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11 Alternation of diphthong and monophthong in Armenian words of substrate origin

1 Introduction

The fact that most of the Classical Armenian lexicon is not inherited from Proto-Indo-European has been recognized ever since Hübschmann (1877) established that Armenian constitutes an independent, monophyletic branch within the Indo-European family, rather than being part of the Iranian branch. Aside from the late, more or less easily identifiable, loanwords from known sources (Middle Iranian, Syriac, Greek, Urartian etc.), a sizeable portion of the lexicon remains without comparanda. A large part of this lexicon may reflect loanwords from unattested languages of the Mediterranean and Asia Minor (Clackson 2017). However, the identification of this type of loanwords is still fraught with difficulty, as in most cases, it is hard to exclude that they actually represent unrecognized inherited words or borrowings from attested, but fragmentary, languages like Urartian or Luwian. Most previous research concerning the early influence of European substrate languages on the Armenian lexicon has principally focused on the role of the so-called Mediterranean substrate, which implies areal loanwords shared with Greek and Latin (cf. J̌ahowkyan 1987: 306–11). Martirosyan (2010: 805–7 *et passim*; 2013: 121–123) highlights the role of European substrates in a wider sense (cf. Beekes 1996), as demonstrated by substrate words shared with Germanic, Balto-Slavic, and Celtic. Yet, this line of research is still in an early stage.

As discussed elsewhere in the present volume and in the publications of, e.g., Kuiper (1956, 1995), Polomé (1986), Salmons (1992), and Schrijver (1997),[1] the most reliable method for identifying loanwords from unknown languages ("substrate words") is the identification of what may be termed "irregular comparanda" in other languages. The validity of such comparisons is significantly strengthened

1 This relatively young tradition of research into the substrate languages of the Indo-European branches, to which the present volume belongs, builds, in fact, upon methods pioneered by such scholars as Karel Oštir, Johannes Hubschmid and Edzard Furnée, but it is characterized by a more critical approach and a more rigorous methodology.

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when recurring alternations between phonemes can be identified. Theoretically, the genetic affiliation of the compared languages is irrelevant when following this method. If two entirely unrelated languages have borrowed words from the same source at roughly the same time, they should be identifiable based on recurring alternations as well. This is an avenue of research where future efforts may also bear fruit. When so far, research has focused on the substrate lexicon shared by the Indo-European languages, it is no doubt because the reconstruction of these is so relatively far advanced that we can identify alternations on a deeper chronological level. At the same time, we can use the comparative method for excluding the possibility that the comparanda in question are regular cognates. Strictly speaking then, it is only the irregular, but recurring, sound alternations (or "regular irregularities") which constitute positive evidence that the comparanda are in fact related and not simply lookalikes (cf. the Introduction to this volume).

This study presents three new proposals, and an additional uncertain case, for substrate words shared by Armenian and several other Indo-European languages of Europe, including the languages of the Mediterranean region (Greek and Latin) as well as the Indo-European languages of northern Europe (Germanic, Balto-Slavic, and Celtic). On the basis of their geographic distribution, they can thus tentatively be assigned to a "European" substratum in the sense of Beekes (1996, 2000). The most striking feature of these etyma is that they demonstrate a recurring vocalic alternation. That is, Armenian shows the reflex of a diphthong **ou*,[2] while other comparanda reflect a monophthong in the same position. The implications of this will be discussed further in § 3.

2 Material

2.1 *aṙowoyt, aṙawoyt* 'alfalfa, *Medicago sativa*'

This word is first attested in the Galen Dictionary, where it glosses Gr. μηδική (Greppin 1985: 76). Additionally, it appears in an Arabic-Armenian botanical dictio-

2 In the following, the reconstruction **ou* will refer to the source of Arm. *oy* (unstressed *ow*) disregarding the fact that PIE **eu* or **ou* are usually both considered sources of this diphthong (Meillet 1936: 44, Schmitt 1981: 52). Lamberterie (1982) and Olsen (2020) argue that the regular reflex of PIE **eu* is Arm. *iw*. This assumption solves several etymological problems (e.g. *hiwsem* 'weave', which can be equated with a root **seuk-* 'turn', Lith. *sùkti*), but is not accepted by all scholars. Whichever view one subscribes to, the **ou* implied in this study can be equated with the "**ou_2*" of Macak (2017: 1069), covering a diphthong that results in Arm. *oy*.

nary (ca. 9th century), where it glosses Arab. *ar-raṭbah* ‘red clover, alfalfa’ (Greppin 1996: 393). For later and more marginal spelling variants, see HAB (I: 265).

