 1st person pronoun. Based on data from the Indo-Iranian, Italic, Armenian and Germanic branches, our picture of their common PIE predecessor can be plausibly refined.

The weak spot of the common reconstructions (i.e. **(h₁)mégʰi̯o(m)*, **(h₁)mégʰei̯* and similarly) is the fact that they are only suitable for the Indo-Iranian, Italic and Armenian forms. All other forms must be explained as analogical innovations. Although this can be true, it does not need to be in this entirety. Furthermore, an approach which would be able to explain the forms of one other, additional IE branch as fully regular and without relying on analogy would certainly be more elegant than the standard explanations.

To cut a long story short: early PIE probably had a stressed dative singular ***(h₁)médʰgʰi̯o* for the 1st person pronoun. Already before the breakup of PIE, this ***(h₁)médʰgʰi̯o* underwent a regular simplification of its consonant cluster due to the *métron*-rule (**VC.CRV → *V.CRV*), which led to late PIE **(h₁)mégʰi̯o*. This reduced form was the base for Vedic *máhyam*, Wakhi *maž*, Old Latin *mihei*, Umbrian *mehe* and Armenian *inj*.

The rationale for the reconstruction with former **-$d^h\hat{g}^h$- instead of simpler *-$\hat{g}^h$- is the Germanic evidence, as Proto-Germanic **miz* (Goth. *mis*, ON *mér*, OE *me*, OHG *mir*) with its final sibilant can only be combined with the IIr., It. and Arm. forms by means of a former 'thorn' environment. As the word for 'thousand' (e.g. Goth. *þusundi*, OSwed. *þúsand*) demonstrates, a non-initial 'thorn' sequence (as in the reconstructed strong stem dialectal PIE **tuH-dk̂ómt-* 'thousand') evolved into a sibilant within (Proto-)Germanic.

A similar environment, i.e. a non-initial 'thorn' sequence, must have been present in the pronoun's dative, too, because Germanic at some point in its prehistory lost final *-*i̯o*. This is clearly visible in the masculine or neuter genitive singular of various pronouns; cf. e.g. Ved. gen. *tásya*, Gk. τοῖο < PIE **tósi̯o*, but PGmc. **þas*, as reflected in OE. *þæs*, OS. *thas*; similarly, but with *e*-grade, Goth. *þis*, OHG. *des* < PGmc. **þes* < PIE **tési̯o*.

If this loss occurred very early – i.e. already in PIE times, in the dialect of PIE which was to evolve into Germanic –, it would imply that the pre-Germanic dialect could not participate in the otherwise common PIE reduction of early PIE ***(h₁)méd$^h\hat{g}^h$i̯o* to late PIE **(h₁)mégˆ^{h}i̯o* and that early PIE ***(h₁)méd$^h\hat{g}^h$-i̯o* was reduced to dialectal PIE **(h₁)méd$^h\hat{g}^h$*. The latter form would then be a plausible predecessor of Proto-Germanic **miz*.

To sum up: a 'thorn' cluster could not only − in theory − be the base of Vedic *máhyam*, Wakhi *maẓ*, Old Latin *mihei*, Umbrian *mehe* and Armenian *inj*, but it is also indicated by the Germanic forms.

Finally, the other Indo-European branches have replaced the inherited orthotone dative early PIE ***(h₁)méd$^h\hat{g}^h$i̯o* > late PIE **(h₁)mégˆ^{h}i̯o* with new formations (new stem **(h₁)men-* in Tocharian and Balto-Slavic; old accusative in Albanian; reshaping after the 2nd person dative in Avestan) or its clitic counterpart **moi̯* (Greek, Celtic, Anatolian).