No widely accepted etymology exists, and the word is not discussed in most of the recent etymological handbooks (e.g. Solta 1960, Greppin 1983, J̌ahowkyan 1987, Martirosyan 2010).[3] However, a key to the etymology may have been found already by Dervischjan (1877: 29), who compares Gr. ἐρέβινθος ‘chickpea’ and OHG *araweiz* (a variant of *arawīz*) ‘pea’. These forms cannot be regular cognates, however. Greek β (< **b*) does not correspond with OHG *w* (< **u̯*), nor Arm. *w* (< **bʰ* or **p*). Neither do the vowels match, and the suffix Gr. -ινθ- has a nasal which is not found elsewhere. Consequently, these words are better analyzed as a complex of independent borrowings from a non-Indo-European language (cf. WH I: 419–20, Kuiper 1956: 217–9, Furnée 1972: 231, 273, Kroonen 2012: 242–4, Šorgo 2020: 434). The following quasi-Proto-Indo-European reconstructions can be posed:

– **ereb-indʰ-* ~ **orob-*: Gr. ἐρέβινθος ‘chickpea’, ὄροβος ‘bitter vetch, *Vicia ervilia*’
– **a/oru̯-īd-*: PGm. **arwīt-* ‘pea’ (OHG *arawīz, araweiz*, OS *erit*, ON *ertr*)
– **eru̯-o-*: Lat. *ervum* ‘pea’

The question is whether the Armenian material can be added to this complex as well. If we assume that the variants *aṙowoyt* and *aṙawoyt*, attested in the earliest sources, are primary, they presuppose quasi-PIE **HrVbʰ-oud-* or **HrVp-oud-*. Now it is possible that the borrowing took place when intervocalic *tenues* and *mediae aspiratae* were at the stage of fricatives in Pre-Armenian. Especially in view of the alternation **b* ~ **u̯* observed in the comparanda,[4] it is possible to surmise that the donor form(s) contained a bilabial approximant **β* or the like. This sound could thus have been substituted for the corresponding fricative in Pre-Armenian, i.e. a

3 Ačaṙyan (HAB I: 265) rejects the earlier etymology of Dervischjan (1877: 29) but cites Geo. dial. (Kakheti, Kartli) *alaverdi* ‘alfalfa’ as a loan from Armenian. The sound substitutions implied for this putative loan would be unexpected, however. Greppin (1992: 72–3) compares the Semitic root *rṭb* ‘fresh, green, juicy, tender’, assuming that the root entered Armenian from Semitic through an unknown medium. This requires an unexplained metathesis, however. Furthermore, Arab. *ar-raṭbah* may be found in the sense ‘alfalfa’, but this meaning is isolated among the Semitic languages and appears to be caused by a late lexicalization of the sense ‘fresh, green’. At the same time, the word must have been borrowed in Armenian before the lenition of PIE **bʰ* > *w*, i.e. before the introduction of Iranian loanwords. J̌ahowkyan (2010: 75) hesitantly reconstructs PIE “**orobʰ-*” and compares Ru. *rjabína* ‘rowan’ (etc.). This is far from compelling. The Slavic comparanda are formally and semantically distant, and they are usually considered to reflect a derivation of PSl. **erębъ* ‘partridge, grouse’ (ÈSSJa I: 73–4, Derksen 2000).

4 The same alternation appears in the clearly non-Indo-European lexeme represented by Lat. *faba*, Fal. *haba* ‘bean’ (< **bʰab-*), OPr. *babo*, OCS *bobъ* ‘id.’ (< **bʰabʰ-*) vs. ON *baun*, OHG *bōna* (< **bʰau̯-n-*), cf. Kroonen (2013: 55), Šorgo (2020: 435, 460–1).

form *(*V*)*ṙVβ*-. Such an input is better compatible with the evidence of the other languages, in particular Greek, and it would date the borrowing to sometime between the lenition of stops and the sound shift, which can probably be observed in the suffix *-*oud*- > -*oyt*- (cf. the chronology of Ravnæs 2005).[5] Another fact that suggests a relatively late borrowing is the presence of *ṙ* in place of *r*, the latter of which would be the regular reflex of PIE **r* between vowels. The trilled *ṙ* usually reflects the clusters **sr*, **rs*, and perhaps **rH* (cf. Macak 2017: 1061), but the comparanda do not indicate that any such cluster was present in the input form. It is thus possible that the borrowing took place late enough for the trilled *ṙ* to have already emerged as a Pre-Armenian phoneme.

The original vocalism cannot be determined with certainty, but a few observations can be made. As for the second vowel, the only option among Proto-Indo-European vowels that can be outright rejected is short **e*. Since no external evidence exists for **ē*, **ō*, **i*, or **u*, the most parsimonious option is **o*, leading to quasi-PIE **Hrobʰ/p*-. The rarer variant *aṙawoyt*, then, may be the result of assimilation. If we accept the rule that **o* yielded *a* in an initial, open syllable, a change that took place only after the loss of pretonic **i* and **u* (Pedersen 1900: 99, Grammont 1918: 223–225, Clackson 2020), we may assume that the initial vowel was **o*. We thus arrive at something like **oṙoβ*-, which comes formally close to Gr. ὄροβος 'bitter vetch'.[6] Even still, it cannot be ascertained whether the initial vowel was present in the input or results from the regular vowel prothesis that affects initial **r*- and **ṙ*- in inherited words, as well as most later loans (e.g. *aṙat* 'liberal, generous, abundant', cf. Parthian *rād* 'id.'). In Greek too, the initial vowel ἐ- may be caused by secondary prothesis, but the Germanic and Latin evidence shows that forms with initial vowels were also in circulation.

A crucial observation is the presence of a suffix **-oud*-, potentially related to Gr. -ινθ- and Gm. **-īt*- (cf. Kroonen, this volume). An archetypically non-Indo-European suffix, it is already known in several variants. The form **-oud*-, with a back vowel, comes close to the variant -υνθ-, in e.g. Gr. ὄλ-υνθος, ὄλ-ονθος 'winter fig' (perhaps related to the Lat. gloss *bolunda*; Beekes 2010: 1074) and especially

5 Another possibility is that PIE **bʰ* had lost its aspiration but without merging with older **b*, either because **b* had shifted to *p*, had maintained an inherited glottalic articulation (as assumed by proponents of the Glottalic Theory, cf. Kortlandt 1983: 98–9), or were simply non-existent in the language. At the same time, however, this would also require the assumption that the suffix was borrowed with a final voiceless (glottalic) stop, an alternant for which no evidence exists elsewhere.

6 This observation is also interesting in view of semantics, because both bitter vetch and alfalfa are crops primarily used for the feeding of ruminant animals and not generally consumed by humans, as opposed to (chick)peas.

the nasal-less variant -ũθ- as in ἀγνύς, -ῦθος 'loom-weight' (Chantraine 1999: 12) and κωμύς, -ῦθος 'bundle, truss of hay' (Beekes 2010: 814). Another form of the suffix with final **-d-* underlies PGm. **arwīt-*; cf. further **albut-* ~ **albet-* 'swan' (ON *ǫlpt*, OE *ielfetu*) vs. PSl. **olbǫdь* 'swan' (SCr. *làbūd*, Sln. *labǫ́d* 'swan') and PSl. **lebedь* 'swan', Ru. *lébed'* (Kroonen 2013: 20, Jakob, this volume). Thus, the only alternant that is unique to Armenian is the diphthong *oy*, pointing to quasi-PIE **ou*.

2.2 *artoyt* 'lark, skylark'

The earliest attestation of this word is also in the Galen Dictionary, where it glosses Gr. κορύδαλος (Greppin 1985: 62). It is widespread in the dialects (HAB I: 344). It has been compared to a set of European words for 'thrush', including Lat. *turdus*, Lith. *strãzdas*, SCr. *drôzd*, ON *þrǫstr* and OIr. *truit* 'thrush, blackbird' (Łapᶜancᶜyan 1961: 359, J̌ahowkyan 1967: 151). This comparison does not adhere to established sound laws, however.[7] A proto-form **trosdo-* would yield Arm. ***arost* while the zero-grade formation **trsdo-* would probably yield ***tᶜaṙt*.[8]