Birds of a feather? Latin *columba* 'pigeon, dove' and Greek κόλυμβος 'grebe'

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The comparison between Lat. *columba* (-*us*) 'pigeon, dove' and Gk. κόλυμβος (-ίς, -άς) 'diving bird, esp. grebe' is as irresistible as it is problematic. While the formal agreement between these two bird-names seems perfect, the semantics are hard to reconcile – doves and grebes have little in common, except perhaps grey color. But as Lockwood (1990) pointed out, while doves are crosslinguistically often named after their color, grebes are not: their name usually refers to their characteristic diving behavior (e.g. Lat. *mergus* ← *mergō* 'plunge, dive'). In fact, *columba* has been often traced back to PIE roots meaning 'dark grey' or the like, augmented with the suffixal complex *-*(o)n-b*^{h}*-o-* typical of animal names. The root could – but need not – be the one of Lat. *color* '(dark) color' (on which see now Höfler 2015) and possibly Gk. κελαινός 'dark, black'.

Lat. *palumbēs* 'wild dove', rather than a cognate of Arm. *aławni* (< *$p\underset{\circ}{l}h_2$-b^h-*n*-?) as suggested by Klingenschmitt (1982:68), is probably an inner-Latin creation after *columbus* from the root of *palleō* 'be pale', near-synonymous with but possibly distinct from (cf. Nussbaum 1999:190f.) the root **pel-* 'grey' giving names for 'dove, pigeon' in Greek (πέλεια, περιστερά < *πελ-) and Baltic (O.Pruss. *poalis*).

On the other hand, Proto-Slav. **golǫbь* 'dove' strongly resembles *columba*, but the disagreement in anlaut points to irregular development (possibly for tabooistic reasons), borrowing, or parallel creations on different roots. The history of these words, included the hypothesis of a connection with Coptic *k^{y}roompe* 'pigeon' (Lefort 1931), will be discussed in the first part of my talk.

However, the semantics of Gk. κόλυμβος makes both common inheritance and a borrowing scenario unlikely. The main focus of my talk will be on a new etymological proposal for this Greek word. I start from a review of the attestations and their philological context, showing that κολυμβίς, κολυμβάς and κόλυμβος have all a generic meaning 'diving', 'diver', with 'grebe' only one of possible specializations; thus, the verb κολυμβάω 'dive, swim' is hardly derived from the bird-name, *pace* the standard etymological dictionaries.

I argue instead that κόλυμβος < **ḱolum-g^w(h$_2$)-o-* and the unattested *κολυμβᾱ- < **ḱolum-g^w(h$_2$)-eh$_2$-* inferrable from denominative κολυμβάω arose from the univerbation of a syntagm **ḱolum g^{w}eh$_2$* 'to go covered' (i.e. under the cover of water), with an adverbial accusative of the *u*-stem noun **ḱol-u-/ḱel-u-* 'covering' (← **ḱel-* 'cover': Lat. *cēlō* 'cover up', Goth. *huljan* 'hide', etc.) that also lies behind κέλῡφος 'sheath' (← **ḱeluh$_1$ b^{h}uH-*) and καλύπτω 'cover, hide' (← **$k\underset{\circ}{l}$lu-b^h-i̯e/o-*) according to the recent analysis by Merritt (2019). A close morphological parallel can be found in κόρυμβος/-η 'hilltop', analysed by Balles (2009) as univerbation of **ḱor(h$_2$)um g^{w}eh$_2$* 'to go bent, make a curve' → *ḱorum-g^w(h$_2$)-o-/-eh$_2$* 'crooked, arched', with adverbial accusative of **ḱor(h$_2$)-u-* 'horn, bend'. More generally, the importance of such univerbated syntagms as a source of compounds and neo-roots has been increasingly recognized in IE linguistics (Hackstein 2012, Schutzeichel 2014).

Semantic support for the proposed reconstruction comes from several crosslinguistic parallels, as well as from phraseological collocations of καλύπτω referring to (self-)submerging in water (e.g. *Od.* 4.402 μελαίνῃ φρικὶ καλυφθείς "hidden by the dark ripple", or the Homeric verse-end formula (3x) κῦμ' ἐκάλυψεν, of creatures disappearing beneath the sea), and even from later derivatives like καλυφή 'submerged land'.

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PIE *tr̥- 'three'
Evidence from Mycenaean Greek Compounds

The purpose of this paper is twofold. First, it aims at showing that the PIE root for the numeral 'three', commonly understood to be **tri-*, also presents a form **tr̥-*, being this the basis for two Greek compounds. Second, it intends to analyze the relationship between the two PIE numeral forms **tr̥-* and **tri-* from a chronological point of view. The focus of the paper will be on the etymological analysis of the Greek terms (attested in both Mycenaean and later alphabetic Greek) in which a reflex of this root can be observed. Finally, iconographical and contextual evidence from the Bronze Age will be employed in order to crosscheck the linguistic reconstruction.

A reflex of an original PIE root **tr̥-* can be supposed in two Mycenaean Greek compounds, although their traditional interpretation assumes a different etymology. First, the Myc. word indicating the 'table', *to-pe-za*, /*torped͡za*/, and its alphabetic correspondent τράπεζα are commonly understood to be nominal compounds of the PIE roots of the numeral 'four', **kʷ(e)twr̥-*, and the noun 'foot', **ped-* (with the final nominal suffix **-yh₂*). From a semantic perspective, the term is assumed to mean 'four-footed', implying a word-formation apparently based on the number of the table's feet (or legs), which is consistent with the modern standard of four-footed tables. However, some phonological elements invite to consider a different derivational hypothesis, i.e. that *to-pe-za* reflects a form **tr̥-* of the PIE root for 'three'. Second, also for the Mycenaean compound *to-mi-ka*, /*tormiska*/, which is commonly understood to reflect an original PIE **kʷ(e)twr̥-* in its first member, a different etymology can be put forward. Although this word does not show any direct alphabetic correspondent, some light on both its etymology and semantic interpretation is cast by a morphologically-analogous compound *ti-ri-*[*mi-ka*, /*trimiska*/, 'with three threads' (cf. Gk. τριμίσκον and τρίμιτος), which shows the form **tri-* of the PIE root for 'three' in its first element. Thus, *to-mi-ka* has been understood to mean 'with four threads' on the basis of such a comparison and the interpretation of *to-* < **kʷ(e)twr̥-* for its first member. Nonetheless, the above-mentioned phonological difficulties in positing the correspondence PIE **kʷ(e)twr̥-* : Myc. *to-*, /*tor-*/, suggest, also in this case, that the first element *to-* of the compound

to-mi-ka stems from PIE **tr̥-*. In the light of such a reconstruction, it can be put forward that *to-mi-ka* and *ti-ri-*[*mi-ka* derive from two different forms of the same root for 'three' (**tr̥-* and **tri-* respectively), and share the same meaning 'with three threads'. Likewise, similar considerations lead to propose that also *to-pe-za* witnesses the form **tr̥-* of the PIE root for 'three' in its first element, as mentioned above.

I will argue that the two variants of the numeral 'three' root attested in Mycenaean and Classical Greek reflect two diachronic stages of the root, namely **tr̥-* and **tri-*. In Mycenaean, they appear as first members of structurally-analogous compounds, and also in equivalent lexemes. A comparison with other linguistic features of 2nd-millennium Greek, such as the *o*-stem genitive singular endings (*-Xo* and *-Xo-jo*), can show how such a circumstance is consistent with this chronological phase. A further element to consider is that a pair of Mycenaean compounds, *ti-ri-jo-we*, /*triohwes*/, 'with three handles', and *qe-to-ro-we*, /*kʷetrohwes*/, 'with four handles' (cf. Gk. οὖς), seems to crosscheck that PIE **kʷ*(*e*)*twr̥* – and, what is more, in opposition with **tri-* – is reflected in Mycenaean Greek with an initial *qe-*, /*kʷe-*/. Finally, some archaeological evidence seems to add weight to such a reconstruction, testifying the usage of three-footed tables in Mediterranean and Near Eastern areas during the Bronze Age. Particularly significant is a fresco from the Palace of Pylos, probably representing the same three-footed tables notated in the Linear B tablets through the form *to-pe-za*. Furthermore, in Mycenaean texts two other typologies of tables are registered, namely *we-pe-za*, /*hwespedz͡a*/, 'six-footed' (from PIE **swe*(*k*)*s-*, 'six'), and *e-ne-wo-pe-za*, /*e*(*n*)*newopedz͡a*/, 'nine-footed' (from PIE **h₁newn̥-*, 'nine'), which seems to attest a pattern based on a three-footed constructive module for tables.