Rather, *artoyt* must reflect quasi-PIE **droud-V-*.[9] This form more closely resembles Gr. στροῦθος, στρουθός 'sparrow' (also 'ostrich; flounder'), which can reflect **stroudʰ-*.[10] The Hesychius gloss στροῦς· ὁ στρουθὸς καὶ ὄσπριον (sparrow/ostrich and pulse) appears to be an old root noun, which indicates that the input

7 Among these comparanda, Hamp (1981: 81), de Vaan (2008: 637), Matasović (2009: 392, 2020: 335) and others rather cite Arm. *tordik* 'thrush'. However, it is unlikely that *tord-* can reflect **dorzdʰ-*, which would rather give ***toṙt-* (cf. fn. 8), and the aspirated **dʰ* conflicts with the Germanic evidence. Most importantly, there is no reliable attestation of the form *tordik* in classical sources. It is found only once in a 19th century edition of Philo, where Ačaṙyan (HAB IV: 422) suspects it to have been added by the editor. Therefore, it may simply have been borrowed from It. *tordo* and furnished with the highly productive diminutive suffix *-ik* (Vahagn Petrosyan, p.c.).

8 There are no certain examples that show the outcome of **-rsd-* or **-rst-*. If Arm. *owṙtᶜ** 'rain', seen in *owṙtᶜem* 'fertilize' and *y-owṙtᶜi* 'irrigated, fertile', reflects **h₁urs-ti-* (cf. Skt. *vr̥ṣṭí-* 'rain'; Martirosyan 2010: 498–499), it shows that the merger of **rs* > *ṙ* also took place before a stop, but only after blocking the post-resonant sonorization of **t* > *d*. The regular outcome of **-sd-* is *-st-* (cf. *nist* 'seat' < **ni-sd-o-*) which suggests that any opposition with the voiced allophone **z* was neutralized, so that **-rsd-* would yield **-ṙt-*.

9 J̌ahowkyan (2010: 96–7) also gives the option of reconstructing **t* (**troud/t-*, **trud/t-*). This is, however, impossible, since **t* would undergo lenition, not metathesis, and we should thus expect ***aroy(t)*/*arow(t)*. The written variant *artowt* can be easily understood as a levelling after the oblique cases where unstressed *oy* becomes *ow*.

10 A variant with voiced onset and no **s-* may be seen in the personal name (gen.) Δρούθου (Furnée 1972: 182), but this is obviously circumstantial evidence.

form ended in a consonant, but the Armenian form must have been transferred to a vocalic class since otherwise, we would expect final **-ds* to yield ***-c*. Although the Greek and Armenian forms are not identical, they are formally and semantically similar enough that we can tentatively assume independent borrowings from a third source.

Turning back to the European words for 'thrush', these are usually traced to **trosd-* (*vel sim.*; cf. IEW 1096 **trozdos-*; Greppin *apud* EIEC: 582 **trosdo-*; Hamp 1981: 81 **(s)drosdʰ-*). However, there are several irregularities between these comparanda alone, rendering it unlikely that the etymon is inherited from PIE. First, Lat. *turdus* must reflect either **torsd⁽ʰ⁾o-*, which would show an irregular metathesis, or **trsd⁽ʰ⁾o-* (de Vaan 2008: 634–635), which would be a rare case of an *o*-stem with a root zero grade.[11] Second, ON *þrǫstr* can reflect PGm. **þrastu-* < **trosd-*, but the West Germanic forms OHG *thrōšca*, *drŏsca*, OE *þrysce* must reflect **þrusk(j)ōn-* (< **trus(T)-(s)k-*) with an unexpected *u*-vocalism (Kroonen 2013: 545) and possibly a suffix **-sk-*, which seems to be associated with animal names of substrate origin in Western Europe (see Stifter, this volume). Finally, all Slavic forms have an irregular initial **d-*.[12] These formal issues, coupled with the limited, but geographically contiguous, distribution of the word suggest that it has a non-Indo-European origin (cf. Matasović 2009: 392, 2020: 335). We are thus faced with two main groups of alternating forms denoting passerine birds. One group shows a sibilant before the root-final consonant, while the other does not:

1)
- **stroudʰ-*: Gr. στροῦθος 'sparrow'
- **droud-*: Arm. *artoyt* 'lark'

2)
- **trosd-*: ON *þrǫstr* 'thrush', OE *þræsce*; OIr. *truit, truid* 'thrush' (or < **trusd-*)[13]
- **tresd⁽ʰ⁾-*: OPr. (EV) *tresde* 'thrush'
- **strosd⁽ʰ⁾-*: Lith. *strãzdas*, Latv. *strazds* 'thrush, blackbird, starling'
- **drosd⁽ʰ⁾-*: Ru. *drozd*, SCr. *drôzd* 'thrush'

11 The best example of such a noun is of course **iugo-* 'yoke', which is both widespread, archaic (cf. Hitt. *yūk-* 'yoke') and derived from a well-attested verbal root **ieug-* (LIV^2 316). None of these criteria can be said to apply to **trsdo-*.