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The reception of the Indo-European theory in Greece through the lens of the dominant language ideology of Modern Greek

Mass media are constantly referring to the ideologies which are prevalent in society. Moreover, "ideology" has been studied within the framework of various humanities and social disciplines. For instance, "ideology" signifies a system of values and beliefs in the domain of modern political science, without receiving a negative connotation (Freeden 2003). The negative meaning of the word "ideology" originates from perspectives maintained by Karl Marx and Frederick Engels. According to these thinkers, "ideology" reflects the reality misleadingly· it is the distortion of the material world. Throughout the 20th century, "ideology" had the negative connotation Marx and Engels had attributed to this concept and, as a result, political and social sciences distinguished it from the "objective knowledge" (Eagleton 1991).

Although illustrious linguists do not take ideological factors into consideration as to linguistic issues, this methodological preference is ideologized, historically detectable, and originates from aspects nineteenth-century linguists voiced regarding the nature of the linguistic system. As Milroy (2012) points out by using examples, aspects maintained by the Neogrammarians, a German school of linguists (19th century), and structural linguistics (20th century), initiated by Ferdinand de Saussure (e.g. Saussure's aspect on the autonomy of a language system), affected, to some extent, modern linguistic approaches. Nowadays, an analysis of ideological schemata procures advantages and meets the demands of a modern linguistic study, as sociolinguistic researches have shown inexorable progress.

This study aims at examining helleno-centric linguistic theories and pseudo-scientific perspectives, which are disseminated in Greek society, concerning the origins of Greek. More specifically, the present research will focus on (1) quasi-scientific approaches and (2) squarely nationalistic narratives with regard to the reception of the Indo-European theory and its dimension as to the origin of Greek, the antiquity of Greek and its speaker, and the influence Greek had on the structure of languages worldwide. Sampanis & Karantzola (2018: 183) point out aptly: "In Greece, the literature which can be called 'para-linguistic' and promotes the concept of Greek as an autochthonous and particularly archaic language that exerted influence on a number of languages in Europe and globally is excessive and probably more proliferous than the academic publications on IE linguistics".

The reception of the Indo-European theory in Greece through helleno-centric approaches will be examined under the light of the dominant language ideology of Modern Greek. This ideology of Modern Greek as a regime language became dominant after the official establishment of Standard Modern Greek and the resolution of Greek Language Question in 1976. According to this conceptual model, each language has a unified "Interior" and a threatening "Exterior". The Interior of Greek is "pure" Greek. The Exterior of Greek is "non-Greek". The Interior of a language does not know any historical limit and it is from its past that a language gains its symbolic strength (Moschonas 2004: 173 and 190). In the present study, it will be indicated that the ideological reception of the Indo-European theory in Greece forms part of the strategies the dominant language ideology employs in order to

declare the concept of the purity of the Interior (Greek), which is presented as intact and homogeneous, knowing of no historical limits.

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On Greek χελύνη and χελύνιον. Among turtles and lips.

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This paper analyses the different usages of χελύνη in order to establish which was its original meaning and how was its semantic development from the framework of Cognitive Linguistics (cf. Croft & Cruse 2004). Our starting point is an Aristophanic *hapax* referring to the lips, since the described action can be compared to those with χεῖλος (cf. δάκνων τὰ χείλη, Eub.53.4):

ὑπ' ὀργῆς τὴν χελύνην ἐσθίων· (Ar.*V.*1083)

The derived term χελύνιον (Hp.*Ep.*23.20, LXX *De.*34.7.1, J.*AJ* 5.208.2) is to be added here. The fact that it is also employed on animals (cf. Hipparch.2.3.35.4) seems to indicate that both χελύνη and χελύνιον originally referred not to the human *lips*, but to the animal *snout*. The semantic change *snout* → *mouth* is a common case of metonymy based on animal analogy (Wilkins 1996).

However, χελύνη does also refer to the *turtle* and the *lyre*. Assuming that χέλῡς is the base for χελῡ́νη (<*χελύσ-ν-ᾱ, cf. Aeol. χελύννα), and leaving aside its ultimate origin, either Indo-European (cf. OCS *žely*) or Pre-Greek (as Schmeja 1963 on χελώνη and in Beekes 2010 basing on the dialectal form χελύμνᾱ with μ/ϝ alternance in χελύϝνᾱ > χελῡ́νη), it is necessary to explain the relation between 'turtle' and 'lip'.

Mastrelli (1966 *apud GEW*) suggested a metaphor based on the keen shape of the jaws of turtles, which leads us to the following question: Is the turtle called χελύνη by its sharp snout, or is it the jaw called so because of its similarity to the snout of turtles? Since the first possibility (that is, the turtle being the "snouty") seems more plausible, we will support that the origin of these terms lies on an ancient name for the jaw that has undergone different metonymical usages.

Keywords: *Greek Semantics, metonymy, body parts, Cognitive linguistics.*

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Armenian *dašxuran* ‘bowl’ and Pashto *l’oxǎy* ‘vessel; pot’: loanwords and the relative chronology of sound laws

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Based on phonological and morphological considerations the Arm. word *dašxuran* ‘bowl’ has been considered an Iranian loanword, but the exact source for the loan has so far not been identified. Périkhanian (1985: 75f.) reconstructs a tentative Iran. **uda-xšaudana-* (containing Iran. **uda-* ‘water’ and **xšaud* ‘? be/make wet or liquid’; cf. Cheung 2007: 455), but such a form is not continued in any Iran. language and the reconstruction as such is problematic for several reasons.

A single Arm. loan etymology might seem rather irrelevant by itself, but this etymology has been adduced as key evidence for one particular sound law: Seemingly pointing to a <u>late</u> change **d* > *r* only after the Arm. loss of an initial unaccented **u* (otherwise both *d’s* should have become *r,* yielding pre-syncope Arm. ***urašxoyrana-*). The etymology could thereby suggest that Middle Iran. intervocalic *δ* (or still *d* ?) was substituted by pre-Arm. **d* (and not by Arm. **δ*) and that all other changes that produced pre-Arm. **d* such as PIE **d*^{h} > Arm. *d* or PIE **Rt* > Arm. *Rd* had occurred prior to that (cf. Viredaz 2005: 86-89). The sound change Arm. *d* > *r* has lately been used to explain quite a number of morphemes and words containing *r* in Armenian (cf. Viredaz 2005; 2018a; 2018b).

In this paper I want to present a different etymology for *dašxuran* by connecting it to Pashto *l’oxǎy* ‘vessel; pot’. The etymology of the latter is still under debate. Some attempts have been made (Morgenstierne (1927: 39) < **dāxštra-*; Morgenstierne (2003) < **daus/štraka-*).

If *l’oxǎy* can be traced back to a pre-form **daxšura-(ka-)-* instead, a connection with the Arm. word (and thereby ultimately a revision of the Arm. change **d* > *r*) is worth a consideration. However, several sound changes have to be discussed first, and that will make up the main part of this paper:

- Pashto *u*-umlaut and the origins of the vowel *o*
- the relative chronology of Pashto syncope and the change **(x)šr* > *x̌*
- the fate of Armenian unaccented *u* in (later) loanwords

The question of the etymology of a possible Iran. **daxšura-* ‘pot’ may be addressed subsequently.