12 As a parallel for voicing in this environment, Smoczyński (2018: 1308) cites OCS *nozdri*, Lith. *nas(t)raĩ* 'nostrils', but these forms are irrelevant because they go back to **nas-ra-* with an epenthetic dental (cf. Smoczyński 2018: 843). Assuming assimilation (Vasmer 1955, 1: 372) is an *ad hoc* solution without clear parallels.

13 Related forms in British Celtic, viz. W *trydw*, OBret. *trot*, OCorn. *troet* 'starling', appear to be loans from Irish. If not, these forms (along with the Irish) continue PC **troddi-*, which would then represent yet another irregular alternant (cf. Stifter, this volume).

- **trusT-(s)k-*: OHG *drŏsca* (alternatively **trauᵓ*), OE *þrysce* 'thrush' (**þruskjōn-*)
- **t(o)rsd⁽ʰ⁾-*: Lat. *turdus* 'thrush'

Whether the forms of group 1 and 2 are ultimately related remains uncertain. However, at least one possible parallel for a substrate alternation **-VsC-* ~ **-VC-* can be adduced, and it shows a similar north(west)–south(east) distribution; consider the following words for 'barley' (IEW 446, Witczak 2003: 55–57, Martirosyan 2010: 199, Kroonen 2013: 175, Thorsø 2020, Šorgo 2020: 439):

1)
- **gʰrīdʰ-*: Gr. κρῑθή, Epic κρῖ (< **κρῖθ*; Chantraine 1999: 583)
- **gʰ(ə)rĭt-*: Arm. *gari*, gen.pl. *gareacᶜ*

2)
- **gʰersd-*: OHG *gersta*
- **ǵʰrsd-*: Alb. *drithë* 'cereals, grain'
- **gʰ(o)rsd-iu̯o-*: Lat. *hordeum* (or < **gʰord-*)

To summarize, the words for 'thrush', 'sparrow' and 'lark' in Germanic, Celtic, Balto-Slavic, and Italic show several formal irregularities and an alternation **-VsC-* ~ **-VC-* vis-à-vis Greek and Armenian, which shows that they are of non-Indo-European origin. Again, this example also exhibits the alternation between Arm. **ou*, this time found in Greek as well, with a monophthong elsewhere.

2.3 *kᶜowpič* 'male hawk or falcon'

This is a hapax found in the commentaries on Dionysius Thrax by Grigor Magistros and Yovhannēs Erznkacᶜi (Adonc 1915: 240), where names for male animals are discussed. It is said to designate the male of the *šahēn* 'peregrine falcon' and the *gawaz* 'hawk'.[14] Ačaṙyan (HAB IV: 593) records no etymologies, and the word is not cited in more recent etymological works. I propose a connection with the following forms in Germanic and Slavic (cf. Suolahti 1909: 359–362, Boutkan 1998: 125, Kroonen 2013: 97–98, Šorgo 2020: 440, Jakob 2023: 168).

- **ko/abʰ-ouǵ-*: PSl. **kobuzъ* (Po. *kobuz* 'hobby', USrb. *kobušk* 'red-footed falcon')

14 *Ew bazēi arakan čowrak* [. . .] *isk šaheni ew gawazi kᶜowpič. Ew yaytni nšanakowtᶜiwn, zi očᶜ owrowkᶜ ayloᶜ hawowcᶜ lini kᶜowpič anown*: "And the *čowrak* is the male of the goshawk [. . .] but the male of the *šahēn* and the *gawaz* is the *kᶜowpič*. And the meaning is clear, for *kᶜowpič* is not the name of any other birds." (cf. Greppin 1978: 67).