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Indo-Iranian Loanwords and the Central Asian Substrate Hypothesis

It is generally assumed that early Indo-Iranian was spoken in the Sintashta and Andronovo cultures (Kuz'mina, 2007). According to the *Central Asian Substrate Hypothesis*, speakers of Proto-Indo-Iranian migrated to Central Asia around 2000 BCE and came into contact with the agricultural BMAC civilization, which resulted in a body of loanwords into Proto-Indo-Iranian, borrowed from the language of the BMAC people (Lubotsky, 2001; Witzel, 2003). The hypothesis is supported by the archaeological evidence of contact between the Sintashta-Andronovo and BMAC cultures, as well as the semantic connection between some loanwords and BMAC material culture (**išt(i)-* 'brick', **i̯au̯ī̯ā-* 'canal') or Central Asian domesticates (**kHara-* 'donkey', **Hustra-* 'camel'). However, since the set of words recognized as loanwords into early Indo-Iranian varies depending on the author, a reexamination of all proposed evidence, following a uniform methodology, is necessary. Moreover, sufficient evidence for the hypothesis that these loanwords originate in a single Central Asian substrate language has not been provided.

Following a methodology for identifying non-Indo-European vocabulary in Indo-European languages (Schrijver, 1997), I argue that ~ 75 % of about 100 previously suggested loanwords into early Indo-Iranian can plausibly be analyzed as loanwords. For the great majority of the loanwords, no known source language exists. The remaining words are either ambiguous or have plausible Indo-European etymologies. The aim of this presentation is to discuss 1) when, in terms of relative (linguistic) chronology, the loanwords entered Indo-Iranian, and 2) whether most words came from the same source language or not.

Initially, I divide the corpus of loanwords into a Proto-Indo-Iranian and a Post-Proto-Indo-Iranian layer. By applying a modified version of Lubotsky's (2018) relative chronology of Proto-Indo-Iranian sound changes, I subsequently identify a group of loanwords that must have been borrowed in late Proto-Indo-Iranian, after certain sound changes had already occurred. Conversely, a single word shows positive evidence of a Pre-Proto-Indo-Iranian time of borrowing. The fact that most loanwords were borrowed in late Proto-Indo-Iranian or Post-Proto-Indo-Iranian is consistent with the timeline of the Central Asian Substrate Hypothesis.

By analyzing the phonological structure of loanwords into Proto-Indo-Iranian, I propose two new recurring phonological characteristics of this group of words, in addition to those proposed by Kuiper (1991) and Lubotsky (2001). These new phonological characteristics provide additional evidence that an underlying non-Indo-European linguistic system lies fossilized in

the loanwords, revealing phonological features of the source language. This result suggests that many loanwords were borrowed from the same language, which further corroborates the Central Asian Substrate Hypothesis.

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Su aggettivi verbali in -*tá*/*ná*- nel Ṛgveda

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È opinione comune che in antico indiano gli aggettivi verbali in -*tá*- e -*ná*- siano equivalenti da un punto di vista funzionale: entrambi esprimerebbero l'azione verbale che si è manifestata sul soggetto ("Die Form auf *ta* wird einem Nomen beigesellt, um anzuzeigen, dass die Handlung des Verbums an ihm zur Erscheinung gekommen ist. Dem Sinn des Verbums gemäss übersetzen wir es bald activisch bald passivisch," Delbrück (1888, 382)). La selezione di un suffisso piuttosto che dell'altro dipenderebbe da ragioni fonotattiche: radici terminanti in occlusiva dentale e in *ṝ* mostrerebbero una preferenza per il suffisso in nasale – v. già Debrunner (1954, 728–29). Nel presente contributo si affronterà la questione dell'equivalenza funzionale dei due suffissi.

Si dimostrerà, inoltre, come le forme in -*tá*-, lungi da essere participî perfetti passivi (PPP), rappresentino in realtà participî risultativi e costituiscano l'unica sicura diagnostica di inaccusatività nella lingua del Ṛgveda. Solo considerando tali forme come costruzioni orientate al paziente si potrà comprendere la loro duplice funzione: di participî passivi in senso proprio quando formati su basi transitive, e di participî risultativi su basi inaccusative. Infine, si tenterà di rendere conto di quelle forme comunemente intese come attive e non risultative (ad es. *st*^{h}*itá*- 'standing, firm', *plutá*- 'floating') o non stative (ad es. *cakráṃ ná vṛttám* 'like a rotating/spinning chariot-wheel').

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Orts- und Richtungsangaben im Nuristani

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Die Nuristani-Sprachen[1] bilden einen separaten Zweig des Indoiranischen, einem Hauptzweig der indogermanischen Grundsprache. Sowohl über ihre interne Klassifizierung als auch über ihre Genese gibt es bis dato noch keine einheitlich akzeptierte Erklärung.

Die rund 100.000 Sprecher leben in Nuristan, einer abgeschiedene Gebirgsregion am südlichen Hindukusch nahe der pakistanischen Grenze in Nordost-Afghanistan; nur wenige Tausende leben in ein paar angrenzenden Tälern in Pakistan. Diese isolierte Lage kann mitunter erklären, wieso sich dort bis zur Zwangsislamisierung 1895/96 eine lokale polytheistische, d.h. vorislamische, Kultur erhalten konnte. Ein Teil dieser archaischen Kultur, die der vedischen Religion ähnelt (JONES 1972, 1974), erhält sich teils noch in den Sitten und Gebräuchen der Nuristani.

Es gibt fünf Nuristani-Sprachen (nach STRAND 1973: 302): *Katë*[2], *Prasun*, *Nuristani Kalasha*[3], *Tregami* und *Ashkun*. Diese sind eigenständige Sprachen und keine Dialekte (JETTMAR 1975: 30; COSERIU 1980: 115), aber sie zerfallen in sich selbst in verschiedene dialektale Varianten. So lässt sich das *Nuristani Kalasha* in zwei Dialektgruppen zu unterteilen, in die nördliche Dialektgruppe und in die südliche Dialektgruppe. Der Dialekt von Nisheygram, dem südlichsten Dorf im nuristanischen Waigal-Tal *Kalashüm* von ca. 10.000 – 30.000 Sprecher gesprochen, gehört zur südlichen Dialektgruppe.

Katë zerfällt in zwei große Dialektgruppen, in die östliche und in die westliche. Der Kulem-Dialekt gehört zum *West-Katë*, gesprochen in Zentral- und West-Nuristan von den Bewohnern von Katigal, Ktivi, Kulem und Ramgal.

Diese beiden Dialektvariante dienen innerhalb meines Promotionsprojektes als Referenz-Dialekte. Der Projektfokus liegt auf der Erfassung der synchronen und Erforschung der historischen Formenlehre des Nomens in den Nuristani-Sprachen. Die Nominalflexion soll so systematisiert werden, dass der Status der Flexionsklassen (Anzahl und konkretes

[1] Die ehemalige Bezeichnung Kafiri-Sprachen („Sprachen der Ungläubigen“) zu gebrauchen, gehört es heutzutage zu vermeiden (STRAND 1973: 297), denn die Nuristani verstehen sich als fromme Muslime.
[2] *Kati* bei MORGENSTIERNE (1968) und GRJUNBERG (1980)
[3] Die Sprecher bezeichnen ihre Sprache selbst als *Kalaṣa-alā* („die Sprache der *Kalaṣa*“). Bei MORGENSTIERNE (1954) und BUDDRUSS (1987, 1992) steht stattdessen *Waigali.*

Flexionsverhalten) und ihre Verwendung mit Prä- und Postpositionen (Klitika) konkretisiert und ggf. geneuert wird. Periphere Kategorien des Substantivs, wie die des Adjektivs, müssen unbeachtet bleiben, die Pronomina werden aber miteinbezogen.