– **ko/abʰ-ug/ǵ-* (or **ka/opúg-*): PGm. **habuka-* (ON *haukr*, OE *heafoc*, *hafoc*, *hafuc* ‘hawk’, OHG *habuh* ‘hawk’)
– **koub-(ig-i̯V-)*[15]: Arm. *kᶜowpič*

Additional Slavic forms reflect **kobьcь* (ORu. *kobecъ* ‘hawk’, SCr. *kóbac* ‘merlin’, Sln. *(s)kóbəc* ‘sparrowhawk’, Po. *kobiec* ‘falcon’). This form could have replaced the suffix with **-ьcь*, whereas **-uzъ*, on the other hand, can hardly be explained as secondary (Jakob 2023: 168). The Germanic and Slavic comparanda show several signs of being non-Indo-European borrowings. First, the root structure **ka/obʰ-* is a disallowed Proto-Indo-European root structure, containing a *tenuis* and a *media aspirata*. If the occasional comparison with Lat. *capys*, *capus* ‘falcon, hawk’ (Suolahti 1909: 360, Kroonen 2013: 197) is valid, we are faced with an additional root variant **kap-*, which would at best match the Germanic comparanda through Verner’s Law. However, the Latin form may also be an unrelated loan from Etruscan (WH I: 164, Ernout & Meillet 1951: 176). Taking PSl. **kobuzъ* at face value leads to an alternation of the suffixes **-ug/ǵ-* and **-ouǵ-*. A Proto-Indo-European ablaut **ou* : **u* would be highly unusual in a suffix, and this alternation thus supports the assumption that the Germanic and Slavic words were independent borrowings.

The addition of the Armenian comparandum suggests that the input of the Germanic and Slavic forms had the root syllable **o*, not **a*. In this way, we can reconstruct the main root alternants **koub-* ~ **kobʰ-*, yet again with an alternation of diphthong and monophthong, as well as **b* ~ **bʰ*. The final syllable *-ič* points to a suffix **-ig-i̯V-*, as opposed to the back-vocalic suffix **-ug-* ~ **-ouǵ-* seen in Germanic and Slavic. However, we cannot exclude the possibility of secondary influence by the suffix Arm. *-ič*, which appears to have been marginally productive in the pre-literary period, in particular in animal names, cf. *karič* ‘scorpion’, *xaṙnič* ‘locust’, *owtič* ‘moth’ (root *owt-* ‘eat’?) and *daṙnič* ‘endive’ from *daṙn* ‘bitter’; Greppin 1975: 96–97). This suffix also has a rarer variant *-owč*, cf. *parkowč* ‘follicle, shell’, probably from *parik* ‘mermaid’. We could thus envisage an older **kᶜowpowč*, or even a simplex **kᶜowp*, although this remains hypothetical.

The scant and relatively late attestation of the word is not surprising, given its highly specialized semantics, which became limited to male individuals of specific hunting birds. The clear similarity with the Germanic and Slavic forms makes it likely that it reflects a loanword adopted when the ancestor of Armenian was still spoken in Europe.

15 If not simply **koubig-i-* with palalization of **-g-* before front vowel, as in *čmem* ‘squeeze’ < **gim-*, cf. OCS *žьmǫ* ‘press’. However, we have no information on the stem type of the Armenian form. Synchronically, forms with the suffix *-ič* are always *a*-stems (*karič*, gen.-dat.pl. *karčacᶜ* ‘scorpion’).

2.4 *poytn* ‘pot’?

Finally, I will discuss an additional potential example, although it is fraught with more uncertainty. Arm. *poytn* (gen. *powtan*, var. *boytn* [Bible], *poyt* [Agathangelos]) ‘pot’ has long been compared to ON *pottr*, OE *pott* ‘pot’ ?< PGm. **putta-* (Petersson 1916: 254, IEW 99), under the assumption that these forms reflect **boud-no-* and **bud-no-*, respectively. However, the supposition of a Proto-Indo-European root **beud-* is fundamentally flawed, since it contains two *mediae.* The word may thus be better interpreted in a non-Indo-European context.