Das Substantiv unterscheidet zwei Kasus, den Casus rectus und den Obliquus. Der Dialekt von Nisheygram kennt u.a. auch einen Ablativ und einen Lokativ (DEGENER 1998:78). Die Kasussuffixe *-i/-y* (Ablativ) und *-iw/-yw* (Lokativ) sind Möglichkeiten, um Orts- und/oder Richtungsangaben auszudrücken, zum Beispiel *amā̆̆yw* „zu Hause“, *Akúṇiw* „in Akun“ und *kačay* „am Fußboden“.

Daneben werden vor allem die Präposition *a-*, die gebundene Postposition *-akan* und die freien Postpositionen *ater*, *pe* und *pa* gebraucht, um einen (Ursprungs-)Ort oder eine Richtung anzugeben, zum Beispiel *kumřā́-akan* „in den Steintopf“, *akřā́-akan* „an den Haken“ und *uma amā ater* „in meinem Haus“. Sie lassen sich teils mit den Kasussuffixen kombinieren, beispielsweise *a-toliw* „auf dem Feld“ und *sinf ater* „in der Klasse“.

Die Präposition *pə-* im Kulem-Dialekt fungiert wie ein Lokativ: *pamú* „zu Hause“ und *pə křúm* „auf dem Dach“. Daneben sind vor allem die Postpositionen *-ta*, *-tavu* und *-vu* relevant für Orts- und Richtungsangaben, zum Beispiel *úšpa-ta* „aufs Pferd“, *e mančé-ta* „zu einem Menschen(heiler)“ und *bdú-vu* „neben der Tür“, und ihr Zusammenspiel mit dem Casus rectus.

Ein besonderes strukturelles Merkmal sind sogenannte richtungsbezogene Lokalmorpheme. Sie spielen in allen Nuristani-Sprachen eine wichtige Rolle (BUDDRUSS 1977, zitiert aus DEGENER 1998:9). Ihr Konzept der räumlichen Orientierung, das rein horizontale und vertikale Achsen weit überschreitet, basiert beispielsweise auf der Fließrichtung eines Flusses, dem Gebirge oder den Seiten eines Hauses. Die Lokalmorpheme werden gerne als Verbalpräfixe mit Verben verbunden, können aber auch adverbiell gebraucht werden. Diese Präfixe und Adverbien sind relevant für die lokale Verortung oder der Bewegung durch den Raum eines Sprechers bzw. einer Sprecherin oder eines Gegenstandes.

Der zu präsentierende Untersuchungsgegenstand sind die Orts- und Richtungsangaben in den beiden Dialekten des Nuristani, mit dem Schwerpunkt auf der potenziellen und wirklichen Kombination der Kasus(suffixe) und der Adpositionen.

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Jakob Halfmann

Nuristani Theonyms in Light of Historical Phonology

It is often assumed that the pre-Islamic religion of Nuristan in the Afghan Hindu-Kush (called Kafiristan in pre-Islamic times) was little affected by outside influences over the centuries, due to the remote location of its practitioners (cf. Fussman 1977: 23). From this, the conclusion is drawn that it can be considered an archaic hold-out of a non-brahmanized form of the Proto-Indo-Iranian religion closely comparable to Vedic beliefs (cf. Fussman 1977: 24-27).
In order to move beyond mere speculation in the reconstruction of historically unattested religious systems, the reconstructions should be tied to linguistic evidence.
Fussman (1977: 30-31) considers the names of the gods of Kafiristan phonetically regular developments from Proto-Indo-Iranian, which would justify ascribing significant antiquity to the religious practices associated with them. A closer examination of the theonyms in accordance with the principles of regular sound change, however, reveals that they lack the most fundamental characteristics of Nuristani historical phonology and that they are quite clearly borrowings from Indo-Aryan languages.
In this talk I intend to survey the phonological evidence in the attested theonyms and to refute the hypothesis of an ancient Hindu-Kush pantheon that was unaffected by outside influences and is directly reconstructible to the stage of Proto-Indo-Iranian.

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