As suggested by PUr. **pata$_2$* ‘pot’ (Fi. *pata*, Meadow Mari *pot*, Khanty (VV) *put*, Mansi (Tavda) *pōt*, Hung. *faz-ék* ‘pot’, Selkup (Taz) *pot-* ‘put in a pot’; Zhivlov 2014: 120), we could be dealing with a *Wanderwort* with an East-West trajectory of spread.[16] On the other hand, PGm. **fata-* (ON *fat*, OE *fæt* ‘vat, barrel’) and Lith. *púodas* ‘pot’, which point uniformly to **podo-*, are perhaps more obvious candidates for an early borrowing of this etymon.[17] It is theoretically conceivable that the word was borrowed twice into Germanic, i.e. once before and after Grimm’s Law, but it is doubtful whether the form **putta-* existed in Proto-Germanic at all. ON *pottr* is not attested before the 14th century and therefore appears to be a Low German borrowing (de Vries 2000: 427). Consequently, the word is limited to West Germanic, where it is also attested late (13th century in both Old English and Middle Low German). It has been considered a loan from OFr. *pot* ‘pot’, presupposing **pottus* (Frings 1966: 111), but the opposite direction of borrowing cannot be excluded, as this form has no clear background within Italic. It is hardly a *littera*-variant of Lat. *pōtus* ‘drink’; the meanings do not match, and it seems that the *littera*-rule (i.e. *-V̄C-* > *-VCC-*) was limited to syllables with high vowels (Sen 2015: 65). Thus, **pott-* most likely represents a Western European substrate word adopted in both Romance and West Germanic, whence it later spread to Nordic (Ernout and Meillet 1951: 936; Hubschmid 1955: 158–160; FEW IX: 270).[18]

16 A borrowing from Baltic to Uralic can be excluded because all Uralic cognates are regular. The spread of the word could be correlated with the secondary spread of pottery from the Far East to Europe via Siberia, by way of the Pit-Comb Ware Culture, ca. 4000–2000 BCE (Gibbs & Jordan 2013; Isaksson et al. 2018).

17 Of course, while **podo-* is confined to a limited geographical area, there are no formal reasons to consider it a loanword.

18 LLat. *potus* ‘drinking cup (?)’ (a hapax in *The Life of St. Radegund* by Venantius Fortunatus, 6th c. AD) may be an early attestation of this word, if it was borrowed after the lenition of Lat. *-t-* had begun (Meyer-Lübke 1911: 502), but it is not fully excluded that this word rather means ‘drink’ and is identical to *pōtus* (see FEW IX: 271).

It remains uncertain whether these forms bear any connection with Arm. *poytn,* presupposing **boud(n)-*.[19] Nevertheless, no suitable context exists for a more recent spread of the **pott-* etymon from Western Europe, since Arm. *poytn* is attested already in the 5th century. Furthermore, since we may be faced with the same alternation of diphthong and monophthong as exhibited by the three other examples discussed in this study, it is conceivable that **boud-* is a variant of the foreign etymon **pott-*, which surfaces only in Western Europe, and perhaps **podo-*. Especially the latter form would entail that it was borrowed into Armenian from the same source as *kᶜowpič* (§ 2.3) which shows an identical distribution.

3 Evaluation

To summarize the material presented above, we find at least three, perhaps four examples of a recurring alternation in European substrate words, where Armenian contains the reflex of a diphthong **ou* in positions where a monophthong is reflected elsewhere. First of all, these examples provide additional evidence for the fact that Pre-Armenian was once spoken within in a sphere of Indo-European languages that had contact with at least one non-Indo-European language. Furthermore, the fact that a recurring alternation, with a consistent distribution, can be identified in these etyma ties them to the same temporal and geographic stratum.

Some deductions about the relative chronology of these contacts have already been touched upon. In particular, the example *aṙowoyt* (§ 2.1) is best analyzed by assuming that at the time of borrowing, Pre-Armenian had already seen the rise of the phoneme /ṙ/ from **rs*, **sr*, and **rH.* Perhaps, it had also undergone the first stage of the lenition of intervocalic labial stops **p* and **bʰ*. Otherwise, all examples must predate the Armenian sound shift, the metathesis of the clusters **dr* and **dʰr* (cf. *artoyt* < **droud-*), and perhaps the secondary palatalization (*kᶜowpič* < **koubigi̯V-*). Concerning the chronology of the diphthongs themselves, it is difficult to conclude much based on the material. Because the change of the diphthong **ou* (and perhaps **eu*) into *oy* most likely went through an intermediate stage such as **øy* (cf. Pedersen 1905: 324), it remains conceivable that the ostensible **ou* really reflects an adaptation of a foreign phoneme /ø/ *vel sim.*

19 The final *-n* and the corresponding *n*-stem declension pattern is not necessarily original. In some cases, it likely reflects the generalization of the accusative singular (thus *otn* 'foot' < **podm*), but in other cases the *-n* may be entirely secondary in origin (Weitenberg 1985).

A highly relevant morphological feature of the form *aṙowoyt* (§ 2.1) is the presence of a suffix that is most likely related to Greek -νθ- and its variants (referred to by the cover symbol *-*ṼD*-, cf. Šorgo 2020: 428). This suffix is usually associated with (a component of) the Pre-Greek substratum (Kuiper 1956: 216–219; Katičič 1976: 42–43; Kroonen, this volume). As shown by such examples as PGm. **arw-īt-* 'pea' against Gr. ἐρέβ-ινθος; PGm. **albut-/-et-* 'swan' against PSl. **olbǫdь/*lebedь*; and perhaps PGm. **samda-* 'sand' against Gr. ἄμαθος (where -αθ- could reflect **-n̥dʰ-*; Kroonen, this volume),[20] occasionally this suffix is also a feature of substrate words found in the Indo-European languages of Northern Europe. The most economic explanation for this observation seems to be that Greek, as well as several other Indo-European languages, were in contact with *genetically related* non-Indo-European substrate languages. These substrate languages may have been part of the lost linguistic landscape formed by farming societies that had spread from Southeast Europe during the Early and Middle Neolithic (Childe 1926: 83, Kallio 2003, Iversen & Kroonen 2017, Šorgo 2020). In contrast, Kuiper (1956: 218–219) assumes that forms like PGm. **arwīt-* "wandered from the Mediterranean to northern Europe." That is, they show the result of a secondary spread, not direct contact with the same substrate as Greek. Later, Kuiper (1995) operates with three different substrate layers in Europe. Yet, the reality of two of these layers is doubtful. In particular, the layer A2, or "the language of the geminates" (cf. Schrijver 2003: 220–224), has as its main diagnostic the alternation of geminate and singleton consonants in Germanic, but since this variation almost never occurs outside *n*-stems, it is better explained by the operation of Kluge's Law (Kroonen 2011: 127–131). Kuiper's A3, corresponding to Hans Krahe's "Alteuropäisch", is almost exclusively identified on the basis of toponyms. Therefore, we cannot conclude that it was ever in direct contact with the Indo-European languages. Moreover, it should be noted that the suffix **-ṼD-* is not the only recurring morphological feature of substrate words in both Greek and other European languages. Most notable of these is the prefix **a-*, associated with vowel reduction in roots (Schrijver 1997: 307–312, Iversen & Kroonen 2017: 518). Building upon the existing evidence for the influence of this European substrate upon the Armenian lexicon (cf. Martirosyan 2010: 805–807), we now have an exam-

20 Note, however, that this analysis becomes more difficult if we compare Arm. *awaz* (gen. *awazoy*) 'sand', as **sabʰn̥dʰ-* would yield ***awand*. Instead, it is traditionally assumed that *awaz* reflects **sabʰadʰ-o-* (HAB I: 351, Olsen 1999: 24). Alternatively, if the change **VdʰV* > *VzV* is rejected (e.g. Martzloff 2016: 129–35), we might instead posit a root noun **sabʰadʰ-s* > **awaj* with subsequent thematicization and intervocalic lenition **awaj-o-* > **awaz-o-*. Martirosyan (2010: 149–150) rejects the comparison altogether and considers *awaz* an Iranian loanword, citing P *āwāze* 'swamp', but this is semantically problematic.

ple of a recurrent phonemic alternation and a morphological substrate feature in the form of the suffix *-*oud*- > -*oyt*.[21]

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21 Two other potential examples of the suffix variant *-*oud*-, both found in plant names, have no root comparanda, but I will cite them here for future reference: *xtowt* 'spleenwort, *Asplenium trichomanes*' (HAB II: 429, Bedevian 1936: 91), *kałnowt* 'restharrow, *Ononis repens*' (HAB II: 496, Bedevian 1936: 424). Both are attested very late and might show a levelling of the suffix *-oyt* → *-owt* based on the oblique cases, cf. also *aṙwowt, aṙowt* as spelling variants of *aṙowoyt*.

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